



NHTI
Concord's Community College



COURSE CATALOG

Fall, Spring, and Summer 2022-2023

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ACADEMIC CALENDAR

For the most current and comprehensive academic calendars, click [here](#).

SUMMER SEMESTER 2022

May	
9	Full summer session evening, hybrid, and online classes begin (end Aug. 26)
9	First ½ semester evening, hybrid, and online classes begin (end July 1)
9	Last day to add a first ½ summer session or full session online class without instructor permission
9	Orthopaedic Technology courses begin
11	Paramedic Emergency Medicine courses begin
16	Last day to add a full summer session evening or hybrid class without instructor permission
16	Last day to drop a first ½ summer session class with a refund
16	LPN-RN Completion Option, Dental Hygiene, Dental Assisting, Radiation Therapy, Radiologic Technology, and Diagnostic Medical Sonography courses begin
23	Last day to drop a full summer session evening, hybrid or online class with a full refund
27	Last day to resolve I grades from spring semester classes
30	Memorial Day holiday – NHTI closed
30	Summer housing opens to non-12 month housing students
31	Summer 10-week classes begin (end Aug. 5)
31	Summer Session I – 5-week begins (end July 1)
June	
6	Last day to drop a summer 5-week or 10-week class with a full refund
17	Nursing and Dental New Student Orientation
July	
1	Summer Session I, first ½ evening, hybrid, and online classes end
1	Summer Session I housing closes
4	Independence Day holiday observed – NHTI closed
5	Summer Session II housing opens
5	Second ½ semester evening and online classes begin (end Aug. 26)
5	Last day to add a second ½ summer session evening or online class without permission
5	Summer Session II – 5-week begins (ends Aug. 5)
6	Final course grades for first ½ and Summer Session I day classes available on SIS
11	Last day to drop a Summer Session II 5-week class or Second ½ evening or online class with a refund
13	New Student Orientation
27	Express Admissions Day
August	
3	New Student Orientation
5	Summer 10-week and Summer Session II – 5-week classes end
5	Summer Session II housing closes
9	Final course grades for summer 10-week and Summer Session II classes available on SIS
10	Express Admissions Day
17	New Student Orientation
24	Express Admissions Day
26	Full summer session evening, online, and second ½ evening and online classes end
30	Final course grades for summer courses available on SIS

August	
3	New Student Orientation
10	Express Admissions Day
12	180-day staff return
15	Tuition due for Fall 2022 semester
15	10- and 11-month faculty return
17	New Student Orientation
24	Express Admissions Day
26	Residence halls open to new and returning students at 10 a.m.
29	Full semester day, evening, online, and hybrid classes begin
29	First ½ semester classes begin (end Oct. 21)
29	Last day to add an online class or first ½ semester class without instructor permission
September	
5	Labor Day holiday – NHTI closed
6	Last day to add a full semester class without instructor permission
6	Last day to drop a first ½ semester class with a refund
12	Last day to drop a full semester class with a refund
13	Convocation – NHTI/Activities Fair and Campus Barbeque
16	Last day to resolve I grades for summer classes
26	Mid-semester warning grades available on SIS for first ½ semester classes
30	Last day to drop a first ½ semester course with a W
October	
10	Columbus Day – all classes meet
12	System Symposium – no classes
21	First ½ semester classes end
24	Mid-semester warning grades available on SIS for full semester classes
24	Final course grades available on SIS for first ½ semester classes
24	Second ½ semester classes begin (end Dec. 16)
25	Last day to add a second ½ semester class without instructor permission
31	Last day to drop a second ½ semester class with a refund
November	
2	Open House (4-6 p.m.)
3	Last day to drop a full semester course with a W grade
3	60% completion for Financial Aid requirements
6	Daylight Savings Time ends; set clocks back 1 hour
11	Veterans' Day holiday – NHTI closed
21	Mid-semester warning grades available on SIS for second ½ semester classes
24	Residence halls close for Thanksgiving at 5 p.m.
24-26	Thanksgiving holiday – NHTI closed
27	Residence halls open at 12 p.m.
28	Classes resume
28	Last day to drop a second ½ semester class with a W grade
December	
9	Last day of full-semester day classes
12-15	Final exams for full semester day classes
15	Residence halls close at 5 p.m.
16	Snow day for final exams
16	Last day of evening and online classes
19	Final grades due/last DR for 10- and 11-month faculty
20	Final grades available for students on SIS
24-31	Winter Recess – NHTI closed

January	
2	New Year's Day holiday – NHTI closed
3	Tuition due for Spring 2023 semester
3	180-day staff return
4	Open house (4-6 p.m.)
4	10- and 11-month faculty return
10	Express Admissions Day
11	New Student Orientation (snow date: Jan. 12)
15	Residence halls open at 12 p.m.
16	Martin Luther King, Jr./Civil Rights Day holiday – NHTI closed
17	Full semester day, evening, online, and hybrid classes begin
17	First ½ semester classes begin (end March 10)
17	Last day to add a first ½ semester class without instructor permission
17	Last day to add an online class without instructor permission
23	Last day to add a full semester class without instructor permission
23	Last day to drop a first ½ semester class with a refund
30	Last day to drop a full semester class with a refund
February	
3	Last day to resolve I grades for fall semester classes
13	Mid-semester warning grades for first ½ semester classes available on SIS
17	Last day to drop a first ½ semester class with a W grade
20	Presidents' Day holiday – NHTI closed
March	
8	Express Admissions Day
10	First ½ semester classes end
10	Residence halls close at 5 p.m.
12-19	Spring Break – no day or evening classes
12	Daylight Savings Time begins – set clocks ahead 1 hour
13	Mid-semester warning grades for full semester classes available on SIS
13	Second ½ semester (8-week) online classes begin (end May 5)
13	Last day to add a second ½ semester online class without instructor permission
14	Final course grades for first ½ semester classes available on SIS
19	Residence halls open at 12 p.m.
20	Classes resume
20	Second ½ semester day and evening classes begin (end May 5)
20	Last day to add a second ½ semester day/evening class without instructor permission
20	Last day to drop a second ½ semester online class with a refund
20	Registration for Summer 2023, Fall 2023, and Spring 2024 semesters begins
27	Last day to drop a second ½ semester day/evening class with a refund
27	Last day to drop a full semester course with a W grade
27	60% completion for Financial Aid requirements
April	
10	Mid-semester warning grades available on SIS for second ½ semester classes
17	Last day to drop a second ½ semester online or day/evening class with a W grade
May	
1	Last day for full semester day classes
2-5	Final Exams for full semester day classes
5	Last day of evening and online classes for spring semester
5	Residence halls close at 5 p.m.
8	Final grades due
9	Final course grades available on SIS
19	Commencement

ABOUT NHTI

Community College System of New Hampshire

NHTI is a member of the Community College System of New Hampshire (CCSNH) and since 1969 has been accredited by the New England Commission of Higher Education, a nongovernmental, nationally recognized accrediting agency. This Student Handbook is meant to provide specific information related to NHTI. NHTI upholds all CCSNH policies and procedures. To learn more about specific CCSNH policies and procedures please visit the CCSNH [Student Handbook](#).

Mission, Purpose, Values Statement

Mission

NHTI creates a caring culture and fosters innovative teaching and learning, supports economic mobility, and meets the needs of a diverse community by growing and strengthening partnerships with businesses and education.

Purpose

We serve students, businesses, and the community by building academically excellent pathways towards sustainable careers, community engagement, and social responsibility.

Values

Learning	We foster intellectual curiosity and the application of knowledge to promote critical, creative thinking.
Mutual respect	We cultivate an environment in which acceptance, kindness, and collegiality create a valuable exchange of ideas cultivating diversity, equity, and inclusion.
Engagement	We collaborate with each other, businesses, and community organizations to develop principled, ethical citizens.
Accountability	We commit to individual and institutional responsibility in the stewardship of our human, intellectual, physical, and fiscal resources.
Innovation	We support the development and pursuit of new ideas to thrive in an ever-changing world.
Integrity	We uphold fairness, honesty, and ethical behavior.

Educated Person Statement of Philosophy

Acknowledging that students will not only be workers but also citizens, family members, consumers, and life-long learners in a democratic society, NHTI – Concord’s Community College integrates academic, technical, experiential, and work-based learning. These are grounded in a general education core to prepare graduates with the knowledge and skills for successful engagement in their communities, the workplace, and all of their life roles and educational and career endeavors. Therefore, we commit ourselves to educating graduates to be:

- Knowledgeable of human cultures and the physical and natural world. Graduates evaluate the effects of historical trends and events on institutions and social systems and demonstrate respect for and understanding of diverse ideas and modes of expression as conveyed through the humanities.
- Thinkers, problem solvers, and innovators. Graduates evaluate and apply information rationally and consistently to guide decision-making. They apply critical and creative thinking skills to the analysis of problems; demonstrate scientific thought, both quantitatively and qualitatively, by evaluating human and technical problems; generate ideas by consolidating knowledge; and reflect critically on their learning.
- Collaborators. Graduates demonstrate cultural competence, work effectively in teams, and can negotiate and manage conflict; they demonstrate constructive engagement with diverse populations and viewpoints; and they exhibit empathy in their work with others and demonstrate the ability to motivate and/or follow others.
- Communicators. Graduates are active listeners and respond constructively; they read, write, speak, listen, and present on a level that facilitates engagement with others.
- Principled and ethical citizens. Graduates make reasoned, ethical decisions and learn from mistakes; they demonstrate the values of integrity, responsibility, perseverance, and tolerance of ambiguity.
- Career-ready professionals. Graduates organize and prioritize their work; they translate acquired knowledge and skills to real-world applications, are competent in the use of technology and mathematical/numerical operations, and actively develop strategies for continuous improvement in the areas of time management, documentation, self-evaluation, self-determination, and personal and professional growth. These outcomes are given in numerical reference for improved tracking; these values do not establish hierarchal emphasis. Each outcome is of equal importance.

NHTI Diversity Statement

Diversity is a core value at NHTI. Our commitment to diversity enriches everyone by exposing us to a range of ways to understand and engage with the world, develop respect, identify challenges, and to discover, define and deliver solutions. NHTI actively works to eliminate barriers created by systemic discrimination. Diversity includes race, ethnicity, culture, religion, language, socioeconomic status, citizenship, national origin, gender, sexual orientation, age, and disability.

Statement of Non-Discrimination

CCSNH does not discriminate in the administration of its admissions and educational programs, activities, or employment practices on the basis of race, creed, color, religion, ancestry or national origin, age, sex, sexual orientation, gender identity and expression, physical or mental disability, genetic information, or law enforcement, military, veteran, or marital status. This statement is a reflection of the mission of CCSNH and refers to, but is not limited to, the provisions of the following laws:

Inquiries regarding discrimination may be directed to:

Sara A. Sawyer

- Title VI and VII of the Civil Rights Act of 1964,
- Age Discrimination in Employment Act of 1967
- Title IX of the Education Amendment of 1972
- Section 504 of the Rehabilitation Act of 1973
- Americans with Disabilities Act of 1990 (ADA)
- Section 402 of the Vietnam Era Veteran's Readjustment Assistance Act of 1974
- NH Law Against Discrimination (RSA 354-A)
- NH Law RSA 188-F:3-a
- Genetic Information Nondiscrimination Act of 2008

Director of Human Resources, CCSNH
26 College Drive
Concord, NH 03301
603-230-3503

Inquiries may also be directed to:

The NH Commission for Human Rights
2 Industrial Park Drive
Concord, NH 03301
603-271-2767, fax: 603-271-6339

The Equal Employment Opportunity Commission
JFK Federal Building
475 Government Center
Boston, MA 02203
617-565-3200, 1-800-669-4000, fax: 617-565-3196
TTY: 617-565-3204 or 1-800-669-6820

Motto and Emblem

- Motto: Scientia Cum Manu; Knowledge with Skills
- Hand and Torch symbolizes the skills needed to understand and control man's environment to his best interests.
- Abstract Symbol represents the energy and structure of the universe.
- Open Book emphasizes education and theoretical knowledge as factors without which there would be no skills.
- Laurel comes from the state seal/symbol.



INSTITUTIONAL ACCREDITATION

NHTI is accredited by the New England Commission of Higher Education (NECHE), which indicates the college meets or exceeds criteria for the assessment of institutional quality periodically applied through a peer review process. An accredited college or university is one that has necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so, and gives reasonable evidence it will continue to do so in the foreseeable future. Institutional integrity is also addressed through accreditation.

Accreditation by the commission applies to the institution as a whole. It is not a guarantee of every course or program offered, or the competence of individual graduates. It provides reasonable assurance about the quality of opportunities available to students who attend the institution. Inquiries regarding the status of NHTI's accreditation by the NECHE should be directed to NHTI's Office of Academic Affairs. A hard copy of the most recent Accreditation Self-Study Report may be viewed at the NHTI Library or Office of Academic Affairs. Individuals may also contact:

New England Commission of Higher Education
3 Burlington Woods Drive, Suite 100
Burlington, MA 01803-4514
781-425-7785
cihe@neche.org

NHTI has been accredited since 1969. Initial accreditation was through the Commission on Technical and Career Institutions. In 2001, NHTI earned accreditation from the New England Association of Schools and Colleges (NEASC) Inc.'s Commission on Institutions of Higher Education. In 2018, NEASC became NECHE. [Click here to view NHTI's accreditation history with NECHE.](#)

Specialized Accreditations

- *Accounting, Business Administration, Hospitality and Tourism Management, Sports Management:* Accredited by the Accreditation Council for Business Schools and Programs
- *Architectural, Computer, Electronic, Mechanical Engineering Technologies:* Accredited by the ETAC Commission of ABET, www.abet.org
- *Dental Assisting, Dental Hygiene:* Accredited by the Accreditation Commission on Dental Accreditation and granted the accreditation status of "approval without reporting requirements." The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at 312-440-4653 or at 211 East Chicago Avenue, Chicago, IL 60611 and at www.ada.org/en/coda
- *Diagnostic Medical Sonography:* Accredited by the Commission on Accreditation of Allied Health Education Programs
- *Early Childhood Education:* Accredited by the Commission on the Accreditation of Early Childhood Higher Education Programs of the National Association for the Education of Young Children, www.naeyc.org. The accreditation term runs from July 2019 through September 2026.
- *Legal Nurse Consultant:* Approved by the American Bar Association
- *Nursing:* Approved by the New Hampshire Board of Nursing, 7 Eagle Square, Concord, NH 03301; 603-271-2152; <https://www.oplc.nh.gov/new-hampshire-board-nursing>. The program is also accredited by the Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326; 404-975-5000; www.acenursing.org
- *Orthopaedic Technology:* Recognized by National Board for Certification of Orthopaedic Technologists
- *Paralegal Studies:* Approved by American Bar Association as a legal assistant education program
- *Paramedic Emergency Medicine:* Accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions
- *Radiation Therapy, Radiologic Technology:* Accredited by the Joint Review Committee on Education in Radiologic Technology, www.jcert.org
- *Teacher Education Conversion Programs:* Accredited by the New Hampshire State Board of Education

Affiliations and Memberships

NHTI is one of the 7 colleges of the [CCSNH](#), the public system of comprehensive community colleges that serves all of New Hampshire.

NHTI is a full institutional member of the [American Association of Community Colleges](#) and the [League of Innovation](#). NHTI also has [National League for Nursing](#) agency membership in the Council of Associate Degree Programs. Memberships are also held in the [New England Association for College Admission Counseling](#), [National Association for College Admission Counseling](#), [New England Board of Higher Education](#), [Institute of Electrical and Electronics Engineers](#), [National Association of Colleges](#), and [American Society for Engineering Education](#). The college is a member of [Campus Compact for New Hampshire](#). NHTI is affiliated with the New Hampshire Forum on Higher Education with the [New Hampshire College and University Council](#) (the membership of the Community College System of NH). NHTI is a member of the [National Collegiate Honors Council](#).

NHTI's intercollegiate athletics program is a member of, and its teams compete in, the [Yankee Small College Conference](#) and the [United States Collegiate Athletic Association](#).

GENERAL INFORMATION

College Administration

Dr. Mark Rubinstein, *Interim President, CCSNH Chancellor*

Dr. Andrew Fisher, Ed.D., *VP for Academic Affairs*

Dr. Rebecca Dean, Ed.D., *Interim VP of Student Affairs*

Faculty Listing

Debra Albrecht, CDA, RDH, CPHDH, Med, *Keene State College*

Shaunna Babcock, MEd, *Southern N.H. University*

Jeffery Beltramo, BS, *California State University*

Aleta Billadeau, MSN, RN, *St. Joseph's College—Maine*

Jennifer Brace, MSN, RN, *Sacred Heart University*

Mary Jean Byer, MS, RN, *Russell Sage College*

Lisa Centrella, MSDH, *Massachusetts College of Pharmacy*

Aaron Conn, BS, *Southern N.H. University*

Kerry Cook, MS, *University of New Hampshire*

Paula DelBonis-Platt, PhD, *City University of New York*

Susan Diener, MA, *University of New Hampshire*

Kelly Dunn, EdD, *Nova Scotia University*

B. David Edwards, MA, *University of New Hampshire*

Jennifer Eggers, MD, MPH, *Dartmouth College*

Kenneth Gitlitz, BS, *Southern N.H. University*

Kerri Goupil, MS, RN, *University of New Hampshire*

Susan Haas, MFA, *University of Arkansas*

Adam Hopper, MS, *Yale University*

Daniel Huston, MS, *University of New Hampshire*

Sandra Inzer, RDH, MS, RDN, LDN, CPH, *University of New Hampshire*

Chad Johnson, AS, *NHTI – Concord's Community College*

Anni Jones, EdD, *Nova Southeastern University*

Liaquat Khan, DA, *Franklin Pierce University*

Candace Knowlton, MSN, RN, *Southern N.H. University*

Margaret Lambert, MS, MBA, RN, CCRN-K, *Rivier University*

Valerie LaVoice, MBA, *Northeastern University*

Rachel Leo Flagg, MA, *Connecticut College*

Tracey Lesser, MS, *University of New Hampshire*

Alan Lindsay, PhD, *Notre Dame College*

Kelly Luedtke, MEd, CAGS, MLADC, *University of New Hampshire*

Billie Lunt, MSDH, *University of Bridgeport*

Katrina Magee, RDH, MSDH, *Old Dominion University*

Kate Marcouillier, MA, *St. Joseph's College—Maine*

Melanie Martel, MEd, *Notre Dame College*

Crystal McIntyre, Sr. *Human Resources Officer*

Marsha Bourdon, *Business Officer*

Rae Mello-Andrews, MS, RN, RP, *Phoenix College*

Diana Menard, MEd, *Southern N.H. University*

Craig Meservey, MS, *University of New Hampshire*

Mehrdad Meskoob, PhD, *Northeastern University*

Nancy Moffett, BS, *Plymouth State University*

Kelly O'Brien, CDA, RDH, Med, *University of Bridgeport*

Michael O'Bryant, MS, *Springfield College*

Jessana Palm, MSc, *Antioch University New England*

Stacey Peters, BA, *Alfred University*

Deborah Remillard, MEd, *Plymouth State University*

Khatereh Sawal, MS, *Georgia Institute of Technology*

Lisa Scott, CDA, RDH, CPFDA, MEd, *Plymouth State University*

William Seagroves, MEd, *University of New England*

Naomi Simard, BS, *Granite State College*

Daniel Shagena, MS, *University of New Hampshire*

William Shurbert, BS, *Southern N.H. University*

Kimberly Stewart, BS, RN, *Rivier University*

Barbara Stowers, RDH, MSDH, *Massachusetts College of Pharmacy*

Dennis Tappin, MBA, *University of New Hampshire*

Kelley Taylor, MSN, RN, *University of New Hampshire*

Veronica Thibodeau Carter, MS, PE, *University of New Hampshire*

Amy Vonkadich, MEd, *University of Central Florida*

Michelle Wade, MSED, RDMS, RTR, *St. Joseph's College—Maine*

R. Stuart Wallace, PhD, *University of New Hampshire*

Keith Wilding, MAT, NRP, *Boston University*

Beth Wilkes, MS, *University of South Carolina—Sumter*

Lucyann Zeller, MEd., *Plymouth State University*

Staff Listing

Stephen Adams, *Maintenance*
Jessica Arzu, *Maintenance*
Lee Ann Baillargeon, *Maintenance*
Jennifer Bartlett, *Maintenance*
Todd Bedell, *Technology Services*
Matthew Blanchette, *Maintenance*
Mark Bograd, *Admissions Office*
Kristine Boland, *Bursar's Office*
Kristine Bouchard, *Maintenance*
Sharon Bowden, *Academic Center for Excellence*
Robert Bowen, *Maintenance*
Julie Caruso, *Financial Aid Office*
Christie Cho, *Learning Commons Library*
Adam Clark, *Maintenance*
Elizabeth Corliss, *Business Office*
Rebecca Dean, *Student Affairs*
Jeffrey Desharnais, *Technology Services*
Trisha Dionne, *Academic Affairs*
Scot Drew, *Maintenance*
Iurii Druchuk, *Technology Services*
Michael Edgecomb, *Technology Services*
Janet Ercolini, *Health Services*
Ryan Failing, *Residence Life*
Robin Fedion, *Admissions Office*
Penny Fish, *Student Affairs*
Andrew Fisher, *Academic Affairs*
Dale Ford, *Financial Aid Office*
Alejandro Garcia Ochoa, *Maintenance*
Denine Garnett, *Admissions Office*
Amber Gavriluk, *Marketing and Communications*
Sheri Gonthier, *Financial Aid Office*
Eric Hewson, *Maintenance*
Dawn Higgins, *Academic Advising Center*
Cassandra Hoefs, *Academic Affairs*
Paul Hogan, *Athletics Office*
Wilder Joseph, *Maintenance*
Heidi Karajcic, *Academic Affairs*
Michele Karwocki, *Registrar's Office*
Susan Krenzien, *Athletics Office*
Brooke Lambert, *Bursar's Office*
Jelena Lambert, *Bursar's Office*
Deborah Landry, *Bursar's Office*
Nicholas Lareau, *Technology Services*
Elaine MacDonald, *Allied Dental Education*
Joseph Martin, *Campus Safety*
Lorrie Matott, *Financial Aid Office*
Crystal McIntyre, *Human Resources*
Lisa Meisel, *Dental Clinic*
Amanda Moak, *Admissions Office*
Kaitlin Moody, *Student Life*
Craig Nelson, *Campus Safety*
Lisa Nicol, *Health Sciences*
Thomas Pelletier, *Campus Safety*
Karel Pluhar, *Health Sciences*
Elizabeth Pontacoloni, *Registrar's Office*
Susan Posluszny, *Academic Advising*
Alison Richardson, *Academic Advising*
Samantha Robertson, *MSW, Counseling Services*
Shana Rowe, *Admissions Office*
Christine Roz, *Financial Aid Office*
Karen Schaefer, *Maintenance*
Cory Schofield, *Admissions Office*
Andrew Seibert, *Maintenance*
Francis Sliva, *Maintenance*
Debra Smith, *Wellness Center*
Lynn Tilton, *Education*
Pamela Vesey, *Registrar's Office*
Lori Warner, *Registrar's Office*
Jason Wovkanech, *Campus Safety*

Campus Guide

Campus Safety Building

- First Floor
 - Business Office
 - Mail Room
 - Shipping and Receiving
- Second Floor
 - Campus Safety Office
 - ID Office
 - Parking Office

Farnum Hall

- Alumni and Development Office
- Visual Arts Program classrooms and studios

Grappone Hall

- First Floor
 - Auditorium
 - Conference Room
 - Classroom
 - CRC Office
 - Simulation Lab
 - Skills Lab
- Second Floor
 - Classroom
 - Computer Lab
 - Conference Room
 - Offices
 - Study Lounge
- Department Chair/Program Coordinator offices
 - Addiction Counseling, G220
 - Architectural Engineering, G213
 - Child and Family Studies, G221
 - Civil Engineering, G213
 - Human Service, G219
 - Landscape and Environmental Design, G213
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 - Faculty offices
 - Shaunna Babcock, G222
 - Aleta Billadeau, G214
 - Kerri Goupil, G225
 - Liaquat Khan, G213
 - Candace Knowlton, G223
 - Barbara Laganieri, G224
 - Peggy Lambert, G214
 - Kelly Luedtke, G220
 - Rae Mello-Andrews, G215
 - Diana Menard, G221
 - Mike O'Bryant, G219
 - Kimberly Stewart, G215
 - Kelley Taylor, G223
 - Human Service, G223
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 - Lecture Hall
 - Department Chair/Program Coordinator offices
 - Education, G316

- English/Fine Arts/Languages, G315
- ESOL/General Studies/Liberal Arts, G314
- Social Sciences
- Faculty offices
 - Paula DelBonis-Platt, G314
 - Kelly Dunn, G316
 - David Edwards, G313
 - Dan Huston, G312
 - Anni Jones, G313
 - Cynthia Lucero, G317
 - Alan Lindsay, G315
 - Stu Wallace, G312

Langley Hall

- Student residences

Learning Commons Library

- Academic Center for Excellence
- Academic Advising Center
- Accessibility Services
- Archives and Collections
- Bookstore
- CLEP Testing
- Computer labs
- Conference Room
- Cross-Cultural and ESOL Office
- Library
- Marketing and Communications Office
- Math Lab
- Placement Testing
- Staff offices
- Student study areas
- Proctored Testing
- Tutoring
- Writing Center and Study Solutions Lab
- Zoom Room

Little Hall

- First Floor
 - Academic Affairs Offices
 - Business Operations Office
 - Capital Commons Cafeteria
 - Classrooms
 - CNC Lab
 - Computer Labs
 - Human Resources Office
 - Laundry Card Vending
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 - Machine Shop
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 - Department Chair/Program Coordinator offices, L121
 - Automation and Robotics
 - Mechanical Engineering Technology
 - Manufacturing Engineering Technology

- Industrial Design Technology
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 - Adam Hopper, L116
 - Veronica Thibodeau-Carter, L119
 - Kate Sawal, L118
 - Dennis Tappin, L120
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 - Chemistry Lab
 - Classrooms
 - Computer Labs
 - Drafting Room
 - Physics Lab
 - Department Chair/Program Coordinator offices, L215
 - Animation and Graphic Game Programming
 - Computer Engineering Technology
 - Electronic Engineering Technology
 - Math and Physics
 - Faculty Offices
 - Kerry Cook, L203
 - Ken Gitlitz, L218
 - Tony Jenney, L216
 - Val LaVoice, L237-239
 - Perry Seagroves, L219
 - Dan Shagena, L220
 - Lucyann Zeller, L237-239

Maintenance Buildings

- Maintenance Office Building
- Carpentry, Plumbing, Electrical shops
- Grounds equipment garage bays
- Vendor Receiving and Supplies

MacRury Hall

- First Floor
 - Classrooms
 - Computer Lab
 - Dental Clinic
 - Labs
 - Department Chair/Program Coordinator offices
 - Allied Dental, M150
 - Dental Assisting, M152
 - Diagnostic Medical Imaging, M112
 - Orthopaedic Technology, M116
 - Radiation Therapy, M112
 - Radiologic Technology, M112
 - Sonography, M112
 - Faculty offices
 - Adjunct Faculty, M158
 - Deb Albrecht, M144
 - Lisa Centrella, M154

- Sandra Inzer, M156
- Rachel Leo Flagg, M154
- Billie Lunt, M146
- Katrina Magee, M144
- Kate Marcouillier, M112C
- Nancy Moffet, M112
- Kelly O'Brien, M152
- Lisa Scott, M150
- Barbara Stowers, M146
- Michelle Wade, M112D
- Amy VonKadich, M112B
- Second Floor
 - Anatomy and Physiology Lab
 - Biology Lab
 - Conference Room
 - Microbiology Lab
 - Paramedic Emergency Medicine Lab
 - Department Chair/Program Coordinator offices
 - Tracey Lesser, M208
 - Amy Liptak, M209
 - Keith Wilding, M201
 - Faculty offices
 - Adjunct Faculty, M211A
 - Jennifer Eggers, M211C
 - Tracey Lesser, M208
 - Amy Liptak, M209
 - Craig Meservey, M211C
 - Jessana Palm, M211B
 - Keith Wilding, M201
 - Beth Wilkes, M211B

South Hall

- Student residences

Strout Hall

- Student residences

Student Center

- First Floor

- Conference Room
- Counseling Services
- Community Service Office
- Health Services
- Rotunda and Games Area
- Student Life Office
- Second Floor
 - Campus Activities Board
 - Conference rooms
 - Residence Life Office
 - Student Affairs Office
 - Student Senate Office

Sweeney Hall

- First Floor
 - Admissions Office
 - Auditorium
 - Bistro Café
 - Bursar's Office
 - Financial Aid
 - Lactation Room
 - Locker rooms
 - Reception Area
 - Registrar's Office
- Second Floor
 - Business Training Center
 - Classrooms, Offices
- Third Floor
 - Classrooms
 - Computer Lab
 - Department Chair Office, S306
 - Accounting
 - Business Administration
 - Information Technology
 - Sports, Recreation, and Tourism
 - Faculty Office Suite, S301
 - Aaron Conn
 - Chad Johnson
 - Deb Remillard
 - Bill Shurbert

Wellness Center

- First Floor
 - Athletics Office
 - Gymnasium
 - Locker rooms
 - Multipurpose Room
- Second Floor
 - Fitness Center

Definitions

Full time: A student who is registered for at least 12 credits in any given semester. Only the credits as part of a student's program of study will be considered when determining financial aid eligibility.

Part time: A student who is registered for fewer than 12 credits.

Matriculated: A student who applies to and is officially accepted by the college in a program. The status remains until the student withdraws officially from the program/college or is dismissed for academic/disciplinary reasons or upon graduation. Matriculation defines a student's program of study and ensures that courses taken will meet program requirements.

Non-Matriculated: A student who is enrolled in a course or courses but who has not officially been accepted into a college program. A student who has taken individual courses and decided to work for a degree should commit to a specific program and formally matriculate after proper counseling prior to the satisfactory completion of 9 semester hours in appropriate courses. To ensure that credits earned meet program of study requirements, a student should matriculate as early as possible.

Active: A matriculated student who has not officially withdrawn from a program or the college, or has not registered for classes within a given semester but returns to the college within 3 semesters. They are eligible to register for classes under the original program of study; all others must reapply to the program/college and follow the new program of study. Non-matriculated students who are registered for the semester are considered active for that semester.

TECHNOLOGY AND SOFTWARE

NHTI uses technology to support students as they navigate their academic career at the college. The college, as part of CCSNH, provides support to help students get and stay connected to faculty, fellow students, and staff.

EasyLogin

EasyLogin is used to access student email, SIS, Canvas, Navigate, and the Learning Commons Library's online resources. Your EasyLogin username and student email address is emailed to your personal account from CCSNH upon acceptance to NHTI or upon registration for classes. If you did not receive your EasyLogin information, email NHTI-helpdesk@ccsnh.edu. To enjoy the convenience of self-serve password change capability on a 24/7 basis, go to <https://passwordstu.ccsnh.edu/showlogin.cc> and click the Reset Password link.

Student Information System (SIS) and Canvas

The Student Information System (SIS) is the place to go for class schedules, midsemester warning grades, final grades, billing information, financial aid status, academic history, and student email address.

- Go to www.nhti.edu.
- Click the Current Students link.
- Go to Resources and click the Student Portal link.
- Enter your EasyLogin username and password and locate the SIS or Canvas app.

Canvas

Canvas is NHTI's learning management system and is used for all learning at NHTI.

- Go to www.nhti.edu.
- Click the Current Students link.
- Go to Resources and click the Student Portal link.
- Enter your EasyLogin username and password and locate the Canvas app.

Student Email

Official CCSNH email accounts are created automatically for all matriculated students or registered students and are available within 24-48 hours after matriculation or registration. Students CCSNH email accounts serve as the official account for all electronic communications with the college. Students are expected to check their email frequently and to safeguard their password and access.

- Go to www.nhti.edu.
- Click the Current Students link.
- Go to Resources and click the Student Portal link.
- Enter your EasyLogin username and password and locate the Student Email app.

Laptop Loan Program

The NHTI Laptop Loan Program is a no-cost program that lends out laptops and webcams to students for the semester. Laptops and webcams are issued based on availability and eligibility and on a first-come, first-served basis. To participate, students need to complete an application. Students with questions or who would like to apply for the Laptop Loan Program should contact Office of Student Affairs. Laptops will be loaned out to NHTI students for the semester based on eligibility and availability. Students must:

- Be enrolled at NHTI in a degree, certificate, or microcredential program
- Have registered for at least one class
- Have a completed FAFSA on file
- Have no financial or collections holds without a repayment plan in place

Laptops or webcams are loaned for the semester and are expected to be returned in the same working condition at the end of the semester. Students must reapply every semester.

COLLEGE SERVICES

Bursar

Fees

NHTI has one of the lowest tuition costs per year in N.H. – and we make it easy to pay with our flexible options and detailed cost breakdowns.

Below are the fees established for the 2022-2023 academic year. Tuition and fees are due 2 weeks before the first class day of each semester. Some programs require uniforms and/or equipment, and all require textbooks. Students are responsible for the purchase of these materials. All charges are subject to change without notice.

Tuition Costs				
	NH Resident	Veterans ¹	NERSP ²	Out of State/International
Per Credit Cost	\$215	\$215	\$323	\$490

- *Tuition Deposit:* A non-refundable \$100 tuition deposit is required for the follow programs: Dental Assisting, Dental Hygiene, Diagnostic Medical Sonography, Nursing (RN and LPN-RN option), Orthopaedic Technology (degree/ certificate), Paramedic Emergency Medicine, Radiation Therapy (degree /certificate), and Radiologic Technology. They are applied toward tuition in the first semester.
- *Comprehensive Fee:* \$25 per credit hour (supports Student Center, student activities and organizations, Wellness Center, Athletics, Health Services, and Campus Safety)
- *Academic Instruction Fee:* This fee is charged to all students taking lab, clinical, field experience, and/or practicum courses. It is calculated by subtracting the number of lecture hours from credit hours and multiplying the remainder by \$110 for each course. This fee is added to the normal tuition charge for that course. No academic instruction fees are charged for co-ops and internships.
- *Clinical Documentation Fee:* All students taking the following courses are charged a \$150 clinical documentation fee per class: DGMS 296C, ORTH 150C, RADT 159C, and RDTH 190C.
- *Clinical Surcharge:* All students enrolled in the following clinical Dental, Diagnostic Medical Imaging, Nursing, Orthopaedic Technology, and Paramedic Emergency Medicine courses are charged \$500/per semester: ADED 113C, ADED 114C, ADED 191C, ADED 196C, ADED 212C, ADED 221C, CAT 204C, CAT 206C, DGMS 291C, DGMS 296C, DGMS 297C, DGMS 298C, NURS 115C, NURS 116C, NURS 117C, NURS 178C, NURS 215C, ORTH 150C, ORTH 220C, PEM 194C, RADT 159C, RADT 164C, RADT 165C, RADT 294C, RADT 295C, RDTH 190C, RDTH 195C, RDTH 290C, RDTH 293C, RDTH 295C, and RDTH 296C.
- *Course Fee:* All students taking the following courses will be charged a \$50 course fee for each class: INDS 150C, INDS 250C, MCET 105C, MCET 205C, MCET 250C, MCET 260C MFET 111C, MFET 202, MFET 220C, MFET 241C, RAET 205C, RAET 210C, and RAET 220C.
- *Nursing NCLEX-RN Licensure Exam Preparation Fees:* All students taking these courses are charged the following fees to help cover the costs associated with ATI online practice and proctored assessments and tutorials, individualized remediation plans, and end-of-program testing to prepare students for the NCLEX-RN licensure exam: Summer 2021- NURS 178C, \$285; Fall 2021- NURS 115C, \$615; Fall 2021- NURS 116C/117C, \$285; Spring 2022- NURS 116C/117C, \$615; and Spring 2022- NURS 215C, \$285 plus \$385 NCLEX Live Review Course (\$670 total).
- *Orthopaedic Technology Specialty Supplies Fee:* All students enrolled in these courses are charged a \$750 per semester clinical surcharge: ORTH 108C, ORTH 109C, and ORTH 208C.
- *Paralegal Studies Fee:* A \$125 fee will be assessed for all students taking PLGL 104C and PLGL 225C to cover costs associated with ABA dues, Lexis/Nexis, and UNH Franklin Pierce School of Law Library.
- *Radiation Badge Fee:* A \$89 fee will be assessed for all student taking ORTH 150C, RADT 159C, and RDTH 195C for the cost of the radiation badge, which is required per state/national law and accreditation to monitor student radiation dose. A \$25 fee will be assessed to replace any lost radiation badge.

Other mandatory fees below must be added to tuition.

Tuition rates are based on per credit hour cost.

¹ [Military Students Tuition Rates](#)

² The [New England Regional Student Program \(NERSP\)](#) enables a resident of a New England state to enroll in a public college or university in the 6-state region at 50% above in-state tuition for all of NHTI's degree and certificate programs. All applicants will automatically be reviewed for New England Regional Student Program eligibility upon application. NHTI considers New England Regional status to be a form of financial aid. For further information, contact a high school guidance counselor or the NHTI Admissions Office.

- *Teacher Education Conversion Program Fee:* A \$25 fee is assessed for all students taking TECP 50C, TECP 51C, TECP 60C, TECP 62C, TECP 66C, TECP 87C, and TECP 88C to cover the cost of clinical practice.
- *Theater Materials Fee:* A \$25 fee will be assessed for all students taking THTR 185C and THTR 250C.
- *Travel Fee:* A \$75 fee is assessed for all students taking HSTM 101C to defray costs associated with student travel experiences. Additional costs are associated with some of the more extensive trips.
- *Visual Arts Ceramic Studio Fee:* A \$65 fee is assessed for all students taking VRTS 135C and VRTS 235C.
- *Visual Arts Chemical Fee:* A \$20 fee is assessed for all students taking VRTS 130C and VRTS 230C to cover the cost and disposal of chemicals used in this class.
- *Visual Arts Model Fee:* A \$20 fee is for all students taking VRTS 133C and VRTS 210C for cost of live modeling.
- *Liability Insurance:* Personal professional liability insurance is mandatory for all students in health and human service-related programs that have clinical requirements. The cost is approximately \$25 per year. Liability insurance may be required for students in other programs who participate in an off-campus practicum or internship.

Residence Costs

Assignment to an NHTI residence hall is open to any student registered for a minimum of 9 credits for the academic year, any Allied Health student who has clinicals, any student who only has 1-2 classes left to graduate, any ESOL student as recommended by the ESOL advisor, and any student with learning disabilities as recommended by Accessibility Services.

Occupancy				
Double/Triple	Room	Board	Resident Activity Fee	Total
Fall 2022 Semester	\$3515	\$1725	\$75	\$5315
Spring 2023 Semester	\$3515	\$1725	\$75	\$5315
Both	\$7030	\$3450	\$150	\$10630
Single				
Fall 2022 Semester	\$4220	\$1725	\$75	\$6020
Spring 2023 Semester	\$4220	\$1725	\$75	\$6020
Both	\$8440	\$3450	\$150	\$12040
Super Single				
Fall 2022 Semester	\$4618	\$1725	\$75	\$6418
Spring 2023 Semester	\$4918	\$1725	\$75	\$6418
Both	\$9236	\$3450	\$150	\$12826
Fall, Spring, and Summer 2022-2023				
Double	\$8900		\$150	\$9050
Super Single	\$11692		\$150	\$11842

Payment and Refund Policies

Payment of Tuition and Fees

Each semester, tuition and fees are due 2 weeks prior to the first class day. It is the student's responsibility to view their tuition, fees, and housing charges online through the Student Information System (SIS). Accounts should be monitored routinely throughout the semester. NHTI does not send paper bills. Students can make payment through their SIS account using a bank account (e-check) or credit/debit card and at the Bursar's Office using cash, check, MasterCard/VISA, Discover, and debit cards. Checks can be mailed to NHTI, Attn: Bursar Office, 31 College Drive, Concord, NH 03301. NHTI also offers an online installment payment plan.

Unpaid Balances

If payment arrangements have not been made for the entire balance by the tuition due date, a late fee of \$50 may be applied. Students with outstanding balances at the end of the semester will be sent to an outside collection agency, which will result in additional fees being added to the student's balance.

Financial Aid Recipients

All financial aid requirements must be completed to have financial aid applied to the tuition bill. To verify that financial aid requirements are completed, students should:

- Be sure all financial aid requirements are met: Go to SIS and click on the Financial Aid tab. Choose Overall Financial Aid Status. Select Campus. Select 2022-2023 Aid Year. If requirements need to be completed, the message, "You have unsatisfied student requirements for this aid year," will be displayed. Click on the link to view requirements.
- Verify financial aid will cover tuition charges: Go to SIS and click on the Financial Aid tab. Choose Award, then Award for Aid Year. Select Campus; select 2022-2023 Aid Year. Click on Award Overview Tab. Scroll to Financial Aid Award by Term. If financial aid has been awarded, the amount of estimated aid for the term will be displayed. Deduct the estimated total amount of the award for the term from tuition charges.

Students that do not have financial aid in place by the tuition due date or have a remaining balance due after the estimated financial aid award may have a \$50 late fee assessed. Students with questions about financial aid should contact the Financial Aid office at NHTIfinaid@ccsnh.edu or 603-230-4013.

Military Benefit Recipients

Students eligible to receive military education benefits should complete the following steps:

- Complete all paperwork required through military service and/or the VA at least 8 weeks prior to the start of the term (the VA may take 8 weeks to process paperwork).
- Submit VA eligibility paperwork (COE, NOBE), [Military Semester Worksheet](#), Guard and Reservist tuition assistance/tuition waiver authorizations to NHTI's school certifying official (SCO) in the Registrar's Office.
- Make payment arrangements for semester charges not covered by military benefits by the semester due date. Tuition is due 2 weeks prior to the start of the semester.

In accordance with the Veterans Benefits and Transition Act of 2018, students receiving GI Bill® and VR&E (Chapter 33 and Chapter 31 beneficiaries) are considered in good financial standing once the student provides a certificate of eligibility (COE) or valid VAF 28-1905 to the SCO and establishes an approved payment arrangement for any tuition and fees (not covered by their GI Bill® and VR&E benefit) by the tuition due date each semester. If a student's eligibility for GI Bill® and VR&E should change during the semester, the student is responsible for making payment arrangements for any balance that may be due as a result of the change.

The college will not impose a penalty or require the beneficiary to borrow additional funds to cover tuition and fees due to late payments from the VA. The college allows up to 90 days from the date the beneficiary provides a COE or valid VAF 28-1905 form to receive payment from the military. During this time, the beneficiary should not experience interruption in educational services, such as being withdrawn from their course for non-payment.

Third-Party Payments

For NHTI to invoice an employer, company, or agency for courses, the following conditions are required:

- If the employer, company, or agency (insurance company, VOC rehab, CAP, etc.) is paying for tuition, students need an official letter or Tuition Authorization Form from the company authorizing NHTI to bill them. This should be submitted at the time of registration for day, evening, online, or business training courses prior to the first class. The company must be willing to pay upon receipt of invoice.
- If the third-party states there are contingencies, (i.e. grade of C or better upon completion, etc.), NHTI cannot bill the third party. The student must pay the semester charges by the tuition due date and receive reimbursement directly from the third party.
- For NHTI to send an invoice to a company, the letter must be on official letterhead and include student name, company contact name, company billing address and email address, company telephone, the course and/or maximum amount of tuition allowable.
- It is the student's responsibility to make sure the company pays the invoice. If the company fails to pay the invoice, the student is responsible for the bill and will not be eligible to register for future courses until the bill is paid in full.
- A separate letter is needed for each semester.
- If the company offers a reimbursement program, the student is responsible for tuition. NHTI does not offer deferments.
- NHTI reserves the right to not accept payments from companies that are not in good standing with NHTI.
- Contact the third-party payables representative in the Bursar's Office at 603-230- 4000 x4112 with questions.

Delinquent Accounts Collections Policy

Any account balance 90 days past due may be turned over to an independent, outside collections agency. When this happens, no payments will be accepted by NHTI and the debt will be reported to the credit bureau. The cost of the outside collection agency (up to 35% of the amount due) and any legal/bounced check fees will be added to the total amount owed. Students who owe a past-due balance will not be eligible to receive official transcripts or register for courses at NHTI and/or other CCSNH colleges until the balance is paid in full.

NHTI Refund Policies

For refunds due to overpayment (including but not limited to Title IV Stafford sub/unsub loans, scholarships, grants, and Parent Plus loans), students can choose to receive a refund through SIS. Students may check SIS to find out when a credit has been issued or when an NHTI refund has been posted. Once the NHTI refund is processed, students can expect to receive it as follows:

- ACH direct deposit and/or reloadable debit card 3 business days from the date the refund is viewable on the Student Choice Refund page of SIS
- Check refunds up to 14 business days from the date the refund is viewable on the Student Choice Refund page of SIS

All Federal Title IV funds (i.e. PELL, SEOG, Perkins Loan) are refunded according to the rules and regulations mandated by the U.S. Department of Education. Students are responsible for making sure their most current mailing address is on file with our college; any address changes should be made through the Registrar's Office.

Refunds from Cancelled/Dropped Courses or Withdrawing

Students need to contact the Registrar's Office or the Academic Advising Center by phone, fax, or email or in person prior to the published date for last day to withdraw with refund. Students that do not formally withdraw from a course by this deadline will be responsible to pay for the course.

Refunds from BTC Courses and Workshops

Participants registered for workshops through the BTC must notify the BTC at least 5 business days prior to the first session to receive a full refund. There may be exceptions because of enrollment restrictions. Consult the web site or contact the BTC at 603-230-4022 or NHTIbtc@ccsnh.edu with questions.

Financial Aid

The Financial Aid Office recognizes education is an investment to last a lifetime and is committed to working with students to secure eligible funding so they can achieve their goals. Whether students are enrolled full time or part time, they may qualify for financial aid to bring down their college costs or cover them entirely.

Things to know:

- Students need to apply for financial aid each academic year.
- Students need to be matriculated (formally accepted) into a financial aid-eligible program (16 credits or more).
- Every matriculated student could be eligible for federal aid.

Federal Financial Aid

Students that complete the FAFSA will have their application emailed to Financial Aid automatically. The Financial Aid Office will review it to determine a student's eligibility for funding. Some students may be randomly selected for verification. If a student is selected, they will receive an email and or letter from the Financial Aid Office.

Additional Sources of Financial Aid

Financial aid can come from a variety of sources. Students should also consider:

- [Scholarships and grants](#)
- Work-study opportunities
 - Students may be eligible for work-study opportunities at NHTI if there is a documented financial need and checked the box on the FAFSA form for work study. Students can request and/or apply for work-study funds any time during the academic year.
 - Work-study jobs
 - Clerical/office positions on campus in various departments

- Community service positions on campus, at college extension sites, and in community agencies
- America Reads/America Counts
- Non-profit community agencies
- Interested students should contact Financial Aid at 603-230-4013 for eligibility and a list of work-study job openings. In-state students may be eligible for state-funded Community College Work-Study funding.
- Additional loans
 - Federal Direct Stafford Loan: These fixed-rate student loans do not require students to make any payments until 6 months after they leave college or reduce their course load below 6 credit hours.
 - Parent Loan for Undergraduate Students (PLUS): This program allows parents of dependent students to borrow in their own name through the Federal Direct Loan Program to help meet educational expenses. For more information: www.studentaid.gov
 - Private educational loans may be available to students who have exhausted all federal and state aid options. For more information: www.elmselect.com

Learning Commons

The NHTI Learning Commons is the learning and information hub of the college. The Learning Commons Library, housed in the Learning Commons building, accommodates different learning styles through a variety of study spaces, including reservable study rooms, a state-of-the-art instructional lab outfitted with hyflex technology, abundant natural lighting, soft seating, standing desks, data ports, scanning capabilities, and wireless printing. The Learning Commons Library provides community members an inclusive, comfortable, and dynamic environment for research and study.

As an academic teaching library staffed by knowledgeable information professionals, the NHTI Learning Commons Library offers the services and collections of a traditional library while embracing and forward-thinking technology and collection development practices. The library offers complete research services to NHTI's learning community, including robust reference and instructional services and on-site and remote access to over 50 databases. The Learning Commons Library boasts a robust collection of 50,000+ print books, 600,000+ ebooks, numerous print and electronic journals, digital magazines, film and audio collections, and a streaming video database.

The Learning Commons Library's comprehensive services, in support of the college's initiatives on information literacy and the educated person, include online integrated searching of 50+ carefully selected databases, information literacy instruction and resources, social awareness toolkits, and collaboration with many other academic, public, and special library networks. The Learning Commons Library is the designated home library for the New Hampshire Chapter of the American Institute of Architects and Structural Engineers of New Hampshire. The library's archives contain records, documents, photographs, and other ephemera of NHTI's history. The library is also the host venue for NHTI's Wings of Knowledge lecture series, as well as other campus events and exhibits.

STUDENT SUPPORT

Academic Assistance

Academic Center for Excellence

The Academic Center for Excellence (ACE), located in the Learning Commons, supports students by promoting independent self-directed learning. We offer free tutoring programs for students in need of extra help or looking to further their educational goals. Our tutoring programs include open labs and tutorials for A&P and Biological Sciences, Math Lab, Writing Center, Study Skills, peer tutoring, and group study sessions. During tutoring sessions, students can ask questions, learn at their own pace, and receive immediate feedback.

Students who want to discuss academic support offerings can meet with an ACE tutor to talk about their learning strengths and challenges. ACE can help refresh essential study skills such as organizing time and materials, taking lecture notes, reading and studying textbooks, and preparing for tests. ACE offers help in the following areas:

- Placement Testing
- Writing Center and Resources
- Math Lab and Resources
- Study Solutions Lab
- The SQR³ Method of Textbook Study

Academic Advising

NHTI academic advisors help define students' academic, career, and life goals. Whether students need guidance selecting classes, transferring to a 4-year school, or clarifying long-term goals, an academic advisor is here to help. NHTI's advising program provides the knowledge to identify personal, academic, and career goals; develop an educational and career plan; and monitor progress toward achieving these goals. Academic advisors can help:

- Empower students to be active participants in their decision-making processes.
- Connect students to the community using school resources, student clubs and organizations, athletic teams, work-study programs, and student activities.
- Help students understand themselves, develop critical thinking and reasoning skills, and clarify values.
- Provide advising services that are visible and available to everyone.

The Academic Advising Center is located in the Learning Commons Library building.

Accessibility Services

Accessibility Services supports students according to individual needs. Information regarding student disabilities is confidential. In compliance with Section 504 of the 1973 Rehabilitation Act and the Americans with Disabilities Act of 1991, NHTI does not discriminate against students with disabilities in terms of program admissions and/or opportunities for academic success. Students are encouraged to report their disabilities prior to their first semester of classes. Accessibility Services supports student goals and program of study through:

- Letter of accommodation
- Academic coaching
- Assistive technology and equipment loans
- Referral for diagnostic testing
- Request for reduced course load
- Verification for health insurance and athletic participation

Students can qualify for assistance if they have:

- A diagnosed disability
- A history of a disability, but have not previously received service
- A history of school difficulties
- An undiagnosed learning disability, ADD, or other disability

Documentation is required; some restrictions apply. Students needing housing accommodations for medical needs should contact Accessibility Services. Eligibility is determined by the Accessibility Services coordinator.

Behavioral Intervention Team

The Behavioral Intervention Team (BIT) serves as a central network focused on preventive and timely intervention before a crisis arises. BIT is a resource for faculty, staff, and students by which they can report behaviors that may evoke alarm or concern among involved persons. These can include but are not limited to:

- Suspected violations of college policies
- Concerns about a student's well-being
- Self-injurious behavior/suicidal ideation or attempt
- Erratic behavior (including on-line activities) that disrupts the mission and/or normal proceedings of college students, faculty, staff, or community
- Threats of a weapon on campus
- Hospital transport for alcohol and drug use/abuse
- Behaviors that appear to be dangerous or threatening to others
- Other behavior that is inappropriate or disruptive

The BIT process does not replace faculty classroom management, disciplinary processes, and/or public safety responses to incidents. Students with questions about BIT or the need to report a concern can contact one of the [current team members](#) or [submit an incident report](#). Those who need immediate assistance with a threat or concern should contact Campus Safety at 603-224-3287.

Counseling Services

NHTI offers individual short-term counseling and prevention services to all NHTI students. Counseling services are provided by licensed, eligible-in-the-state-of-N.H. mental health professionals sensitive to issues of race, gender, ethnicity, sexual orientation, ability, culture, and learning differences. Counseling sessions are confidential and not part of the academic record. For longer-term services, referrals are made to local mental health professionals. Crisis intervention services are offered during open hours. After-hours crisis coverage is coordinated with community mental health services.

NHTI Counseling provides the following services:

- Short-term student counseling based on the Wellness Model
- Consultation to students, staff, and faculty
- Crisis intervention
- Resource and referral services
- Sexual and relationship violence prevention

NHTI also provides access to online counseling resources through Kepro SAP, free confidential student counseling services by licensed mental health professionals in the local area and other supports 24 hours a day, 7 days a week, 365 days a year. Students get up to 6 counseling sessions per incident per year at no cost.

Cross-Cultural Opportunities

Cross-cultural education and English for Speakers of Other Languages (ESOL) initiates, develops, and coordinates programs and services to meet the educational needs of our diverse campus population and in the community.

- *ESOL*: NHTI offers credit courses leveled to meet ESOL students' needs. Students are guided to take 1-2 ESOL courses with courses in their desired academic program.
- *ESOL tutoring and support services*: ESOL students receive free assistance with academic work including help writing English essays, preparing oral presentations, and other communicative support, and completing other assignments and projects. Tutoring sessions are designed to improve reading comprehension, vocabulary, writing, and conversational skills.
- *Programs and projects*: The ESOL office coordinates programs and projects including the Conversation Partners Program, which brings together native English-speaking and multilingual students on campus.

NAMI Suicide Prevention

In partnership with NAMI New Hampshire, NHTI provides education to the college community on recognizing the signs of a person at risk for suicide, and how to connect the person to help. The grant focuses on increasing protective factors and building relationships and a network of support. A key component is to ensure the college has an effective

“postvention” plan in place, if the need should arise. All of these efforts are accomplished by partnering with faculty, counseling staff, residence life staff, and all stakeholders and student groups.

LGBTQ Resources

NHTI is committed to supporting LGBTQ students academically, professionally, and personally. NHTI fosters a campus of inclusion, respect, and equality. In partnership with Campus Safety, Civil Rights/Equity, and the NHTI Alliance, the campus provides advocacy and support to LGBTQ students who experience harassment, discrimination, or hate crimes.

NHTI Cares

NHTI Cares helps students with immediate, emergency, and one-time expenses. This covers situations such as loss of employment, unanticipated medical issues, changes in family dynamics, and unanticipated expenses with NHTI course work.

NHTI Cares was created in Fall 2018 in response to an increase in students experiencing short-term financial stress due to unanticipated circumstances. In order to support to as many students as possible, the amount of funding support provided is limited. Examples of what NHTI Cares can pay for include but are not limited to medical expenses, weather- and work-appropriate clothing, groceries, car repairs, and professional licenses. Contact the Office of Student Affairs at 603-230-4040 or NHTIstudentaffairs@ccsnh.edu for additional information.

NHTI Lynx Pantry

The NHTI Lynx Pantry is an on-campus food pantry with shelf-stable food items. The Lynx Pantry offers non-perishable, shelf-stable food, personal care items, and perishable (fruits, vegetables, bread, refrigerated, and frozen) food options. The Lynx Pantry is located on the first floor of Little Hall in Room 103. Any members of the NHTI community can access the Lynx Pantry during set hours for pick-ups. The Lynx Pantry is always accepting donations of shelf-stable food, personal care items, and monetary donations.

The Lynx Cupboard was established in Fall 2019 to address food insecurity at NHTI to support our students’ academic pursuits. The name was changed to the NHTI Lynx Pantry when the pantry reopened in the Fall of 2020 with expanded offerings and the ability to offer refrigerated and frozen options. If students have questions or suggestions for the Lynx Pantry, they can contact the Office of Student Affairs at NHTIstudentaffairs@ccsnh.edu. Students can call the pantry at 603-271-6484 x4224.

Student Concerns and Complaints

Students who have a complaint or concern should discuss the situation directly with the person(s) involved. In the event this does not resolve the issue, the matter should be taken directly to the Student Affairs Office, located in the Student Center.

The director of Residence Life should be notified of any unresolved issues pertaining to the residence halls and dining services. The Student Senate Concerns Committee should be notified of any unresolved concerns which do not directly involve the residence halls.

Information on how to file a complaint about NHTI to the N.H. Department of Education Division of Higher Education may be found at <http://www.education.nh.gov/highered/compliance-allegation.htm>.

CAMPUS RESOURCES

Bookstore

The NHTI Bookstore, located in the Learning Commons, is the one-stop shop for all things NHTI. It's the place to get textbooks, books, course materials, and supplies. Students can get t-shirts, sweatshirts, hats, and hoodies, plus gift items like mugs, decals, cups, and NHTI Lynx Fan Gear. We take all forms of payment including financial aid.

Buying textbooks and other course materials can be expensive. Follett, the college's bookstore provider, works to help students get course materials at the lowest possible cost. Follett provides a variety of affordable solutions to our campus. Whether it's digital, used, or rental, these course material options give students the tools to be successful in the classroom with cost savings and ease of accessibility. PayPal and PayPal Credit are accepted.

- The NHTI Bookstore has access to the industry's largest selection of used textbooks at lower costs.
- Renting books costs, on average, less than half the new textbook price.
- The NHTI Bookstore has partnerships to provide digital content for ebooks and study guides.
- Find a lower price somewhere else and the NHTI Bookstore will match it.

Health Services

NHTI Health Services provides a range of services to matriculated NHTI students free of charge or for a minimal fee; a small fee may be assessed for immunizations and lab testing. The Health Services Office is a resource center where students can learn healthy behaviors. For more information, call 603-230-4043, email NHTIhealthservices@ccsnh.edu or stop in to the Health and Counseling office located in the Student Center. Our services include:

- Nurse/nurse practitioner appointments
- Physical exams
- CPR classes
- Feminine hygiene supplies
- First aid supplies
- Immunizations
- Over-the-counter medications
- Safer sex supplies
- TB testing
- Testing: antibody titers, strep, UTI, pregnancy

Health Insurance

NHTI requires proof of current health insurance for students enrolled in an Allied Health program or playing on an NHTI athletic team. NHTI does not provide access to health insurance; it is up to the student to obtain health insurance. A copy of a student's current insurance card must be provided to Health Services prior to the start of any Allied Health or athletic team program. Active military can submit a copy of a military ID.

Health insurance must meet the following criteria:

- Be a U.S.-based insurance plan
- Provide the 10 essential health benefits specified in the [Affordable Care Act \(ACA\)](#)
- Include access to hospital and physician providers local to NHTI
- Remain in effect for the entire semester

The following plans do not meet the criteria:

- An accident-only policy
- A short-term limited duration health plan that does not meet ACA requirements
- A ministry sharing plan
- Any other health benefits program not recognized by the state of N.H. as being health insurance

NHTI Health Requirements

NHTI requires students enrolled in an Allied Health program, living on campus, or playing on an NHTI athletic team to provide health record documentation. All health records should be submitted directly to NHTI Health Services. Health record requirements must be completed prior to the start of any of these programs. Health records will be reviewed and the program(s) will receive notification of clearance once a student has completed all requirements. See below for specific health record requirements.

Allied Health Program Health Record Requirements

- *Color blind testing*: Paramedics only. May be done for free at Health Services.
- *COVID-19*: COVID-19 vaccination is required at all clinical rotation sites.

- *CPR*: We only accept BLS for Healthcare Provider, or Professional Rescuer CPR from the American Red Cross, American Heart Association, or the National Safety Council. CPR is renewed every 2 years and must remain current during a student's enrollment. CPR that is not acceptable includes but not limited to Heartsaver, Friends and Family, and Adult and Pediatric CPR. Students can call Health Services prior to taking a class with questions or to verify it will be accepted. Classes on campus are held and taught by Health Services.
- *Diphtheria/Tetanus*: Immunization within the past 10 years is required. The student must remain current throughout their enrollment. They must have evidence of having had one TDAP.
- *Flu*: Annual flu shots are mandatory at many facilities. It is highly advised to get yearly flu shots while they are easily available as it is uncertain into which facility the student may be placed.
- *Health Insurance*: Current health insurance requirements as of 2019: <https://www.nhti.edu/services/campus-resources/health-services/> (under the "Insurance" tab)
- *Hepatitis B*: Evidence of 3 immunizations and a positive surface antibody titer are required. If a student has not received the series of 3 immunizations or their titer is non-reactive or negative, they must begin the series. The series generally must be completed within a 6-month period. After one month from the third shot, a student can draw a titer. If they remain negative after 2 series, they will be considered non-reactive and further counseling will be done by Health Services.
- *Measles, Mumps, and Rubella (MMR)*: Evidence of 2 MMR shots after 1980 or positive MMR titers are required. If any of the titers are equivocal or negative, the student must receive the vaccine.
- *Physical exam*: Must be signed by a physician or nurse practitioner and have occurred within the past 12 months. Needed upon entrance into the program.
- *Two-step Tuberculosis Skin Test (TST)*: All allied health students must have an initial 2-step test within the past year, then one annually or have TB blood work done. The initial test should be planted and then read within 48-72 hours. The second test should be done 1-3 weeks after the initial test. One TST is required annually after an initial two-step. Repeat bloodwork needs to meet the annual requirement. If you have a history of a positive test, you must submit the results and either a clear x-ray (within 5 years) or negative bloodwork. An annual symptom review must be signed for those with a positive history.
- *Varicella*: Evidence of 2 shots or a positive titer is required. If a titer is equivocal or negative, the student must receive the vaccine. Confirmation by a doctor is not acceptable; the student must have a titer.

Maintaining and updating immunizations, insurance, and CPR is the student's responsibility. All changes should be reported to Health Services. Health Services requires 2 business days to process information for clinical clearances.

Residential Life/Athletics Health Record Requirements

Students living on campus/playing sports are required to submit health information prior to moving in/the first practice.

- Physical exam within the past 12 months
- Two MMR vaccinations
- Updated TDAP/TD (tetanus)
- Health History Form from Health Services
- COVID-19 vaccination is required to play sports at many locations.

COMMUNITY ASSETS

Community Service

NHTI encourages students to get involved in community service by working with non-profit organizations in Concord and in their local communities. NHTI is committed to promoting service-learning opportunities that infuse a community service experience into the course curriculum to enrich the educational experience and provide meaningful service to the community. Service-learning opportunities link theory with direct experience, giving students greater responsibility for their learning and developing a richer context by making the academic subject relevant to real-world experience. Each year, 500+ students participate in service learning at NHTI, totaling 4,000+ hours of service. The courses incorporating service learning grows across the many academic departments in response to community needs.

Dental Hygiene Clinic

The NHTI Dental Hygiene program provides comprehensive patient-centered care through our Dental Clinic. The clinic's primary purpose is to educate dental hygiene students to become competent professionals and increase public awareness of oral health. Quality dental hygiene care is critical to the well-being of every patient treated. NHTI's dental hygiene clinic is a classroom/learning environment where student hygienists provide services at a minimal cost. NHTI Dental Hygiene students have been evaluated for lab and clinical competency prior to treating patients in the clinic and are closely supervised during treatment to provide optimal care. The Dental Hygiene Clinic is located in MacRury Hall and is open to all NHTI students, faculty, and staff, as well as the public.

The New Hampshire Police Standards and Training Council

The New Hampshire Police Standards and Training Council, responsible for state certification and training of all police and State correctional and probation/parole officers in the State of New Hampshire, is located in a facility across the street from the Sweeney Hall.

Among the programs conducted by Police Standards and Training is the New Hampshire Police Academy, a residential, 12-week para-military training program that uses some of the facilities of NHTI at specific times, including the Capital Commons and the Dr. Goldie Crocker Wellness Center. The recruits who attend this program have been hired as police officers by a state agency or municipality, and attend this program to achieve certification and the right to serve as an officer. The recruits attending this program will be seen from time to time traversing the campus in formation, especially to and from meals at the Capital Commons. The recruits are always in the direct control of the Academy staff and would not normally have direct contact with the students or faculty and NHTI.

ADMISSIONS

Admission to NHTI and its academic programs is based on a number of considerations. Waiver of any portion of NHTI admission requirements because of special situations may be achieved only through consultation with department chairs and the director of Admissions. To apply to NHTI, visit www.NHTI.edu, call the Admissions Office at 603-230-4011 or 800-247-0179, or email NHTIadmissions@ccsnh.edu.

General Admissions Requirements

Many NHTI programs have prerequisites, are competitive, or have other specific admissions requirements. For admission to these programs, students need official transcripts forwarded to NHTI by secondary and postsecondary institutions. Application materials should be sent to:

NHTI – Concord’s Community College
ATTN: Admissions Office
31 College Drive
Concord, NH 03301-7412

You can also request that your school email your official transcripts to NHTIadmissions@ccsnh.edu.

Students are encouraged to submit an official high school transcript, diploma, or equivalent (GED/HiSET) documentation, as these may be used for advising or to waive placement testing. Students will complete a High School Self-Certification as part of the application; documentation of high school (or an equivalent) completion may be required to receive federal financial aid.

Application Deadlines

While NHTI offers rolling admissions for most programs, Allied Health programs have application deadlines:

- | | | | |
|----------------------------------|---------------|---------------------------|---------------|
| • Radiologic Technology: | Jan. 13, 2023 | • Nursing RN: | Jan. 27, 2023 |
| • Diagnostic Medical Sonography: | Jan. 13, 2023 | • LPN-RN Completion: | March 3, 2023 |
| • Dental Hygiene | Jan. 27, 2023 | • Radiation Therapy: | March 3, 2023 |
| • Dental Assisting | March 3, 2023 | • Orthopaedic Technology: | March 3, 2023 |

The Radiologic Technology and LPN-RN Completion programs begin in the Summer term; the other Allied Health programs begin in the Fall term only.

Specific Admission Requirements

Many associate degree and certificate programs have additional requirements listed on their [academic program pages](#). Students are responsible for knowing the requirements, deadlines, and documentation for admissions. These include:

- Prerequisite courses with a C or better
- Entrance exams
- A personal interview and reference

If a student does not meet the program requirements, they may still be offered admission to either the Liberal Arts Associate in Arts program or the General Studies Associate in Science program. This allows the student to enroll at NHTI and work with an academic advisor to complete the prerequisite courses needed to pursue their goal.

Additional Admissions Requirements and Recommendations

SAT/ACT/Placement Testing

Though not required, it is recommended students submit scores for standardized national college admission tests taken within the last 5 years. These scores may be used to waive the placement testing requirements.

Mathematics Requirement

All of our degree programs require the successful completion of at least one semester of college-level mathematics. It is recommended students complete high school Algebra I with a C or better prior to NHTI admission. Many STEM programs require additional math for admissions. If a student’s placement testing does not demonstrate readiness for college-level mathematics, it may take more than 2 years to complete their degree.

Transferring to NHTI

Students requesting transfer to NHTI should submit all documents listed for general admission and must meet the specific admission requirements for their desired program. In addition, official transcripts from postsecondary institutions attended are needed to evaluate transfer credit.

- Only those courses required in the desired program will be considered.
- Courses must be equivalent in content and credit hours to those required in the desired program.
- Grades must be a C or higher, based on NHTI standards.
- Science and other technical courses, including but not limited to Anatomy and Physiology I and II and Microbiology, taken more than 5 years prior to the desired date of entry must be repeated or challenged to be applied toward most Allied Health programs. Time limits may apply to computer or major field courses; final decisions rest with the department chair.
- Most general education courses do not have time limits; final decisions rest with the department chair.
- College credit will be granted to students with military training, experience, or coursework recognized by the American Council on Education. Students seeking credit for their military experience will submit a hard copy of their military transcript to the Admissions Office for the review/evaluation process.
- International Baccalaureate (IB) exams are considered for transfer credit if scores from the International Baccalaureate Organization are submitted. Of the 2 IB exam levels, only the higher-level exams where a score of 5, 6, or 7 has been achieved will be considered for transfer credit. Credit will not be given for standard-level exams.
- CLEP and AP exams are considered for transfer credit if scores from the College Entrance Examination Board are submitted. Students who have taken AP and IB exams do not receive credit for both.
- Challenge exams, credit by exam, and pass/fail courses taken at other institutions will not be considered for transfer credit.
- Course descriptions, syllabi, and course outlines may be requested.
- The director of Admissions, in consultation with the VPAA and department chair, if necessary, is responsible for determining the appropriateness and acceptance of transfer credits.
- Students seeking transfer credit for prior completed college coursework at an institution outside the U.S. need to provide an official foreign credential evaluation to the Admissions Office for review; a list of accredited credential evaluation services can be viewed at www.naces.org/members.html.

Transfer credits may be used to satisfy degree course requirements. Grades associated with such credits will not be included in the determination of GPA, which reflects only achievement in courses completed at NHTI.

Transferring into an Allied Health program for advanced standing (i.e., transferring a clinical course from another institution to begin the program in an upper-level course at NHTI) is based on clinical site availability and the specific transfer policy of the individual department.

In the event a student fails an NHTI course, subsequently and satisfactorily completes a comparable course at another institution, and requests transfer, those credits may be used to satisfy NHTI program requirements at the discretion of the department chair. The grade received at NHTI will remain a part of the student's transcript, and it will be used in determining the student's GPA. Only by successfully repeating the failed course at NHTI will the failing grade be discounted from the student's GPA calculation.

Testing and Experiential Credits

- *Placement Testing:* Academic advisors will use multiple measures, including placement testing, to determine appropriate placement in first semester college coursework. Placement testing may potentially be waived based on factors such as high school GPA, transfer credits, and standardized test scores such as SAT, ACT, or ATI TEAS exam scores. The student may be required to complete placement testing before registering for classes. Non-matriculated students and students in certificate programs do not need to complete placement testing. Contact the Academic Center for Excellence at 603-230-4027 to make an appointment.
- *Advanced Placement Testing:* AP exams are considered for transfer credit with a minimum score of a 3. Official exam scores from the College Board have to be submitted to the Admissions Office for review.
- *SAT Scores:* If a student submits SAT scores that are <5 years old, they may be waived from taking certain placement tests. An SAT Math score of 530+ places them directly into college-level math and waives them from taking the math placement test. An SAT Evidence-Based Reading and Writing score of 480+ waives the reading comprehension test, and an Essay writing score of 6+ waives them from taking the writing placement test. All

SAT scores should be submitted to Admissions prior to or at the point of acceptance to best facilitate registering for first semester courses.

- *Criminal Justice Program*: Students who have previous training through Police Standards and Training, County Corrections, the state Corrections Academy, or in-service training may be eligible to receive credit for courses in the NHTI Criminal Justice program. For more information, contact the Admissions Office or the Criminal Justice department.
- *Advanced Standing Credit*: Evaluation of credit received from a college or hospital-based program in a health-related field may result in advanced-standing credit toward the General Studies associate degree. Students need current certification to be eligible. Credentials include licensed nurse assistant, dental assistant (national certification), and paramedic (New England EMS Institute). For more information, contact Admissions

NHTI/USNH Dual Admission

The NH Dual Admissions and the NH Transfer Programs provides a seamless academic pathway from NHTI (or any CCSNH college) to one of the institutions of the University System of New Hampshire: University of New Hampshire, Keene State, Plymouth State, and Granite State College in a broad range of programs. Students enrolling in this program will receive academic advising to chart a seamless transfer pathway.

Home-Schooled Students

NHTI encourages applications from students who are home-schooled. While the nature of home schooling is unique to each student, the college requires appropriate documentation to determine admission. Applicants are expected to meet the same general and specific admission requirements (or their equivalent) as other applicants and to document the academic work they have accomplished. Documents to be submitted may include:

- A letter or other documentation from the student's local school district stating they have completed a home school program at the high school level
- A list of courses taken and grades earned and/or portfolio of work accomplished
- High school equivalency or other testing, if applicable

Contact the director of Admissions with any questions regarding documentation and/or admission to NHTI programs at 603-230-4011.

International Students

NHTI is authorized by the U.S. Student Exchange and Visitor Program (SEVP) to issue I-20 (Application for Student Visa) forms for students accepted into associate degree programs only. In addition to the general admission requirements and specific admission requirements for their desired program, international students must submit:

- Official transcripts of all secondary school and university academic records; if transcripts are not in English, they must be accompanied by an official English translation.
- Applicants whose native language is not English must take the Test of English as a Foreign Language (TOEFL) and earn a score of 500 or higher on the paper-based test; 173 or higher on the computer-based test, or 61 or higher on the internet-based test.
 - Inquiries regarding the test should be addressed to: TOEFL, Educational Testing Service, Box 899, Princeton, NJ 08540, USA or www.ets.org. Official TOEFL scores must be sent from the testing site to the Admissions office.
 - Students earning a TOEFL score lower than those listed above may be evaluated for language study. Applicants who score between 380-499 on the paper-based exam, 83-172 computer-based, or 26-61 internet-based may be accepted into the General Studies program and take preparatory ESOL coursework for their first 2 semesters. Students scoring below a 380 on the TOEFL will not be admitted to the college or a program at NHTI.
 - NHTI accepts the International English Language Testing System (IELTS) test in place of the TOEFL exam. Students must receive an overall score of 6 or higher for admission into a major. Students who score between 4.5-6 may begin in the General Studies program and take preparatory coursework.
- Letter of support from the person(s) who will be financially responsible for the student; the letter should include the student's name, the intent to attend NHTI, and the amount of money available. It must be in English and funds must be stated in U.S. dollars.

- Letter from the financial institution that holds the funds of the person(s) financially responsible for the student on official letterhead in English and indicating the sponsor's and student's names and the amount of money available for the student in U.S. dollars.
- Copies of current passport and immigration documents including visa, Duration of Status (D/S) card, and I-20.
- A one-time International Student Admissions fee of \$100 at the time of application
- Proof of health insurance to the Health Services Department prior to registration

International students currently in the U.S. with an F-1 visa at another college must forward official transcripts from that college and submit an International Student Transfer Form to the Admissions Office. Dollar amounts promised by the sponsor and available in the sponsor's bank account should be sufficient to cover a minimum of one year of expenses (out-of-state tuition, fees, room, board, books, and miscellaneous expenses). Before an I-20 can be issued, applicants must have submitted all documents required to be considered for admission, be accepted into a program, and have submitted the required TOEFL score and financial documents.

Any international student planning to request an F-2 visa for dependents must submit copies of the dependents' current passport and immigration documents and plan to include the cost for the dependents' expenses in their financial support documents (an additional \$9,900 for the first dependent, \$3,500 for each additional dependent). A letter must accompany the dependents' documents, specifying name, date of birth, country of birth, country of citizenship, and relationship to the international student.

Readmission

When applying for readmission, students must meet current requirements for the desired program. Upon readmission, students will follow the curriculum in the current catalog. Any common courses will be carried forward and every attempt will be made to make substitutions when previous courses have been replaced with updated ones. To approve a substitution, the department chair will make a recommendation to the VPAA, who will make the final decision.

Students who have been absent for more than 3 semesters will be declared inactive; an inactive student wishing to return to NHTI must apply for readmission and meet current entrance requirements. Readmission to the Allied Health programs is based on clinical site availability and recommendation of the department. Contact the program department chair regarding the specific departmental readmission policy.

Change of Program

Enrolled, matriculated students may request a change in their major program of study by using the Change of Program/ Dual Major Request Form. Signatures must be received from the current major and new major department chairs. Signatures do not guarantee or imply acceptance into the new program.

Collaborative High School Programs

Early College is a program that allows current N.H. high school students to take NHTI college-level, credit-bearing courses at a discounted tuition. These credits may be applied toward a degree at NHTI or possibly transferred to another college or university. Students who complete college courses through the Early College program will receive an official transcript from NHTI. Participating students need approval from their high school counselor or administrator and complete and submit the Permission to Enroll form and Early College course registration form.

eStart is a dual credit program that affords N.H. high school students the opportunity to take 100% online college courses through CCSNH while earning both high school and college credit.

Project Lead the Way® allows high school students to explore careers in engineering or engineering technology by completing a designated sequence of courses as part of their high school curriculum. Courses include Introduction to Engineering Design, Digital Electronics, Principles of Engineering, and Computer Integrated Manufacturing. Students who have successfully completed any of these courses may be eligible to apply some of the credits to meet requirements in NHTI's Mechanical/Manufacturing Engineering Technology major.

Project Running Start offers high school students the opportunity to take college courses while at high school at a reduced tuition rate. Students who successfully complete college courses through Running Start receive an official transcript from the CCSNH college with which the high school is associated. Some examples of courses offered include Psychology, Accounting, Human Biology, Networking, Macroeconomics, English Composition, Introduction to Engineering

Design, Digital Electronics, and Principles of Engineering. Students applying to NHTI should respond to the Running Start questions on the NHTI application for admission.

Individual Course Enrollment

Students may wish to register for individual courses without applying to degree or certificate programs. Most general education and some program-specific courses are open to all, assuming course prerequisites are met and space is available after matriculated students have registered.

Non-matriculated students must meet the same course prerequisites, complete the same course requirements, and follow the same college and course rules, policies, and procedures as other students. Individuals who are considering registering as non-matriculated students are asked to consult with an academic advisor at NHTI prior to enrolling. The academic advisor will assist individuals in evaluating their readiness for any course(s) in which they are interested. In some cases, the advisor may recommend that the individual work with the Academic Center for Excellence to take one or more of NHTI's assessment tests in reading, writing, and/or mathematics. The advisor may also recommend that the individual consult with the department chair responsible for the course in question, especially in situations involving the evaluation of relevant work experience.

Non-matriculated students are not eligible to apply for financial aid. To be considered for admission to an academic program, contact the Admissions Office at 603-230-4011 or NHTIadmissions@ccsnh.edu.

ACADEMIC POLICIES

Registrar

The Registrar's Office is available to assist students with questions about records including but not limited to:

Ordering Transcripts

If you attended after 1991: Electronic and paper transcripts are available when ordered online through [the National Student Clearinghouse \(NSC\)](#).

Transcripts will not be processed if you have an outstanding financial obligation to NHTI or any CCSNH college. Transcripts are typically processed within 48 hours of receipt, but during peak periods (such as the start or end of semesters), processing may be delayed. Effective March 2022 a \$5.00 transcript fee will be charged for each transcript.

Confidentiality of Student Records

NHTI maintains the confidentiality of student records in compliance with the Family Educational Rights and Privacy Act of 1974 (Buckley Amendment). The law protects the privacy of educational records, the right of students to inspect and review their educational records, and to provide for the correction of inaccurate or misleading data through informal and formal hearings. Students may authorize the release of their records to individuals or institutions by completing the "Authorization to Release Information" form, available online or in the Registrar's Office. Student information maintained by Residence Life, Health Services and Counseling offices require a separate signed release of information form available from each office.

Family Educational Rights and Privacy Act of 1974 (Buckley Amendment)

The Family Educational Rights and Privacy Act of 1974 was passed to protect the privacy of educational records, to establish the right of students to inspect and review their educational records, and to provide guidelines for the correction of inaccurate or misleading data through informal and formal hearings. The federal law includes provisions for disclosure of directory information by educational institutions.

NHTI considers the following to be directory information: student's name, address, telephone number, email address, date of birth, major field of study, enrollment status (e.g. full-time or part-time), participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees, awards, honors and most recent educational institution attended.

If a student does not wish disclosure of any of the categories of identifiable directory information, they must submit the Nondisclosure of Directory Information Form.

Students should carefully consider the consequences of any decision to withhold general directory information. Should the student decide to inform NHTI not to release general directory information, future requests for such information from noninstitutional persons or organizations will be refused, except as provided by law. NHTI does not assume responsibility to contact students for subsequent permission to release directory information. NHTI assumes no liability for honoring a student's instructions that such information be withheld.

Copies of the Family Educational Rights and Privacy Act of 1974, Part 99 of Title 45, dealing with Privacy Rights of Parents and Students, may be obtained from the VPSA or the office of the VPAA.

Student Records

Students have the right to review the contents of their NHTI records. Students will be given access to their records within a reasonable period of time, but in no case shall access be withheld for more than 45 days after the request has been made. The Registrar is authorized to release this information. Students wishing access to their records must contact the Registrar and complete a Student Request for Record Review form. In cases involving the possibility of data misinterpretation, the VPAA or their qualified designee shall interpret the data to the student.

Students shall have the opportunity for a hearing to challenge the contents of their college records to ensure they are not inaccurate, misleading, or in violation of their privacy or rights. This challenge must be made in writing to the VPAA. Students may authorize the release of their records to intended persons or institutions by completing the Authorization to Release Information form. No access or release of any personally identifiable records or files on students will be allowed to any individual, agency or organization without prior written consent of the student, except as follows:

- The president, VPAA, VPSA, NHTI counselor, coordinator of Admissions, and the registrar shall have unlimited access, without permission, to all student records (with the exception that letters of recommendation

submitted on the basis of a pledge of confidentiality prior to Jan. 1, 1975, will not be shown to students and financial records of the parents of the students will not be made available to students). They cannot, however, release information without prior written authorization from the student, except as follows:

- To officials (faculty, staff, student workers/interns) and department chairs within NHTI who are directly involved in a legitimate educational concern for the student
- To authorized federal/state officers as identified in Section 438 (b) 3) of Public Law 93-380
- To appropriate persons in connection with an emergency if the knowledge of such information is necessary to protect the health or safety of any persons; NHTI maintains records on students, although some students may not have all the following items in their records: academic transcript of all work completed at NHTI; student financial accounts.
- Academic folder containing military education information for students eligible for military education benefits or medical records (in a separate file)
- Financial aid folder containing:
 - Application for admission
 - All correspondence to and from NHTI
 - Transcripts of previous academic records
 - Financial Aid applications
 - Recommendations
 - Standardized test results
 - Semester grade reports
 - Copy of parent's Confidential Statement or student's Confidential Statement
 - Financial aid correspondence
 - Financial aid awards and award acceptance forms
 - Records of money disbursed and/or hours worked
 - Affidavits
 - Promissory notes
 - Documents from any outside agencies awarding money to students
- Judicial proceedings (in a separate file) non-disclosure

Medical Leave

A matriculated student who, because of a serious medical condition that requires extended inpatient treatment in a medical facility and/or ongoing outpatient medical treatment, becomes unable to complete the academic requirements and/or unable to meet the program's technical standards and/or the requirements of the Student Code of Conduct, may apply for a formal Medical Leave of Absence (MLA) for up to 2 consecutive semesters.

Students considering an MLA should be aware that granting of such leave does not relieve a student from financial responsibility to the college. A student seeking MLA who is also a financial aid recipient should contact the Financial Aid Office to discuss the leave and any potential implications for changes in eligibility. Students who have concerns about health insurance coverage may wish to consult www.michelleslaw.com for important information.

Students requesting MLA must:

- Provide a letter to the VPAA identifying their program of study, the medical reason for the request, the proposed date on which the leave would begin, and the proposed date of readmission
- Provide the VPAA documentation of the medical condition from a licensed healthcare professional directly involved in the student's treatment sufficiently comprehensive to facilitate the decision-making process.

The VPAA (or designee) will decide the appropriateness of the leave request and notify the student in writing whether the request for MLA was granted and what conditions for readmission may apply. Students whose MLA requests are granted will not be required to reapply for admission at the end of the leave period provided all conditions for readmission have been met. These may include, but are not limited to, submission of documentation from a licensed healthcare professional directly involved in the treatment of the student's condition that is sufficiently comprehensive to provide reasonable assurance that the returning student will be able to meet all college academic, technical, and behavioral requirements; an in-person meeting with the VPAA and/or the student's program department chair; compliance with any new admission criteria implemented in the student's absence; following a new curriculum plan that may have been implemented in the student's absence; and/or repeating courses and/or clinical experiences to ensure clinical competence following the absence.

Students wishing to return to a residence hall may be required to meet additional, separate criteria. Students should directly negotiate any return to residence life with the college's Student Affairs Office.

Students who choose to seek MLA under the provisions of this policy should be aware that information they voluntarily disclose during the application and readmission processes will be handled under the confidentiality guidelines of FERPA and disclosed only to those persons with a direct academic need to know.

Academic Amnesty

A student who has previously attended NHTI and is admitted at a later time may be eligible for Academic Amnesty, which provides for the following:

- All grades taken during the student's previous time at NHTI will not be used to calculate the student's new cumulative GPA. However, grades C- and above taken during the student's previous time at NHTI will be used to meet course requirements (where appropriate).
- All previous grades will remain on the student's transcript.
- To be eligible for Academic Amnesty, a student must meet all of the following conditions:
 - The student has not taken courses at NHTI for at least 3 years from the last semester of attendance.
 - The student applies for Academic Amnesty before the start of their second semester after readmission.
 - The student has never before received Academic Amnesty.

Academic Amnesty is designed for students who exhibited poor academic performance during previous attendance. It is not designed for students who achieved a cumulative GPA above 1.7 during previous attendance. Students granted academic amnesty should be aware that previous grades will be used to evaluate "satisfactory academic progress" for financial aid purposes in accordance with Federal Financial Aid Regulations. Download the Academic Amnesty Form.

Academic Credits

Each course is assigned a number of credits based on the time obligated for formal enrollment in that course: One credit represents (on a per-week basis) 1 hour of classroom work, 2-3 hours of lab, 3-5 hours of clinical experience, 3 hours of practicum experience, or 3-6 internship hours plus 2 or more hours of student work outside of class each week for 15-16 weeks. For complete information, see the Academic Policies of CCSNH.

Credit by Exam

In certain instances, a matriculated student may present evidence suggesting they may be eligible to receive credit for a course or courses either through aggregate educational experience or occupational experiences. In such cases, an application for a Credit by Exam must be made within the first 2 weeks of a semester and be approved by the student's department chair. The department chair will assign a faculty member to discuss the subject area to be tested with the student and administer the test. A fee of \$25 per credit hour is required for each exam administered under this policy. The Credit by Exam is comprehensive; grades are either "pass" (E grade) or "no pass," with full course credit granted for an E.

If a student passes the exam, appropriate credit(s) will be applied to their academic record and a notation entered on their transcript indicating successful completion. Since a traditional grade is not entered, the Credit by Exam is not calculated into the student's GPA. If the student does not pass the exam, no entry is made on the academic transcript, but a record of the unsuccessful completion will be maintained in the student's file.

A student who gets "no pass" on a Credit by Exam will be ineligible for another Credit by Exam in that course and must successfully complete the course as needed to fulfill program requirements. A student who has previously received a failing grade in a course (or less than C for transfer) may not request Credit by Exam in that course. Financial aid does not cover courses for which a student earns credit in this way.

College-Level Examination Program

College-Level Examination Program (CLEP) exams are available in 34 college-level introductory subjects and are administered at NHTI. Through CLEP testing, students can demonstrate their knowledge and competency in a subject area and earn college credit. NHTI recognizes competency demonstrated through CLEP exams in such areas as English, Humanities, Social Science, History, and Calculus.

Experiential Learning

Credit for prior learning offers students the opportunity to demonstrate the knowledge they have gained through life

experiences and apply this toward credit in a degree/professional certificate/certificate program. To prepare for this option, students will develop a portfolio to be assessed by appropriate college personnel. A student must be matriculated in an NHTI program to be eligible to apply for experiential credit. Not all programs provide this credit option; students should consult with their advisors for eligible programs and the application process.

- Students may be awarded a maximum of 24 credits for experiential learning.
- Students will be assessed a fee based on 50% of the current tuition rate on the total credits awarded.
- Financial aid does not cover courses for which a student earns credit through experiential learning.

Academic Excellence

Academic Research

Students wishing to broaden their learning experiences may participate in academic research by using the independent study option. This format allows students to study a topic in greater depth or a topic not currently offered at NHTI. Please refer to the Independent Study Policy. Financial aid does not cover credits earned via academic research or independent study.

Dean's List/Scholastic Honors

A Dean's List is published at the end of each semester. It includes the names of all matriculated, full-time students whose GPA for that semester is 3.3 or higher (while enrolled in 12 credits). Students who achieve a cumulative GPA of 3.7 or higher graduate with high honors, and those who achieve a cumulative GPA of 3.3-3.69 graduate with honors. Cumulative GPA is calculated using all courses completed at NHTI.

Honors Courses

Honors courses offer academically strong, highly motivated students the opportunity to learn in smaller classes with a stimulating, creative environment that promotes active engagement with subject matter. They allow for a rigorous and individualized approach to learning. Each course that offers an honors section is identified in the Course Description section of the Course Catalog. Student qualification for honors courses is based on criteria that may include prerequisite grades, NHTI assessment test scores, and/or scores on standardized tests.

Students who successfully complete honors courses receive an honors designation on their transcript, which may strengthen transfer to other colleges or candidacy for competitive programs at NHTI, such as Nursing, Dental, and Radiologic Technology. If a student registers themselves on SIS, they should ensure the class carries the honors designation. Check the schedule of course offerings on SIS, as not all courses are offered every semester.

Phi Theta Kappa – International Honor Society

Phi Theta Kappa (PTK) is the largest international honor society in American higher education with 2 million+ members and 1,200+ chapters internationally. NHTI's Alpha Upsilon Omicron Chapter of PTK provides opportunities for scholarship, leadership, service, and fellowship for PTK students at NHTI while offering an intellectual climate for continued academic excellence. To be eligible, a student must complete a minimum of 12 credit hours of associate degree coursework and earn a cumulative GPA of 3.5 or higher. Eligible students are invited to join PTK each semester, and induction ceremonies are held each Fall and Spring semester. Once inducted, students must maintain a high academic standing of 3.3 cumulative GPA throughout enrollment; this allows them to retain a lifetime membership in PTK.

Vice President's Award for Academic Excellence

The Vice President's Award for Academic Excellence is presented at the Spring Awards Ceremony to the student(s) achieving the highest overall cumulative GPA in the graduating class. The following criteria apply:

- A minimum of 48 credit hours must be used in the calculation of the cumulative GPA.
- All students are eligible for the award, including those who have exercised Academic Amnesty, changed programs, or have previously graduated from an NHTI program.
 - For the purposes of this award, students who have previously graduated from an NHTI program will have their GPA calculated using courses taken in the new program and any prior courses that may be applicable to the new program.
 - Students who have exercised the Academic Amnesty option will have their GPA based only on courses taken after the option has been exercised. No previous courses will be used.
 - Students who have changed majors will have their GPA calculated on the basis of all courses taken at NHTI and not just those in the new program.

Academic Honesty

Faculty will gather all material evidence (e.g., papers, crib notes, copied materials and the source[s] from which it came, et al.). If the charges have arisen from an inconsistency in quality, prior work samples along with the work in question should be presented to the student. Names of those who have pertinent knowledge of the situation will be presented.

Once the information is gathered, a meeting between the individual faculty member and the accused should be held within 5 class days (or within 5 business days of a final exam) to discuss the matter. All parties shall maintain confidentiality. The faculty member may seek advice/counsel from their department chair. The student may seek advice/counsel from an individual of their choice.

Following the meeting, the faculty member shall have these options available if disciplinary action is warranted:

- Have the student redo the assignment or do a different assignment.
- Reduce the student's grade a specified amount.
- Give the student an F for the assignment.
- Give the student an AF or F for the course.
- Issue the student a letter of sanction (copies to registrar and student's department chair).
- Other options as appropriate.
- Available options that require department chair and VPAA approval include:
 - Suspend the student from the program or college for one semester.
 - Suspend the student from the program or college for more than one semester.
 - Dismiss the student from the program or college.

The faculty member's decision will be sent in writing to the student within 2 class days of the meeting. If another student was complicit in the cheating/plagiarism, the faculty member will pursue disciplinary action against that student. Appeals are handled using the grade appeal/grade change process and/or the student judicial process.

Academic Progress

Any student whose academic progress is deemed less than acceptable by their department chair may be referred to the Academic Standards Committee, which considers each case and recommends action to be taken by the VPAA. That action may involve, but is not limited to, a warning, academic probation, program suspension, NHTI suspension for a specified period of time, conditional probation, or dismissal. Dismissal is permanent.

All credit courses are used for this calculation. Students entering with advanced standing should add their transfer credits to those credits earned at NHTI to determine their positions in the guidelines. Any matriculated student registered for 2 or more courses during any semester will be subject to review by the Academic Standards Committee. Academic progress may affect financial aid. Check with the Financial Aid Office for more information.

Academic Warnings

At mid-semester, academic warnings are formally issued by faculty to students with grades of C- or below, NP, or PP. Warnings are submitted to the Registrar's Office, which then emails the letters to students. Warnings may also be issued at any time during a semester when deemed appropriate by faculty.

Academic Probation

Academic probation usually will last for one semester only. The student's department chair will recommend to the committee if a student can take courses in their major field during academic probation. Students placed on academic probation may be eligible to continue receiving financial aid if they meet the minimum GPA requirements. To ensure that adequate academic progress toward a degree is being made, the college uses the guides above in determining which students are automatically brought to the attention of the Academic Standards Committee.

Suspension

Suspension may be for any period of time established by the Academic Standards Committee but must be for a minimum of one semester excluding the Summer (unless required by the student's program). A matriculated student suspended from a program may not take major field courses during the suspension; non-major field courses may be taken.

Students under academic suspension may seek course selection and academic planning help from Academic Advising. Students who are under academic suspension from NHTI and wish to return must, prior to the completion of the suspension, submit a new application with an explanatory letter, to the NHTI Admissions Office.

Guidelines for Suspension

- NP or F in clinic
- Academic probation status for third consecutive semester
- Violations of the Student Code of Conduct
- Failure to meet published technical standards

Conditional Probation Partnership

The conditional probation partnership assists students whose cumulative GPA would be placed on program suspension. This involves a contractual arrangement with the student that incorporates mentoring/counseling elements. A department chair designates students for this program by making a recommendation to the Academic Standards Committee based on the department's judgment they could reasonably be expected to achieve academic success with guided assistance and realistic academic goals. A contract is then forwarded to the student with a letter from the VPAA explaining that the student is being given the opportunity to continue in the program if they agree to the contract conditions. The student must sign and return it to the Academic Affairs office by a predetermined date. If the student chooses not to sign the contract, status will be determined by the guidelines for suspension. A student who accepts the contract but fails to abide by its provisions will be returned to suspension immediately and not be eligible to apply for readmission until the end of the subsequent semester.

Total Credits Accumulated (GPA Hours)	Minimum Acceptable Grade Point Average
0-13	1.5
14-27	1.7
28-40	1.8
41 or more	2.0

Total Credits Accumulated (GPA Hours)	Minimum Acceptable Grade Point Average
0-13	.50
14-27	1.10
28-40	1.25
41 or more	1.50

Appeal of Suspension or Dismissal

A student who wishes to appeal an academic suspension or dismissal may do so by writing a letter of appeal to the VPAA in accordance with procedures and deadlines outlined in the letter sent to each suspended and dismissed student informing them of their status. Appeal letters received by the required deadline are reviewed by the Academic Standards Committee. In some cases, students may be asked to appear before the committee, which will render a decision on the appeal based on the information provided by the student and department chair. Decisions of the Academic Standards Committee are final.

Adding a Class

A student may add a class up to and including the seventh calendar day of the semester (prorated for alternative semester lengths) if space is available. If a course is full or if it is after the seventh day, a class can only be added with the written permission from the instructor. A student may add an online course up to the official start of the semester. Once the semester has started, a student may add an online course only with the written permission of the instructor.

Attendance

Registration for any course presupposes the student will participate in all scheduled activities. In addition to academic issues relative to attendance, veterans and students receiving financial aid are expected to be in regular attendance as a condition of receiving such aid. While occasional circumstances over which the student has no control may necessitate absence, the content presented in the activities missed by the student is a segment of information being taught.

For any course offered in any format, there is a limit to the amount of time and content a student can miss without compromising the integrity of the learning experience and the credit award. If illness, accident, emergency, or an NHTI-sponsored activity prevents a student from meeting attendance obligations, it is the responsibility of the student to inform faculty in a timely manner to discuss either the requirements for continued enrollment in the course or the options for course withdrawal.

Instructors may include an assessment of attendance behaviors into their overall grading structure for the course. Such assessment strategies are published in the course syllabus distributed at the start of the course. A faculty member may issue a grade of AF at any point in the semester at which they feel a student's absence record precludes the reasonable possibility of meeting course objectives based on published attendance expectations.

Any student who has been suspended or dropped from a course for failure to meet published course attendance requirements may appeal following the procedures outlined in the Grade Appeal/Grade Change Policy.

Audits

Students may enroll in courses that provide an opportunity to learn about the challenges of college work, explore a discipline of interest, refresh prior learning, or supplement existing knowledge. Typically, a student attends lectures, seminars, and/or labs but does not complete graded assignments. When enrolled as an audit, the student will not be given a final grade nor credit towards graduation (the academic transcript will reflect an AU for the course).

Not all courses can be taken for audit, and entry into a course as an auditing student is by permission of the instructor. A student must complete a registration as an audit during the first week of classes. Once admitted as an audit the student may not change to credit status after the designated add period; a student registered for credit may not change to audit status after the designated add period. Exceptions may be made by the VPAA. Students must pay the full tuition for the course. Financial aid does not cover costs for an audited course.

Change of Program/Dual Major

Enrolled, matriculated students may request a change of their major program by using the Change of Program/Dual Major Request Form. Signatures must be received from the department chairs of the current and new major. Signatures do not guarantee or imply acceptance into the new program. The request must be made within the "add" period at the beginning of a semester for the same semester. Requests for the subsequent semester made after the "add" period will not take effect until after final grades for the semester have been reviewed. The student will be informed of the decision in writing by the Admissions Office. Students follow the curriculum for the semester to which they are accepted.

When calculating the GPA of a student who has changed programs, all courses taken at NHTI and courses taken in the new program will be used. For purposes of academic review, the Academic Standards Committee will consider the student's semester-by-semester performance in the new program rather than the overall GPA.

Classroom Etiquette

Academic integrity is of primary importance in the classroom, whether the classroom be face-to-face or online. Students and faculty are responsible for creating and maintaining an environment that supports an effective learning community. It is therefore imperative that students and faculty demonstrate mutual respect.

Inappropriate behavior may compromise the learning and performance of all students. Such inappropriate behaviors include but are not limited to: late arrivals/early departures; loud or prolonged side conversations; use of cell phones; computers (other than for legitimate academic use); iPods (or similar devices); and use of derogatory or vulgar language. All students are expected to abide by the Student Code of Conduct and are subject to sanctions as described therein for any violations.

Plagiarism/Cheating Policy

Honesty is expected of all NHTI students. In academic matters, this includes the submission of work that clearly indicates its source. Dishonest acts include cheating and plagiarism. Cheating includes, but is not limited to:

- Use of any unauthorized assistance from other persons or technologies in taking quizzes, tests, or exams or in the preparation and completion of class assignments
- Dependence upon the aid of resources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments
- The acquisition, without permission, of tests or other academic material belonging to a member of the CCSNH colleges faculty, staff, or students
- Knowingly providing unauthorized assistance of any kind to another for the purpose of providing unfair advantage to the recipient in the completion of course assessments/assignments

Plagiarism includes, but is not limited to, the use (intentional or unintentional), by paraphrase or direct quotation, of the published or unpublished work of another person without full and clear acknowledgment. It includes the unacknowledged use of materials prepared by another person or agency engaged in providing term papers or other academic materials via direct sale, barter, or other means.

Cheating and plagiarism are considered serious disciplinary matters and are subject to the same penalties and procedures as other NHTI disciplinary matters. Students should be aware that penalties levied in proven cases of cheating or

plagiarism may include the issuance of a grade of AF (which may in turn lead to delay of graduation), suspension or dismissal from a program or from the college, or other sanctions as deemed appropriate.

Classroom Recording Policy

As per CCSNH policy: "Students are not permitted to record any class lectures, activities or discussion using electronic video, still photo, or audio recording unless the student first obtains permission from the instructor. If the recording is made as a recommended, reasonable accommodation or modification for a student with a disability, permission shall not be unreasonably withheld." To view the entire policy please go to: <https://www.ccsnh.edu/about-ccsnh/policies/> and select the System Policies for Academic Affairs (section 600).

Clinical/Practicum/Internship

Evaluations are conducted on students who enroll in any course designated as a clinical, practicum, or internship experience. It is the student's responsibility to understand the goals, objectives, and evaluation criteria of each clinical/practicum/internship and adhere to all policies, rules, and procedures outlined by the department and/or clinical/practicum/internship site. Students enrolled in these experiences are evaluated on their technical skills, knowledge, behavior, attitude, attendance, and adherence to policies, rules, and procedures set forth by NHTI, the academic department, and the participating agency.

A student will be removed from a clinical/practicum/internship site and issued a grade of AF if performance or behavior is deemed unsatisfactory or unsafe as a result of a formal evaluation conducted by a faculty member/ agency supervisor in accordance with published department criteria and procedures. In such situations, students are prohibited from receiving a W grade. In the event that a Withdrawal Form submitted by a student is processed prior to submission of the AF grade, the student-initiated W grade will be replaced in the student record by the faculty-assigned AF grade.

Course Repeat

A student may repeat a course for credit one time. Registration for further repetitions will require permission from the matriculated student's department chair or, for a non-matriculated student, an academic advisor. When calculating the cumulative GPA, when a student repeats a course the grade achieved in the most recent course will be the grade used in the GPA calculation. All previous grades will remain on the transcript but will not be used in the calculation. Though credits for courses repeated at a college other than NHTI may be applied as transfer credit as appropriate, grades for those courses will not be used in the calculation of the GPA; the grade received at NHTI will remain a part of the transcript and continue to be used in determining the student's cumulative GPA.

Course Substitution/Waiver

A student may be eligible to substitute a higher-level course for the one prescribed in the curriculum if indicated by an evaluation of the student's competencies. The substitution can be made only with the joint approval of the student's department chair and the department chair of the area offering the course. The Approval Form is available in the Registrar's Office. A student may substitute a comparable course from another program to meet degree requirements with the common agreement of the department chairs and the approval of the VPAA.

A course may be waived by the director of Admissions in consultation with the department chair only if a higher-level course has been completed at another accredited college or university with a grade of C or higher. Waivers apply only to transfer of credits from accredited colleges or universities and not prerequisites for a given program. A waiver is for the course only; credit will not be awarded for the waived course. All students must complete a minimum of 60 credits to be awarded an Associate in Science or Associate in Arts degree. Students with fewer than 64 credits as a result of a waiver must make up the credits. Any make-up credits must have the approval of the student's department chair.

Directed Study

Under certain circumstances, a matriculated student with a cumulative GPA of 2.0 or higher may take a course via directed study in a semester when the course is not offered at NHTI. A directed study allows them to pursue the learning objectives/outcomes for a course independently under the guidance of a faculty member. The student must explain why the course was not taken in a previous semester and demonstrate why the course could not be taken in a subsequent semester. Barring exceptional circumstances, a directed study will not be granted for a course currently being offered at NHTI. Non-matriculated students are not eligible for a directed study.

A department chair who requests that a student take a course via directed study must present a proposal to the VPAA detailing the rationale for the request, the specific learning activities that will be required of the student, and the specific assessment and evaluation tools that will be used to evaluate the student's learning. The proposal should identify the faculty member who will supervise the directed study. The Directed Study Proposal Form is available from the Academic Affairs Office and the Registrar's Office.

A student may not take a directed study for a course they have taken at NHTI and failed or for a course taken at another institution and received a grade that will not transfer to NHTI. The VPAA must give final approval to all directed study proposals. Grading of directed study projects will follow standard NHTI policies and procedures.

Dropping Classes/Withdrawing

Dropping Classes with a Refund

We understand that students may face adverse consequences such as loss of financial aid eligibility, loss of athletic eligibility, loss of residence life eligibility, loss of VA Education Benefits, or inability to meet program completion expectations. Students should consult with their academic advisor before making any moves to drop a course.

- Students who drop a full-semester class by the end of the fourteenth calendar day of the semester will receive a 100% refund of tuition, less non-refundable fees.
- Students can drop an 8-week course within 7 days from the start of the alternative semester for a full refund.
- To drop a course that is 2 weeks or fewer in length, students must drop it by the end of the first day of the class to receive a refund.
- If the last day to drop with a refund falls on a weekend or holiday, the drop refund date is the first business day following the weekend or holiday.

Students are urged not to just stop attending a course and should contact the Registrar's Office or Academic Advising center or drop a class online via SIS (during open registration periods). Students must notify the Registrar's Office or the Academic Advising Center before the above date to receive a refund.

Dropping Classes after the Refund Period

If a student decides to drop a class after the refund period, the Registrar's Office is the only official authority that can accept the withdrawal notification. Officially dropping a course prior to the completion of 60% of the scheduled duration of the course will result in a grade of W (withdrawn) on the student's transcript, with no effect on their cumulative GPA. A withdrawal after the 60% completion mark requires the instructor to issue a grade of WP (withdraw passing) or WF (withdraw failing) on the drop form. A grade of WP will not affect cumulative GPA; a WF will be calculated into the student's cumulative GPA.

If the student stops going to class without providing official notification, the default withdrawal date for financial aid purposes will be the midpoint of the semester. Those students who stop attending class may be dropped by their instructor with an AF grade, or they will receive an AF from the instructor at the end of the semester. The AF will affect the student's cumulative GPA and financial aid.

Withdrawing from NHTI

- Do courses seem overwhelming? Our [Academic Center for Excellence](#) offers free tutoring to all NHTI students.
- Are finances problematic? Contact our [Financial Aid office](#) for help and advice, and [apply for scholarships and grants](#) to help offset costs.
- Need to speed things up? Consider our [8-week online programs](#).
- Need to slow things down? Students can take only a few courses rather than a full workload. [Academic Advising](#) can help answer questions and help devise individual solutions.
- Does it feel like college just isn't the right path? It's our [Academic Advising center's](#) job to help students figure out what they really want.

If the student is certain they want to withdraw from NHTI, the Registrar's Office is the official authority to accept their withdrawal notification. Students must submit a signed [Withdrawal Form](#) to the Registrar's Office to show their intent to withdraw. The date the form is submitted to the registrar with the withdrawal date and the date of notification to the school. Students can also withdraw by phone, fax, or mail. The Registrar's Office will fill out the appropriate form and date stamp it with the submission method.

If a student's withdrawal occurs at the 60% or later period, the student will be subject to the same academic

assessments and actions as students completing the semester. If they are in good standing, they may apply for readmission by submitting a new application, with an explanatory letter, to the NHTI Admissions Office.

Enrollment Status

A matriculated student is one who has been formally accepted to and is actively enrolled in a program. Students who are enrolled in courses but have not been formally accepted into an academic program are referred to as non-matriculated students. To be formally accepted to a program, students must provide all the documentation required for admission to that program (degree, professional certificate, or certificate) and be officially notified by the Admissions Office of acceptance. Only matriculated students are eligible to graduate from a program and to receive an official completion credential from the college. Students wishing to apply for financial aid must be matriculated. Matriculation may be required for enrollment in discipline-specific courses.

For military education benefits purposes, the VA defines student enrollment status specifically. The VA reviews the start and end date of each enrolled course to determine the enrollment status and calculate the monthly BAH/stipend.

Student enrollment at NHTI is defined according to the number of credits for which a student is enrolled in a particular semester as follows: Full-time is 12 or more credits per semester; part-time = fewer than 12 credits per semester. For financial aid purposes, NHTI defines student enrollment more specifically: Full time is 12 or more credits per semester; $\frac{3}{4}$ time is 9-11 credits per semester; and part time is 6-8 credits per semester.

Grading System

NHTI has implemented a letter grade system in which each grade reflects a level of achievement measured against specific course objectives.

Grade Appeal/Grade Change

Any appeal of a grade must be initiated by the student with the instructor before the next semester is done. Students should be advised that in most instances a grade may be changed only by the instructor. The VPAA, the only other individual on campus empowered to change a student's grade, may alter a student's grade only in a case of obvious computational error or blatant abuse of the grading prerogative.¹ Students who believe they have valid ground for a grade appeal should use the following process to resolve the issue:

- Contact the faculty member and schedule a meeting to discuss the grade appeal and attempt to resolve the conflict. The faculty member and student will meet within the next 5 work days.
- If the issue is not resolved, the student has 3 work days from the date of the faculty member's decision to file a written appeal with the faculty member's program or department chair, or with the VPAA if the faculty member is the department chair.² Within 3 work days, the department chair or VPAA will mediate the dispute either through discussion with the instructor, or with the student in the company of the faculty member.
- If the issue is still not resolved, the student will file a written appeal with the VPAA within 3 work days. The letter of appeal must include the student's name and contact information, the course name and number, the semester in which the course was taken, the student's grade, the name of the instructor issuing the grade, and evidence of obvious computational error and/or blatant abuse of the grading prerogative. The VPAA (or designee) will have 10 work days from receipt of the written appeal to render a decision. The decision of the VPAA (or designee) is final.

Grade Point Average

The GPA is indicative of the overall quality of a student's performance. It is used by academic institutions and prospective employers as a means of describing academic achievement. Three factors are used in computing the GPA: credit hours, point value, and letter grade earned. Letters have point values; if a student is enrolled in 5 courses carrying 4, 4, 6, 3, and 5 credits and earns grades of B+, C-, A, D, and C respectively, their GPA for the semester is calculated in the following manner: Multiplying the number of credits times the point value, then dividing the sum of the grade points (57.0 in the example) by the sum of the credits (22). Their GPA is 2.59. The cumulative GPA for all semesters in which the student has been enrolled at NHTI may be calculated in the same manner by using total credits and total points.

¹"Blatant abuse of the grading prerogative" refers to situations in which an instructor has willfully ignored published grading and assessment criteria and/ or has exhibited bad faith by acting in violation of published professional/ethical standards for faculty.

²There are times when the schedules of the faculty member, department chair, and/or VPAA are not compatible with the timeframes specified above. Students unsuccessful in their attempts to reach the faculty member may contact the Academic Affairs Office. A representative will then make every attempt to arrange the required meetings within the 5 days indicated in Step 1. Students are advised, however, that it may not be possible in all cases.

Grade	Points	Definition
A	4.0	An honor grade representing achievement of understanding and ability that is excellent and distinctive
A-	3.7	
B+	3.3	Represents achievement of a level of understanding and ability of consistently high quality
B	3.0	
B-	2.7	
C+	2.3	Represents achievement of a level of understanding and ability consistent with those levels required for successful entry into the student's chosen career field
C	2.0	
C-	1.7	
D+	1.3	Represents some evidence of achievement but substantially below the level required for successful entry into the student's chosen career field
D	1.0	
D-	0.7	
F	0.0	Represents negligible academic achievement. A student who receives an "F" grade in a course that's a prerequisite to other courses must repeat the failed course with a passing grade before being eligible to continue with the course sequence.
P	Pass (not calculated into GPA)	
E	Pass grade issued for Credit by Exams (not calculated into GPA)	
PP	Provisional pass; warning (not calculated into GPA)	
NP	No pass; unsatisfactory (not calculated into GPA)	
I	Incomplete grade. Indicates the student has not completed a major course assignment due to extraordinary circumstances. It is not used to give an extension for a student delinquent in meeting course responsibilities. Not calculated into the GPA. All work must be completed by the end of the third week of the subsequent semester or the grade defaults to an F.	
AF	Instructor or administrator-initiated withdrawal at any time for reasons other than poor grade performance; e.g., failure to meet attendance requirements, violation of the Student Code of Conduct, disruptive behavior, etc. May be issued if a student registered in a clinic, practicum, internship or lab is deemed unsafe or performing in an unsatisfactory manner as determined by an evaluation in accordance with department criteria and procedure. Calculated in GPA as an "F."	
W	Student-initiated withdrawal from a course at any time prior to drop deadline (60%). Does not affect GPA. Can be initiated by the instructor if the student is unable to initiate the process (e.g., catastrophic illness or injury, job transfer).	
WP	Student-initiated withdrawal from a course after the drop deadline (60%); student has a passing grade at time of drop, as determined by the instructor. Does not affect GPA. Can be initiated by the instructor if the student, because of extenuating circumstances, is unable to initiate the process (e.g., catastrophic illness or injury, job transfer).	
WF	Student-initiated withdrawal from a course after the drop deadline (60%); student has a failing grade at time of drop, as determined by the instructor. Calculates in GPA as an "F."	
AU	A course taken as an audit, does not earn credit and cannot be used to meet graduation requirements. Admission by permission of the instructor. Not all courses can be taken for audit.	

Incomplete Grades

An Incomplete grade indicates a student has not completed a major course assignment because of extraordinary circumstances. The grade is applied only in those instances where the student has a reasonable chance of passing; it is not used to give an extension of time for a student delinquent in meeting course responsibilities. The work must be completed by the student through formal arrangement with the instructor no later than:

- The end of the third week in the Spring semester for a grade issued in the Fall semester
- The end of the third week in the Fall semester for a grade issued in the Summer term
- Three weeks from the earliest start date of the Summer term for a grade issued in the Spring semester

Should the student fail to complete the work within the designated period, the grade will automatically become an F. Exceptions to the above deadlines may be made by the VPAA. I grades will not be included in the computation of GPA. An I may affect a student's financial aid. Students should contact the Financial Aid Office for information.

Graduation

Graduation from an Associate Degree Program

NHTI shall confer degrees in accordance with the policies set forth in the current edition of the CCSNH Board of Trustees Manual.

Associate Degree Requirements:

- Completion of a minimum of 60 credits and all program requirements
- Achievement of a passing grade for all courses required by the specific program
- Achievement of a minimum cumulative GPA of 2.0
- At least 15 credits in NHTI courses, with at least 8 of those in advanced-level major field courses
- Meet all course distribution requirements for an Associate degree as described below:
 - *Associate in Science*: In addition to meeting the requirements listed in above, a student must meet the following course distribution requirements to earn an Associate in Science Degree:
 - Earn at least 30 credits in program-specific courses in a defined major field
 - Earn at least 20 credits in general education courses, including one course of 3 credits or more in each of the following categories: English Composition; Humanities/Fine Arts/Language; Quantitative Reasoning/Mathematics; Science; and Social Science. The remaining general education credits to reach the required total of 20 general education credits may be taken in Humanities/Fine Arts/Language, Quantitative Reasoning, Science, or Social Sciences.
 - The remaining 10 credits to reach the required total of 60 credits may be assigned in any subject area, as deemed by the faculty to be appropriate to the curriculum.
 - *Associate in Science in General Studies*: Students wishing to earn an Associate in Science in General Studies degree must meet all of the requirements above, as well as the general education distribution requirements listed above. The 30 credits of major field coursework may be taken in any subject area.
 - *Associate in Arts*: In addition to meeting the requirements listed above, a student must meet the following course distribution requirements to earn an Associate in Arts degree. Each category below must include at least one course worth at least 3 credits (see *chart, next page*). Although degrees are awarded following each semester (August, December, and May), NHTI only holds one commencement ceremony in May of each year. Potential graduates must file a Petition to Graduate form on the following schedule:
 - End of April for students completing in the Summer semester
 - End of October for students completing in the Fall semester
 - End of November for students completing in the Spring semester

All forms must be completed and returned to the Registrar's Office. A \$20 fee will be charged for replacement of a diploma. All financial obligations to NHTI must be met for degrees and transcripts to be released.

Professional Certificate Program Completion

NHTI awards professional certificates in accordance with the policies in the current edition of the CCSNH Board of Trustees Manual. Matriculated students in professional certificate programs must complete a Professional Certificate Request Form to receive their professional certificate. (Professional certificates are not awarded at the commencement ceremony.) All forms must be completed and returned to the Registrar's Office. Students must meet the following requirements to earn a professional certificate from NHTI:

- Completion of all program requirements
- Achievement of a passing grade for all courses required by the specific program
- Achievement of a minimum GPA of 2.0 in those courses required for the specific program
- Completion of 8 credits or 25%, whichever is larger, in NHTI-controlled courses

Professional certificates are awarded following each semester (August, December, and May) once the official grade processes have been run. Students must file their Professional Certificate Request Form on the following schedule:

- End of April for students completing in the Summer semester
- End of October for student completing in the Fall semester
- End of November for students completing in the Spring semester

All financial and other obligations to NHTI must be met for diplomas, certificates, and transcripts to be released.

Certificate Program Completion

NHTI awards certificates in accordance with the policies set forth in the current edition of the CCSNH Board of Trustees Manual. Students who are matriculated in a certificate program must complete a [Certificate Request Form](#) to receive their certificate of completion. (Certificates are not awarded at the commencement ceremony.) Once the Certificate

Request Form has been received, an academic audit will be performed. Students must meet the following requirements to earn a certificate from NHTI:

- Completion of all program requirements
- Achievement of a passing grade for all courses required by the specific program
- Achievement of a minimum GPA of 2.0 in those courses required for the specific program
- Completion of 6 credits or 25%, whichever is larger, in NHTI-controlled courses

Certificates are awarded on the following schedule:

- September 1 for students completing in the Summer semester
- January 1 for students completing in the Fall semester
- June 1 for students completing in the Spring semester

All financial and other obligations to NHTI must be met for certificates and transcripts to be released.

Additional Associate Degrees

Students may earn additional associate degrees by concurrent completion of the requirements of several degrees or by subsequent study of the first degree received. The requirements for additional degrees are as follows:

- Complete all requirements of each program of study, including general education requirements.
- Earn a minimum of 15 additional credits, beyond those required for the first and subsequent degrees.

Completion/Graduation Rate

As required by the U.S. Department of Education, 34 CFR Part 668, Student Assistance General Provisions, "An institution shall make readily available to all enrolled students and prospective students, through appropriate publications and mailings, the Institution's completion and graduation rate (or a projected completion or graduation rate) of its full-time degree-seeking undergraduate students who enroll for the first time" at NHTI "and have not previously enrolled at any other institution of higher education."

Of the 547 full-time, first-time degree/certificate-seeking students entering NHTI in Fall 2018, 146 completed their programs within 150% of the normal time, resulting in a graduation rate of 27%.

Inactive Status

Matriculated Allied Health students in good standing who interrupt their education by not enrolling in the subsequent semester will be declared inactive and no longer considered a student in the program. The student must file a request for readmission through the Admissions Office. Students will be admitted pending available space. In all other programs, students in good standing who interrupt their education by not enrolling for 3 consecutive semesters (including summers) will be declared inactive and no longer considered a student in the program. The student must file a request for readmission through the Admissions Office.

Independent Study

Opportunities for credit-bearing independent study are available to matriculated students with a cumulative GPA of 2.0 or higher who wish to explore areas of a discipline not covered in the normal curriculum. The intention of independent study is to expand a student's learning experience beyond the normal program curriculum. An independent study cannot be taken in place of any course existing in any of NHTI's catalog. Students wishing to pursue existing NHTI courses on an independent basis should consult the NHTI policy on directed study.

Students wishing to take an independent study opportunity must consult with a supervising faculty member to prepare a proposal detailing the learning outcome to be pursued, the learning activities that will occur, and the assessment and evaluation that will be used to determine the final grade. The proposal should indicate the number of credits requested for the independent study (usually 1-2). The Independent Study Proposal Form is available from Academic Affairs and the Registrar's Office. The student must obtain the following signatures as indicated on the form: the student's department

Course	Credits
English Composition	3-4 credits
English Literature, Composition (requiring English Composition as a prerequisite), or Communications	3 credits
Quantitative Reasoning/Mathematics	6-8 credits
Natural or Physical Science (including at least one lab science)	7-8 credits
Social Sciences	9 credits
Humanities/Fine Arts/Language	9 credits
And either	
Electives in specialized major field or (for generic AA in Liberal Arts)	20-24 credits
Liberal Arts elective (from above list) and open electives	12-15 credits 9 credits
Total	Minimum 60 credits

chair; the faculty member who will supervise the learning experience; the department chair of the supervising faculty member; and the VPAA. Grading of independent study projects will follow the standard NHTI policies and procedures.

Exceptions to the above policy require approval from the department chair and VPAA. Financial aid does not cover courses for which a student earns credit through independent study.

Prerequisite and Corequisite Courses

Many courses at NHTI are dependent on knowledge learned in preceding courses. NHTI requires students to pass all listed prerequisite courses to proceed with courses for which there are prerequisites. Prerequisite courses may be waived only with the prior approval of the department chair in which they are taught. Such a waiver does not suggest these prerequisite courses need not be taken, only that credit for them may be gained at a subsequent time. Corequisite courses are those that must be taken concurrently (at the same time) with another course, as listed in a particular course description. With departmental permission, a corequisite course may sometimes be taken in advance of the course for which it is a corequisite.

Prior Learning Assessment

NHTI offers avenues for students with prior learning to gain college credit. Students must be matriculated into a program of study and may request that prior credits or experience be evaluated and applied toward graduation requirements within their programs of study. Options for prior learning assessment available to students include:

American Council on Education

College credit will be granted to students with military training, experience, or coursework recognized by the American Council on Education. Students seeking credit for their military experience will need to submit a military transcript to the Admissions Office for the review/evaluation process.

College-Level Examination Programs®

CLEP is a nationwide Credit by Exam program that offers students the opportunity to obtain recognition for college-level achievement through a program of exams in undergraduate college courses. NHTI is a CLEP testing center. CLEP is the most widely accepted Credit by Exam program in the U.S., helping students earn credit for what they already know. CLEP exams are available in 34 college-level subjects. With satisfactory exam scores, students may earn credits toward their college degree, depending on the exam subjects and the students' major.

Credit by Exam

Credit by Exam allows matriculated students to receive credit by passing a comprehensive exam of course material. Seekers have to be matriculated into an NHTI program and provide evidence that the course content has been mastered. Students should first consult with their academic advisors to determine eligibility.

Application for Credit by Exam

The fee for Credit by Exam is \$25 per credit hour. Grades will be either "pass" or "no pass," with full course credit granted for a grade of E (pass). Since a traditional grade (A-F) is not entered, the Credit by Exam is not calculated into the student's GPA. If the student fails to pass the exam, no entry is made on the academic transcript, but a record of

the unsuccessful completion will be maintained in the student's file. A student who receives a grade of "no pass" will be ineligible for another Credit by Exam in that course and must successfully complete the course as needed to fulfill program requirements. A student who has previously received a failing grade in a course (or less than C for transfer) may not request Credit by Exam in that course. Financial Aid does not cover course credits earned through Credit by Exam, nor are the credits transferable.

Process for Credit By Exam

- Verify the student is matriculated (accepted into a program).
- Work with department chair/advisor to schedule exam with appropriate faculty.
- If taking the exam in graduating semester, obtain approval from the VPAA.
- Complete parts I, II, and III of the Application for Credit by Exam.
- Acquire necessary signatures in the order listed.
- Identify on the application the date exam will be administered.
- Identify on the application the minimum passing grade needed.
- Take the form to the Bursar's Office for payment (\$25 per course credit).
- Obtain Bursar's Office signature in Part IV.
- Complete exam.
- Have administering faculty complete Part VI including the grade of pass or no pass.
- Have administering faculty submit exam with answer sheet to VPAA.

Experiential Learning

Credit for prior learning offers students the opportunity to demonstrate the knowledge they have gained through life experiences and apply this knowledge towards credit in a degree/professional certificate/certificate program. To prepare for this option, students will develop a portfolio to be assessed by appropriate college personnel. A student must be matriculated in an NHTI program to be eligible to apply for experiential credit. Not all programs provide the experiential credit option; students should consult with their department chairs, advisors, or program coordinators to determine if experiential credit is appropriate.

- Students may be awarded a maximum of 24 credits for experiential learning.
- Students will be assessed a fee based on 50% of the current tuition rate on the total credits awarded.
- Financial aid does not cover courses for which a student earns credit through experiential learning.

Criminal Justice Program

Criminal Justice students who have previous training through Police Standards and Training, County Corrections, the state Corrections Academy, or in-service training may receive credit for courses required in the NHTI Criminal Justice program. For more information, contact the Admissions Office or the Criminal Justice department.

Advanced Standing Credit

Evaluation of credit received from a college or hospital-based program of study in a health-related field may result in advanced-standing credit toward the General Studies associate degree. Students must have current certification. Eligible credentials include licensed nurse assistant, dental assistant (national certification), and paramedic (New England EMS Institute). For more information, contact the Admissions office.

Other Forms of Earning College Credit

- International Baccalaureate
- Advanced placement exams
- Running Start, eStart, and Early College

Process to Address a Classroom Concern

NHTI is committed to creating and maintaining a positive and productive learning environment for all students. Students who have concerns about any aspect of the classroom experience should first discuss the concern with the course instructor. Discussions may be held in person, via telephone, or through the CCSNH email system. In the event that discussion with the course instructor does not resolve the issue, the concern should then be brought to the appropriate department chair. Only after a student has been unable to resolve the issue through discussion with their course instructor and department chair should a student bring concerns to the VPAA.

Where the concern about the classroom experience involves discrimination on the basis of unlawful criteria including race, color, religion, national or ethnic origin, age, sex, sexual orientation, marital status, disability, gender identify or

expression, genetic information, or veteran status, as defined under applicable law, the student should also report the conduct to the college's Title IX and Equity coordinator and follow the process set for in [Student Affairs Policy 730.06](#). Where the concern involves a grade appeal, the student must follow the process and timeline outlined in the Academic Affairs policy.

Program Residency Requirements

To be eligible to receive an NHTI associate degree, a student must satisfactorily complete a minimum of 15 credits of course work in NHTI-controlled courses with at least half of these credits numbered at the 200 level in the student's major. To be eligible to receive an NHTI professional certificate, 9 credits or 25% of the required program credits, whichever is larger, must be taken in NHTI-controlled courses. To be eligible to receive an NHTI certificate, 6 credits or 25% of the required program credits, whichever is larger, must be taken in NHTI-controlled courses. Exceptions to this policy require approval of the VPAA and Academic Standards Committee.

Under-Enrolled Day Classes

NHTI reserves the right to cancel a class that it deems under-enrolled. Occasionally, a day class may be cancelled for insufficient enrollment, and students will be asked to attend that same class, if it is also available, in the evening. NHTI recognizes its obligation to run courses in the semesters indicated in the program curriculum and will not cancel a day class unless the same or a comparable course is available in the same semester in the evening.

STUDENT AFFAIRS

Campus Safety

The Campus Safety department operates 24/7 and offers a variety of services, such as a walking escorts, unlocking/jumpstarting motor vehicles, parking permits, lost and found, investigations, lockers, event coverage, issuing student IDs, and response to complaints and emergencies. Campus Safety encourages the reporting of potential or actual criminal activity and other emergencies by calling the emergency line at 603-224-3287 or using one of the Code Blue Phones on campus to contact Campus Safety directly.

To meet the requirements of the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act of 1998 the NHTI Annual Security Report has been prepared by the NHTI Campus Safety Department using statistical and other information supplied by NHTI, the Concord Police Department, and the N.H. State Police. To view the Annual Security Report, visit <https://www.nhti.edu/services/campus-resources/campus-safety/>.

Dining

Dining programs and services reflect the diversity and spirit of NHTI. Multiple meal plan options are available to satisfy every student's lifestyle. NHTI, in collaboration with our partners in Dining Services, makes every effort to adapt and support students with food allergies, Celiac Disease, and other medical dietary restrictions. We ask that students with any nutritional concerns reach out to our Dining Services partner, Chartwells, to ensure we are meeting dietary needs.

For Residents

All students living in a residence hall on campus are required to purchase a meal plan. Resident Life recommends incoming first year students to purchase The Ultimate Plan for their first semester. Students can add additional Flex Dollars to their account at any time in increments of \$25.

- *19 Meals per Week and \$100 Flex Dollars:* This plan offers students the greatest value. Students can enjoy all 19 meals offered in Capital Commons each week. This plan is also supplemented with \$100 in Flex Dollars per semester to be used for snacks, beverages, and more in the Capital Commons and The Bistro.
- *15 Meals per Week and \$100 Flex Dollars:* This plan is designed for students who are not on campus on the weekends. Students can enjoy up to 15 meals per week at Capital Commons. This plan is also supplemented with \$100 in Flex Dollars per semester to be used for snacks, beverages, and more at Capital Commons and The Bistro.

For Commuters

NHTI commuter meal plan options are specifically designed for students who want to enjoy the same privileges that resident students enjoy but do not want to commit to a meal plan.

Block Meal Plans

Block Meal Plans offer students the most flexibility as the amount of meals can be used throughout the semester in any manner. Students can use their block meals at our all-you-care-to-eat dining hall. Unlike the traditional meals per week plans available to resident students, meals on our block plans carry over from week to week. Students do not have to worry about losing their meals each week if they do not use them. With a Block Meal Plan, there are no restrictions and plenty of flexibility. Block Meal Plans come in the following options:

- *Block 50:* 50 meal visits for Capital Commons Dining Hall and \$100.00 in Flex Dollars that can be used either at the Bistro or Capital Commons Dining Hall. \$450.00
- *Block 25:* 25 meal visits to Capital Commons Dining Hall and \$75.00 in Flex that can be used either at The Bistro or Capital Commons Dining Hall. \$257.00
- *Block 10:* 10 meal visits to Capital Commons Dining Hall and \$50.00 in Flex that can be used either at the Bistro or Capital Commons Dining Hall. \$125.00

Flex Dollars

Flex Dollars are accepted like cash in all our dining locations. Flex Dollars is a "declining balance account" that works like a debit card. Students can use their Flex to purchase beverages or snacks at The Bistro, or a full meal in the Capital Commons Dining Hall. Each time a purchase is made, the purchase amount is subtracted from the Flex Dollars balance. Flex Dollars carry over from semester to semester but not from year to year. Additional Flex Dollars can be added to

student accounts at any time in increments of \$25. The more money put on the card, the more spending money that is added. Credit or debit cards are accepted at both campus dining locations.

- \$500: Receive \$550 in Flex Spend
- \$400: Receive \$435 in Flex Spend
- \$300: Receive \$320 in Flex Spend
- \$200: Receive \$210 in Flex Spend

Unused Flex Dollars

Unused Flex Dollars carry over from Fall to Spring semester; however, unused block meals will not carry over. At the end of the Spring semester, all unused Flex Dollars are nonrefundable and will not carry over to the following school year. Students should select a meal plan according to their expected spending habits. Students can purchase additional meals and Flex Dollars at any time by contacting Chartwells Dining Services in Little Hall.

Intercollegiate Athletics

NHTI offers an intercollegiate athletic program to eligible students. NHTI teams compete for New England and national championships as members of the Yankee Small College Conference (YSCC) and the U.S. College Athletic Association (USCAA). NHTI student athletes are consistently named All-Americans, Academic All-Americans, and YSCC League All-Stars for their outstanding athletic and academic accomplishments.

Intercollegiate Athletics Eligibility

NHTI students interested in playing intercollegiate athletics must do the following to participate:

- Provide proof of insurance with the NHTI Health Services Office.
- Have documentation of a physical exam and immunizations from their personal physician or with the nurse practitioner in the NHTI Health Services Office in the Student Center.
- Pay the required student activity fee.
- Meet all eligibility requirements of the [USCAA](#).
- Meet NHTI academic standards including status as a full-time student in a matriculated academic program allowing for no more than one academic failure from the preceding semester.
- Maintain the minimum standards of NHTI internal academic progress listed below.

Students lose their eligibility to participate in NHTI athletics if any criteria listed above it not met. Students interested in NHTI athletics should contact 603-230-4041 or visit the Athletics Office in the Wellness Center.

Intramural Sports and Wellness Center

The NHTI Fitness and Recreation Department provides wellness opportunities through activities, events, classes, and on-campus fitness facilities to get and stay healthy and happy in a friendly, comfortable environment. NHTI's Fitness and Recreation Department strives to enhance mental, physical, and emotional well-being while giving students the opportunity to explore their preferences and activities.

The Dr. Goldie Crocker Wellness Center has a weight room and cardiovascular exercise multi-purpose room in addition to our gymnasium, which has a full-length basketball court with 6 baskets and bleachers. An athletic training area and locker rooms are also available for [intercollegiate athletics program](#), as well as for recreational and special events. The Wellness Center is open to NHTI students, staff, faculty, and employees of CCSNH. Group fitness classes are also available to students at no cost.

Lost and Found

Campus Safety takes possession of lost items that are found on campus. Once these items are turned in they are inventoried, logged, and held for 30 days, after which they will be discarded. To retrieve your property, go to Campus Safety, provide valid identification, and sign the lost and found inventory log indicating you have received the property. Contact Campus Safety for claims and inquiries regarding lost property at 603-224-3287 or NHTIcampussafety@ccsnh.edu.

Residence Life

NHTI offers on-campus housing to students in 3 residence halls. Housing is available to registered and eligible NHTI students. Students must be enrolled for a minimum of 9 credit hours to live on campus. Full-time professional staff

members, along with student leaders (resident assistants) support students living on campus and provide opportunities for engagement within the residence halls.

Residence Life provides students with:

- *Experience:* Living on campus makes it easier for students to get involved in projects/clubs that influence the community. Students develop new leadership experiences, share ideas, and achieve outcomes that bolster resumes.
- *Supportive relationships:* Social and academic support fuse together in student housing. Students have ongoing access to study partners and informal peer tutors.
- *Amenities:* Our residence halls are equipped with TV lounges, vending machines, laundry facilities, and game spaces where residents can play pool, ping pong, or video games by signing out an Xbox.
- *Diversity:* Our housing hosts a dynamic segment of the campus population. Students live with people from all over the country and overseas, building relationships with students of various cultures, ethnic traditions, and gender identities.
- *Convenience:* Living in student housing enables students to focus on what's really important: the future.

12-Month Housing

We offer students the option of living on campus year-round! South Hall offers a large, open kitchen space that allows residents to cook their own meals during academic breaks when dining services are limited. Students who need to remain on campus during breaks should request 12-month housing when they apply, as only students who select this option will be guaranteed to stay.

Mixed-Gender Community

Students may request to live in a mixed-gender community and will only be placed in this community if they specifically request it. Space is limited.

STUDENT LIFE

Student Leadership

NHTI provides leadership development opportunities throughout the year. These opportunities build and develop leadership and valuable life skills through workshops, seminars, and structured retreats. There are many different types of leaders in different roles on campus. This program is open to all NHTI students; participation in portions of the program may have a GPA requirement. Students interested in NHTI leadership programs can contact the Office of Student Life at 603-230-4040 or NHTIstudentlife@ccsnh.edu.

- *Lynx to Leadership*: Lynx to Leadership is a dynamic two-day leadership program held at NHTI to engage incoming students in positive relationships, servant leadership, and community service. The goal of the Lynx to Leadership program is to strengthen the NHTI community while helping new students make life-long connections. Open to new students, the program is held mid-August every year and fills up quickly.
- *Leadership Lecture Series*: Throughout the academic year, the Student Leadership Program offers multiple lecture and/or workshops focusing on leadership skills.
- *Student Leadership Retreat*: Each year, NHTI coordinates a retreat for current students, advisors, and members of the Student Engagement Team to gather for a day of leadership development. Typically, the day is spent at an off-campus location where students can network with one another and learn new skills while mastering existing skills. The retreat focuses on leadership skills including communication, collaboration, and teambuilding.

Orientation Program

NHTI has a unique orientation program to facilitate a smooth transition to college life. Students and their guests have the opportunity to tour campus; ask questions; meet current students, alumni, faculty, and staff; and become familiar with college organizations, activities, and services.

Student Activities

NHTI offers a broad range of programs and services to engage students in academic and campus life and enhance their educational experience. The Student Center is the hub for social, cultural, entertainment, and recreational activities. The 16,000 sq. ft. space includes a great room with fireplace, lounge, games area, and conference rooms. It houses a variety of student service offices including campus clubs and organizations, Health and Counseling Services, Campus Activities, Community Service, Residence Life, Student Life, and Student Affairs.

Student Organizations

The Office of Student Life's mission is to enhance the student experience through the development of, exposure to, and participation in programs and activities. Student Life creates a welcoming physical and social environment as part of the educational setting and is grounded in student development through involvement. The Student Life department offers student organization opportunities for students to build connections and develop lifelong skills. A full list of active and dormant student organizations and clubs can be found on our website.

Student Senate and Campus Activities Board

NHTI encourages a democratic form of student government to develop individual initiative and a sense of group responsibility. The Student Senate is responsible for representing the student body in campus affairs and the allocation of funding support for student events and programs. The Senate comprises elected representatives and is responsible for the promotion and coordination of student activities. The Student Senate president and other members represent the student body on various college committees.

ACADEMIC PROGRAMS

Our mission is to help you reach your academic and career goals on your terms in a way that makes sense for you. We offer daytime, evening, hybrid, remote, hyflex, and online class options with 8- and 16-week sessions. We're more than just your local community college; we offer 80+ degree and certificate programs in six focus areas:

-  **Arts, Humanities, Communications, and Design**
-  **Business**
-  **Health Sciences and Services**
-  **Hospitality**
-  **Social, Educational, and Behavioral Sciences**
-  **STEM and Advanced Manufacturing**

Ideally, you should plan on taking 30 credits per academic year (including the fall, spring, summer, and interim sessions) in your chosen degree or certificate program to reach your optimal college experience while saving you time and money. If you have any questions about individual focus areas, programs, or courses, contact our Office of Academic Advising at NHTIadvising@ccsnh.edu or your personal academic advisor.

ARTS, HUMANITIES, COMMUNICATIONS, AND DESIGN

Associate of Arts

- [Communications](#)
- [English](#)
- [Liberal Arts](#)
- [Visual Arts](#)

Associate of Science

- [General Studies](#)

Certificate

- [Mindful Communication](#)

Internship Considerations

NHTI has developed excellent practicum opportunities to foster hands-on learning while simultaneously receiving credit. The college's first priority must be to ensure that patients/clients/children/families are not placed in jeopardy by students during learning experiences. Students in internship, externship, practicum, service learning, and clinical experiences must demonstrate sufficient emotional stability to withstand the stresses, uncertainties, and changing circumstances of patient/client/child/family responsibilities. The student is expected to have the emotional stability to exercise sound judgment, accept direction and guidance from a supervisor or faculty member, and establish rapport and maintain interpersonal relationships and confidentiality with employees, customers, and/or patients/clients/children and their families.

Curriculum Abbreviations

- CL – Number of lecture/classroom hours per week for the course
- LAB – Number of simulation laboratory, laboratory or clinical hours per week for the course
- CR – Number of credit hours for the course

COMMUNICATIONS

Associate in Arts

This program is designed to prepare students to build successful careers in today's complex, information-based, media-driven culture and allow them to transfer into bachelor's degree program in Communications, Media Studies, Journalism, or related degree. The associate degree will prepare students to engage with communicative patterns, problems, and practices they will encounter in their personal and professional lives.

- By studying communication in everyday relationships, groups, and organizations, students discover how these systems are created, maintained, and improved.
- By learning critical thinking, problem solving, conflict management, and collaborative strategies, students develop leadership, career development, and understanding skills for different situations.
- By developing skills in writing, editing, social media, and analysis, students learn to create and deliver effective messages through written, oral, digital, and broadcast channels.

This program is available 100% online.

Program Learning Outcomes

This program seeks to guide and develop students into becoming ethical, hard-working, and thoughtful contributors in their personal lives, careers, and society. Accordingly, the program will develop students' abilities to:

- Exemplify high ethical standards in personal and professional communication.
- Participate in discussions about cultural diversity.
- Communicate through individual and group presentations and speeches and participate in a symposium.
- Effectively employ communications and social media tools.
- Assess the dynamics of interpersonal communication and conflict management involving personal and business relationships.
- Develop a communication plan to enact during a crisis within an organization and then reflect and revise communication strategies used during the crisis.

Career Information

Communications skills are needed across industries and disciplines, such as social media, media, broadcasting, journalism, photography, business, public relations, travel and tourism, sales, advising, law, health, human services, education, and ministry. Graduates can enter into the following professions (not an inclusive list):

- Radio and TV stations broadcaster
- Newspaper and magazine writer/editor
- Student and athlete advising
- Advertising/marketing/social media developer

The communication skills derived from the degree can help students succeed in corporate settings or in organizations involving communications, media, broadcasting, journalism, photography, business, public relations, politics, law, health, human services, education, and ministry.

Communications Associate of Arts Curriculum

	Course	Title	CL	LAB	CR
FIRST YEAR	Fall Semester				
	ENGL 101C	English Composition	4	0	4
	XX xxxC ¹	Social Science	3	0	3
	MATH 120C	Quantitative Reasoning or higher-level math course	4	0	4
	HIST 105C	Western Civilization II	3	0	3
					14
	Spring Semester				
	ENGL 120C/COMM 120C	Communications or			
	ENGL 120MC/COMM 120MC	Communication: Mindful or			
	COMM 125C	Communication and the Literature of Science and Technology	3	0	3
DCOM 150C	Social Media Strategy	3	0	3	
XX xxxC ¹	Social Science elective	3	0	3	
XX xxxC ²	Humanities elective	3	0	3	
XX xxxC ³	Lab Science elective	3	2	4	
				16	
SECOND YEAR	Fall Semester				
	COMM 135C	Introduction to Media Studies or			
	DCOM 130C	Ecommerce, Websites, Blogs or			
	SPTS 180C	Public Relations and Advertising for the Sports Industry or			
	VRTS 140C	Digital Photography	3	0	3
	COMM 201C	Interpersonal Communication or			
	DCOM 210C	Search Engine Optimization or			
	SPTS 250C	Sports and Society or			
	VRTS 101C	Intro to Drawing	3-4	0	3-4
	COMM 203C	Advanced Public Speaking	3	0	3
	PHIL 242C	Contemporary Ethical Issues	3	0	3
	MATH 1xxC	Math above Quantitative Reasoning	4	0	4
					16-17
	Spring Semester				
	COMM 227C	Professional Communication or			
	SPTS 220C	Sports Communications or			
	VRTS 193C	Intro to Photoshop	3	0	3
	COMM 202C	Intercultural Communication or			
	DCOM 230C	Email, Mobile Promotion, and Marketing or			
	VRTS 201C	Drawing II	3	0	3
XX xxxC	Social Science elective	3	0	3	
XX xxxC	Science elective (with or without lab)	3-4	0	3-4	
BUS 261C	Advertising or				
DCOM 250C	Digital Analytics or				
SPTS 270C	Introduction to Sports Analytics or				
ENGL 221C	Film Genres and Directors	3	0	3	
COMM 204C	Communications Capstone	1	0	1	
				16-17	
Total Credits					
				62-64	

Communications Associate of Arts Degree Tracks

COMMUNICATIONS	ENGL 120C/COMM 120C	Communication or
	ENGL 120MC/COMM 120MC	Communication: Mindful or
	COMM 125C	Communication and the Literature of Science and Technology
	DCOM1 50C	Social Media Strategies
	COMM 135C	Intro to Media Studies
	COMM 202C	Intercultural Communication
	COMM 203C	Advanced Public Speaking
	COMM 204C	Communications Capstone
	COMM 227C	Professional Communication
BUS 261C	Advertising	

DIGITAL	ENGL 120C/COMM 120C	Communication or
	ENGL 120MC/COMM 120MC	Communication: Mindful or
	COMM 125C	Communication and the Literature of Science and Technology
	DCOM 130C	Ecommerce, Websites, and Blogging
	DCOM 150C	Social Media Strategies
	DCOM 210C	Search Engine Optimization
	DCOM 230C	Email, Mobile Promotion, and Marketing
	DCOM 250C	Digital Analytics
	COMM 203C	Advanced Public Speaking
	COMM 204C	Communications Capstone
COMM 227C	Professional Communication	

MINDFUL	ENGL 101MC	English: Mindful
	ENGL 102MC	Intro to Literature: Mindful
	ENGL 120MC/COMM 120MC	Communication: Mindful or
	COMM 135C	Intro to Media Studies
	ENGL 294MC/COMM 294MC	Communicating Mindfully Capstone
	DCOM 150C	Social Media Strategies
	COMM 201C	Interpersonal Communication
	COMM 202C	Intercultural Communication
	COMM 203C	Advanced Public Speaking
	COMM 204C	Communications Capstone
	COMM 227C	Professional Communication
	BUS 261C	Advertising

SPORTS	ENGL 120C/COMM 120C	Communication or
	ENGL 120MC/COMM 120MC	Communication: Mindful or
	COMM 125C	Communication and the Literature of Science and Technology
	DCOM 150C	Social Media Strategies
	COMM 202C	Intercultural Communication
	COMM 203C	Advanced Public Speaking
	COMM 204C	Communications Capstone
	SPTS 220C	Sports Communications
	SPTS 250C	Sports and Society
	SPTS 270C	Introduction to Sports Analytics

VISUAL ARTS	ENGL 120C/COMM 120C	Communication or
	ENGL 120MC/COMM 120MC	Communication: Mindful or
	COMM 125C	Communication and the Literature of Science and Technology
	ENGL 121C	Intro to Film
	ENGL 221C	Film Genres and Directors
	DCOM 150C	Social Media Strategies
	COMM 203C	Advanced Public Speaking
	COMM 204C	Communications Capstone
	VRTS 101C	Intro to Drawing
	VRTS 140C	Digital Photography
	VRTS 193C	Intro to Photoshop
	VRTS 201C	Drawing II

¹ ANTH, ECON, HIST, POLS, PSYC, or SOCI prefix (excluding HIST 104C and HIST 105C) are strongly recommended.

² ENGL 102C Intro to Literature, ENGL 121C Film Studies, or language

³ Excluding BIOL 100C, CHEM 100C, and PHYS 100C

ENGLISH

Associate in Arts

The program ensures a sound general education in the Humanities and Sciences while allowing students to pursue interests in literatures or creative writing. The associate degree can serve as a stepping stone to a 4-year degree in English or related majors. This program is available 100% online.

Program Learning Outcomes

Through the study of literature and the practice of writing, the successful English major will be able to identify a diverse range of historically and culturally significant texts; analyze and evaluate those texts; and, with the aid of developed skills in research and writing, apply original ideas and opinions to a wide range of historical and contemporary issues. Upon successful completion of the AA in English, students will be able to identify, analyze, and evaluate a diverse range of historically and culturally significant works of fiction, nonfiction, drama, and poetry. The successful student will also be empowered to develop original ideas and opinions on literary texts and a range of issues related to historical and contemporary Western culture.

Career Information

Students who complete this program can enter into the following professions (not an inclusive list): editing, journalism, and publishing.

English Associate of Arts Curriculum

Course	Title	CR
General Requirements		
ENGL 101C	English Composition	4
ENGL 102C	Introduction to Literature	3
	Humanities: HIST 105C Western Civilization II and XX xxxC Humanities/Fine Arts/ Language elective	9
	Mathematics/Quantitative Reasoning electives: 2 courses that can include CPET 107C, PHIL 112C, or MATH 120C ¹ or higher-level math	8
	Lab Science elective ²	8
	Social Science electives: 3 courses of ANTH, ECON, HIST, POLS, PSYC, or SOCI ³	9
		41
Concentration ^{4,5}		
ENGL 1xxC	Introductory genre courses beyond ENGL 102C	6
ENGL 2xxC and 2xxC	Sequential survey courses in American or British Literature	6
ENGL 255C	Shakespeare	3
ENGL 2xxC	Upper-level electives	6
		21
Total Credits		62

¹ Milestone course – A course necessary to pass to advance in the program

² Excluding BIOL 100C, CHEM 100C, and PHYS 100C

³ Excluding HIST 104C and HIST 105C

⁴ A minimum 60 credits is required for graduation.

⁵ A minimum of 16 credits hours must be earned through instruction at NHTI with a minimum of 8 credit hours in courses numbered at the 200 level.

LIBERAL ARTS

Associate in Arts

This program is designed to provide students with broad knowledge and exploration in the arts and sciences. It offers maximum choice and flexibility, a wide array of courses, and clear transfer pathways to other programs and 4-year schools. This program allows students to create a pathway for following opportunities:

- Ability to transfer to 4-year colleges and universities to complete a bachelor's degree in a Liberal Arts area
- Starting point for those who have not selected a major and want to complete general education requirements and an associate degree
- Access to prerequisite courses to transfer into NHTI programs such as Engineering Technology, Math, Biology, Health Science, Environmental Science, and Accounting

Career Information

Employers rank critical thinking and communication skills as essential components of career readiness. Students with a Liberal Arts degree gain these sought-after skills to pursue a wide range of job opportunities.

Program Learning Outcomes

- Evaluate strengths and weaknesses as a learner and develop strategies for finding solutions.
- Express oneself clearly and cogently through written and oral communication.
- Evaluate the effect of historical trends, events, institutions, and social systems on society.
- Apply quantitative reasoning/mathematical operations necessary to be competent in both a personal and professional setting.
- Apply the scientific method to gain knowledge and examine the laws, theories, and processes of physical and biological phenomena.
- Demonstrate an understanding of diverse ideas, emotions, and modes of expression, as expressed through literature and the arts.
- Demonstrate the basic applications of computer technology on both a personal and professional level.
- Complete the necessary course requirements to support transfer to four-year institutions.

Liberal Arts Associate of Arts Curriculum

Course	Title	CR
Core Requirements		
ENGL 101C	English Composition	3-4
ENGL xxxC	English elective	3
MATH xxxC	Mathematics/Quantitative Reasoning electives: 2 courses that can include CPET 107C, PHIL 112C, or MATH 120C ¹ or higher-level math	6-8
XX xxxC	3 Humanities electives ² : Any INDL, PHIL, ASL, CHIN, FREN, GERM, SPAN, THTR, MUSC, DANC, VRTS, HIST 104C, HIST 105C, or English Literature ³	9
XX xxxC	3 Social Science electives: ANTH, ECON, INDL, POLS, PSYC, SOCI, or HIST xxxC ³	9
XX xxxC	2 Science electives, one with lab: BIOL, CHEM, PHYS, SCI, ENV	7-8
Total Core Credits^{4,5}		37-41
Electives		
XX xxxC	4-5 Liberal Arts and Sciences electives (any General Education elective)	12-15
XX xxxC	3 general electives (any credited course)	9-12
Total Credits		60

¹ Milestone course – A course necessary to pass to advance in the program

² For optimal transfer the following courses are recommended: Philosophy, History, Fine Arts, Anthropology, or other culture/diversity class.

³ Excluding HIST 104C and HIST 105C

⁴ All students must complete a minimum of 60 credits of college-level coursework with a minimum cumulative GPA of 2.0.

⁵ All students must earn at least 15 credits at NHTI with at least 8 of those credits numbered at the 200 level.

VISUAL ARTS

Associate in Arts

This program provides the opportunity to acquire a thorough knowledge of visual expression and broad exposure to the history of art in preparation for transfer to four-year colleges and universities and a career in the visual arts. The structured curriculum emphasizes visual perception, technical acuity, and artistic philosophy geared toward developing a personal aesthetic. The first-year curriculum provides all students with a common foundation in basic artistic techniques. The following year, students focus on advanced studio disciplines and prepare a professional portfolio of their work. To view NHTI Senior Capstone work, visit <https://www.nhtivarts.com/>.

The Visual Arts professors are professional artists with extensive exhibition records and a wealth of teaching experience. The limited student-to-faculty ratio facilitates a respectful and safe environment to develop inherent abilities. We encourage mentorships, independent study, internships, and exhibition opportunities. Students have their work exhibited at the end of each semester.

Program Learning Outcomes

Students who complete the program will demonstrate:

- A comprehension of art history and its relationship to society, an understanding of different modes of expression, and how to articulate that context during individual assessment of studio work
- The ability to create imagery that reflect professional standards in a range of mediums that use components of visual language to communicate personal and group content and critically assess individual work in group settings
- The ability to write concisely and employ mathematics, science, and appropriate terminology as used in the field of visual arts
- The ability to articulate meaning and motive in an artist statement, create an independent body of work, prepare professional-quality displays, and curate and hang exhibitions

Career Information

Graduates can enter into the following professions (not an inclusive list): illustrating, graphic design, set design, photography, film/media production, fabric/paper design, fashion design, product design, art therapy, art instructors, game design, character development, interior design, and fabrication. They may earn income by opening their own studios and selling work to museums, galleries, and private collectors. Many continue study toward BFA degrees to further their abilities and pursue careers in teaching.

Visual Arts Associate of Arts Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR	
	Fall Semester					
	ENGL 101C	English Composition	4	0	4	
	VRTS 101C	Introduction to Drawing (studio) ¹	2	4	4	
	VRTS 103C	Two-Dimensional Design (studio) ¹	2	3	3	
	VRTS 111C	Survey of Western Art History I ¹	3	0	3	
	XX xxxC	Social Science elective ^{1,2}	3	0	3	
					17	
Spring Semester						
	XX xxxC	Social Science elective	3	0	3	
	ENGL xxxC	English elective	3	0	3	
	VRTS 104C	Three-Dimensional Design (studio) ¹	2	3	3	
	VRTS 112C	Survey of Western Art History II ¹	3	0	3	
	VRTS 201C	Drawing II (studio) ¹	2	4	4	
					16	
SECOND YEAR	Fall Semester					
		MATH xxxC	Math elective ³	3-4	0	3-4
		VRTS xxxC	Studio elective ¹	2	4	4
		VRTS xxxC	Elective (may be Studio or History) ¹	2-3	0-4	3-4
		XX xxxC	Lab Science elective ⁴	3	2	4
		XX xxxC	Social Science elective ²	3	0	3
						17-19
	Spring Semester					
		MATH xxxC	Math elective ³	3-4	0	3-4
		VRTS 290C	Visual Arts Capstone Practicum ^{1,5}	1	0	1
		VRTS 2xxC	Studio elective (#2) ¹	2	4	4
		XX xxxC	Lab Science elective ⁴	3	2	4
	XX xxxC	General elective	3-4	0	3-4	
					15-17	
Total Credits					65-69	

¹ Indicates major field courses.

² Any course with a prefix of ANTH, ECON, HIST, POLS, PSYC or SOCI (except HIST 104C and HIST 105C)

³ MATH xxxC 1 must be MATH 120C or higher-level mathematics course (excludes "institutional credit only" math courses and MATH 129C); MATH xxxC 2 must be a higher-level mathematics course than MATH xxxC 1.

⁴ BIOL 100C, CHEM 100C and PHYS 100C do not meet this requirement.

⁵ The final studio course will serve as the capstone course during which the student will create a portfolio of work to be displayed at a public showing.

GENERAL STUDIES

Associate in Science

This program is designed to provide students with maximum flexibility, traditional and online options, and strong advising to help fulfill prerequisites needed to apply to any of NHTI's Allied Health programs. This program offers a wide array of courses and opportunities and allows students to create a pathway that provides opportunity to:

- Transfer to other NHTI Allied Health programs upon acceptance to those programs.
- Be a starting point for students, especially those who are interested in Allied Health fields but who have not yet selected or been admitted to a specific Allied Health program.
- Complete general education requirements and complete an associate degree.
- Complete prerequisite courses to transfer into programs ranging from Nursing to Radiologic Technology.
- Apply credits earned in an NHTI certificate program or elsewhere toward an associate degree at NHTI.

Program Learning Outcomes

- Evaluate strengths and weaknesses as a learner and develop strategies for finding solutions for improvement.
- Express oneself clearly and cogently through written and oral communication.
- Evaluate the effect of historical trends, events, institutions, and social systems on society.
- Apply quantitative reasoning/mathematical operations necessary to be competent in both a personal and professional setting.
- Apply the scientific method to gain knowledge and examine the laws, theories, and processes of physical and biological phenomena.
- Demonstrate an understanding of diverse ideas, emotions, and modes of expression as expressed through literature and the arts.
- Demonstrate the applications of computer technology to be competent on a personal and professional level.

Career Information

Career pathways for General Studies majors are diverse and depend on the students' interests, the skills they develop, and the goals they set for themselves. General Studies majors are often interested in helping people, particularly in a medical setting. After completing a degree at NHTI, graduates may find themselves helping to administer medical treatment, providing access to services, or helping to prevent, diagnose, and treat medical conditions. General Studies majors are often interested in ensuring people know how to maintain and improve their health and the health of others. Learning about scientific principles and evidence-based practice are crucial parts of the education when exploring the possibility of a career in these fields.

General Studies Associate of Science Curriculum

OPTION A: SELECT A CONCENTRATION

Course	Title	CR
ENGL 101C	English Composition	4
ENGL xxxC	English elective ¹	3
MATH 120C	Mathematics: MATH 120C Quantitative Reasoning or higher-level math	4
XX xxxC	2 Social Sciences electives ²	6
XX xxxC	Lab Science elective ³	4
XX xxxC	Humanities elective ⁴	3
XX xxxC	General elective (any college-level credited course)	3
		27 (min)
Electives		
GST 100C	College Success Seminar ⁵	1
GST 102C	Study Strategies ⁵	2
XX xxxC	Liberal Arts and Sciences electives	12
XX xxxC	Electives (may include a certificate program)	20-23
		35-38
Total Credits		62-65

OPTION B: APPLY CREDIT/EXPERIENCE

Course	Title	CR
ENGL 101C	English Composition	4
ENGL xxxC	English elective ¹	3
MATH xxxC	Mathematics: MATH 120C Quantitative Reasoning or higher-level math	4
XX xxxC	2 Social Sciences electives ²	6
XX xxxC	Lab Science elective ³	4
XX xxxC	Humanities elective ⁴	3
XX xxxC	General elective (any college-level credited course)	3
		27 (min)
Electives		
GST 100C	Assessment of Prior Learning	1
	Experiential Credit ⁵	16 (max)
	Certificate in a specific program area ⁶ (must relate to experiential credit) and/or	variable
	Coursework in a specific subject area ⁶ (must relate to experiential credit)	
		32
Total Credits		60

¹ Excluding ENGL 100C, ENGL120C, ENGL120MC, ENGL135C, and ENGL 201C

² Any Anthropology (ANTH), Economics (ECON), Interdisciplinary (INDL), Political Science (POLS), Psychology (PSYC), Sociology (SOC), or History (HIST, excluding Hist 104C and HIST105C) course

³ Excluding BIOL 100C, CHEM 100C, and PHYS 100C. Includes one 4-credit science from these categories with a lab: Biology (BIOL), Chemistry (CHEM), Physics (PHYS), Science (SCI), Environmental Science (ENVS)

⁴ Includes any interdisciplinary (INDL), Philosophy (PHIL), American Sign Language (ASL), Chinese (CHIN), French (FREN), German (GERM), Spanish (SPAN), Theater (THTR), Music (MUSC), Dance (DANC), Visual Arts (VRTS), History (HIST 104C or HIST105C), or English Literature course.

⁵ GST 100C/102C can be waived if a student has taken a course section designated as a First-Year Experience course, if the student has six credits with a C or better, or with the permission of the department chairperson.

⁶ If the combination of experiential credit and certificate program courses totals less than 35 credits, additional coursework must relate to the concentration subject area and must be approved by the department chair.

Note: A minimum of 16 credit hours must be earned through instruction at NHTI with a minimum of 8 credit hours in courses numbered at the 200-level. For optimal transfer experiences, speak with an NHTI advisor for specific recommendations.

MINDFUL COMMUNICATION

Certificate

This program consists of four English courses with the “MC” extension that infuse mindful communication and emotional intelligence into the teaching of core course content. Students who take those courses as part of their degree program can graduate with both an associate degree and a Mindful Communication certificate.

Mindfulness has been linked with an increased ability to focus, improved working memory, improved problem solving, reduced reactivity, reduced stress, and improved health. NHTI’s Mindful Communication courses and certificate program are part of the mindfulness-based approach to the study, application, and teaching of mindfulness as pioneered by leaders in the field at the Center for Mindfulness, Medicine, Health Care, and Society at the University of Massachusetts Medical School.

The certificate is financial aid-eligible only when the MC courses are completed as part of a degree program.

Career Information

This certificate makes students more marketable across a broad range of fields, including information technology, healthcare, business, education, and human services. Emotional intelligence (EI) is widely recognized as helping people succeed and move up in their careers. Studies suggest that those with high EI often earn higher salaries than those with low EI.

Mindful Communication Certificate Curriculum

Course	Title	CL	LAB	CR
Full Certificate				
ENGL 120MC/COMM 120MC	Communication: Mindful	3	0	3
ENGL 101MC	English Composition: Mindful	4	0	4
ENGL 102MC	Introduction to Literature: Mindful	3	0	3
ENGL 294MC/COMM 294MC	Communicating Mindfully Capstone	1	0	1
Total Credits				11

Associate of Science

- [Accounting](#)
- [Business Administration](#)
- [Paralegal Studies](#)
- [Sports Management](#)

Certificate

- [Accounting Advanced](#)
- [Accounting Basic](#)
- [Management](#)
- [Paralegal Studies](#)
- [Sports Management](#)

Internship Considerations

NHTI has developed excellent practicum opportunities to foster hands-on learning while simultaneously receiving credit. The college's first priority must be to ensure that patients/clients/children/families are not placed in jeopardy by students during learning experiences. Students in internship, externship, practicum, service learning, and clinical experiences must demonstrate sufficient emotional stability to withstand the stresses, uncertainties, and changing circumstances of patient/client/child/family responsibilities. The student is expected to have the emotional stability to exercise sound judgment, accept direction and guidance from a supervisor or faculty member, and establish rapport and maintain interpersonal relationships and confidentiality with employees, customers, and/or patients/clients/children and their families.

Curriculum Abbreviations

- CL – Number of lecture/classroom hours per week for the course
- LAB – Number of simulation laboratory, laboratory or clinical hours per week for the course
- CR – Number of credit hours for the course

ACCOUNTING

Associate in Science

This program offers an associate degree to prepare students for entry-level positions in accounting and business. All courses in our certificate programs are transferable to an associate degree. We also offer credit transfer options to four-year colleges and universities. Day, evening, and online courses are available.

Program Learning Outcomes

It is the mission of the Accounting department to prepare students for:

- Competitive eligibility for entry-level jobs in the accounting field
- Transfer to baccalaureate programs
- Advancement in their current jobs

At the completion of the program, students will be able to:

- Demonstrate proficiency in accurately observing and organizing financial data.
- Demonstrate analytical and problem-solving skills.
- Demonstrate the use of accounting principles and procedures as they apply to the recording and reporting of financial information.
- Demonstrate proficiency in valuing, recording, and reporting the business entity's assets, liabilities, and equity.
- Demonstrate proficiency in the use of financial data in planning, controlling, and evaluating entity performance.
- Appreciate the importance of deadlines to the profession.
- Understand professional responsibilities in the workplace.
- Communicate clearly, both verbally and in writing.
- Complete tasks in a timely fashion.
- Demonstrate proficiency in basic computer applications, including Excel.

Career Information

Career potential is excellent with an associate degree in accounting, which is a critical component of every type and size of business and industry. Accounting employees provide much of the information used by organizations to make critical financial decisions. Graduating with an A.S. in Accounting will prepare students for jobs in the following professions (not an inclusive list):

- Accounts payable/receivable clerk
- Tax preparer
- Billing/accounting/auditing clerk
- Bookkeeper

Accreditation

Our accounting associate degree is accredited by the Accreditation Council for Business School and Programs.

Specific Admissions Requirements

High school algebra I with a grade of C or higher or NHTI's MATH 092C with a grade of C or higher.

Accounting Associate of Science Curriculum

FIRST YEAR – ON CAMPUS

Course	Title	CL	LAB	CR
Fall Semester				
ACCT 101C	Accounting I ¹	3	0	3
BUS 170C	Principles of Marketing ¹	3	0	3
ENGL 101C	English Composition	4	0	4
IST 102C	PC Applications	3	0	3
MATH 124C	College Algebra or higher-level math	4	0	4
				17
Spring Semester				
ACCT 102C	Accounting II ¹	3	0	3
ENGL xxxC	English elective	3	0	3
IST 200C	Spreadsheets	3	0	3
MATH 125C	Finite Mathematics or			
MATH 251C	Statistics	4	0	4
XX xxxC	Lab Science elective ¹	3	2	4
				17

SECOND YEAR – ON CAMPUS

Fall Semester				
ACCT 205C	Intermediate Accounting I ¹	4	0	4
ACCT 250C	Cost Accounting ¹	3	0	3
BUS 225C	Business Law I ¹	3	0	3
BUS 270C	Principles of Management ¹	3	0	3
				13
Spring Semester				
ACCT 206C	Intermediate Accounting II ¹	4	0	4
ACCT 230C	Taxes ¹	4	0	4
ECON 101C	Macroeconomics or			
ECON 102C	Microeconomics	3	0	3
XX xxxC	Humanities/Fine Arts/Language elective	3	0	3
				14
Total Credits				61

¹ Indicates major field course

² Excluding BIOL 100C, CHEM 100C, and PHYS 100C

FIRST YEAR – ONLINE

Fall Semester					
ACCT 101C	Accounting I	3	0	3	
ACCT 102C	Accounting II	3	0	3	
IST 102C	PC Applications	3	0	3	
IST 200C	Spreadsheets	3	0	3	
Spring Semester					
BUS 270C	Principles of Management ¹	3	0	3	
ACCT205C	Intermediate Accounting I ¹	4	0	4	
ENGL101C	English Composition	4	0	4	
XX xxxC	Lab Science elective ²	3	2	4	
Summer Semester					
ACCT 230C	Taxes ¹	4	0	4	
ACCT 250C	Cost Accounting ¹	3	0	3	
				34	

SECOND YEAR – ONLINE

Fall Semester					
ACCT 206C	Intermediate Accounting II ¹	4	0	4	
BUS 225C	Business Law I ¹	3	0	3	
ENGL xxxC	English elective	3	0	3	
MATH 124C	College Algebra	4	0	4	
				14	
Spring Semester					
BUS 170C	Principles of Marketing ¹	3	0	3	
ECON 101C	Macroeconomics or				
ECON 102C	Microeconomics	3	0	3	
MATH 125C	Finite Mathematics or				
MATH 251C	Statistics	4	0	4	
XX xxxC	Humanities/Fine Arts/Language elective	3	0	3	
				13	
Total Credits				61	

¹ Indicates major field course

² Excluding BIOL 100C, CHEM 100C, and PHYS 100C

BUSINESS ADMINISTRATION

Associate in Science

Students interested in being part of the day-to-day challenges in the dynamic field of business should consider this degree at NHTI. Students will be given a broad background in classes taught by faculty who are or have been successful business professionals. We offer courses in accounting, business law, human resources, computer applications, economics, English, and math. Classes are offered days, evenings, and online. Easy transfers are available.

Program Learning Outcomes

- Students will demonstrate oral and written communications competencies across the disciplines. Students will practice standard forms of communication such as resumes, letters, and reports.
- Students will practice ethical and effective interpersonal skills in their relations with fellow students and instructors. They will demonstrate those skills in classroom and small group and workplace settings. Work experience supervisors will report satisfaction with students' skills, performance, and judgment during their internships.
- Students will demonstrate familiarity with economic and managerial concepts and quantitative controls in the business environment.
- A majority of the students who begin the program will complete the AS degree requirements within 3 years.
- A majority of program graduates report satisfaction with the Business Administration education at NHTI. Of our graduates, 75% will be employed in a related field within six months of completing degree requirements or continue in a 4-year degree program.

Career Information

Students who complete this program can enter into the following professions (not an inclusive list):

- Customer service representative
- Loan officer
- Marketing assistant
- Office manager
- Retail manager

Accreditation

The Associate in Science in Business Administration program is accredited by the Accreditation Council for Business Schools and Programs.

Additional Info

The Business program has the following articulation agreements in place: Plymouth State University, Southern NH University, UNH-Manchester, Rivier University, and New England College. Several students have also successfully transferred to other colleges such as Bentley University and Bryant University.

BUSINESS ADMINISTRATION ASSOCIATE OF SCIENCE CURRICULUM

FIRST YEAR	Course	Title	CL	LAB	CR
		Fall Semester			
	ACCT 101C	Accounting I	3	0	3
	BUS 101C	Introduction to Business ¹	3	0	3
	ENGL 101C	English Composition	4	0	4
	IST 102C	PC Applications	3	0	3
	MATH 120C	Quantitative Reasoning or higher-level math	4	0	4
					17
	Spring Semester				
	ACCT 102C	Accounting II	3	0	3
	BUS 170	Principles of Marketing ¹	3	0	3
	BUS xxx	Business elective ²	3	0	3
	ENGL 120C	Communications or			
	ENGL xxxC	English elective	3	0	3
	MATH 125C	Finite Mathematics or			
	MATH 251C	Statistics	4	0	4
					16
SECOND YEAR	Fall Semester				
	ACCT 110C	Managerial Accounting	3	0	3
	BUS 225C	Business Law I ¹	3	0	3
	BUS 270C	Principles of Management ¹	3	0	3
	BUS xxxC	Business elective ²	3-4	0	3-4
	ECON 101C	Macroeconomics or			
	ECON 102C	Microeconomics	3	0	3
					15-16
	Spring Semester				
	BUS 240C	Small Business Management ¹	3	0	3
	BUS 273C	Human Resource Management ¹	3	0	3
	XX xxxC	Lab Science elective ³	3	2	4
	XX xxxC	Humanities/Fine Arts/Language elective	3	0	3
				13	
Total Credits					
					61-62

¹ Indicates major field course

² BUS, ACCT, or IST course that is not a required course, as well as HLTH 101C or HLTH 104C, or DCOM 105C or DCOM 150C

³ BIOL 100C, CHEM 100C, and PHYS 100C do not meet the science requirement.

PARALEGAL STUDIES

Associate in Science

This program prepares students to perform effectively in today's legal and business communities with a broad-based academic curriculum emphasizing the skills, substantive knowledge, and ethics a paralegal needs to assist lawyers. This degree can be completed on a full- or part-time basis. Most major field courses are offered in the evenings. The general education courses are offered days and evenings. Paralegal work requires discretion and independent judgment; a paralegal works under the supervision and direction of an attorney. Even though a paralegal can perform many of the tasks that have otherwise been performed by attorneys, they may not give legal advice, represent a client in court, or otherwise engage in the practice of law.

Program Learning Outcomes

NHTI graduates will be exposed to the legal system and the role of paralegals within the profession, the ethical rules governing lawyers and paralegals, and the operation of a law office. Through the course sequence in the degree, NHTI graduates will be:

- Able to assist in most aspects of legal research and in the preparation of clear and concise legal writings on a topic of their choosing
- Introduced to Lexis/Nexis
- Able to assist in virtually all phases of litigation and property transactions
- Able to assist in the formation, daily administration, and dissolution of a corporate entity
- Able to assist in the planning and administration of a decedent's estate
- Prepared to assist in the drafting of pleadings and in the completion of preliminary research in the area of family law
- Exposed to the various elements of N.H.'s criminal practice and procedure

Career Information

Graduates may either enter the work force directly after graduation or continue their education at a four-year institution. They are trained for professional status as lawyers' assistants in banks, corporations, government agencies, insurance companies, and law firms.

Accreditation

This degree program is approved by the American Bar Association and is designed to prepare students to perform effectively in today's legal and business communities.

Specific Admissions Requirements

- Interview with department chair scheduled by the department chair once applications are complete
- Two confidential letters of reference
- 200-word essay with reasons for choosing the Paralegal Studies program (to evaluate writing skills)

Character Expectations

Background checks are completed by potential employers prior to obtaining any position with arrest or detention power and typically before being accepted for an internship. Applicants who have been in difficulty with the law may not be employable or eligible for an internship. Because future goals may be compromised, applicants are advised to discuss any concerns with the department chair.

Paralegal Studies Associate of Science Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR	
	Fall Semester					
	ENGL 101C	English Composition	4	0	4	
	IST 102C	PC Applications	3	0	3	
	PLGL 106C	Introduction to Legal Studies ¹	3	0	3	
	PLGL 107C	Contracts and Torts ¹	3	0	3	
	PSYC 105C	Introduction to Psychology	3	0	3	
					16	
Spring Semester						
	ACCT 101C	Accounting I	3	0	3	
	ENGL 120C/COMM 120C	Communication or				
	ENGL xxxC	English elective	3-4	0	3-4	
	MATH 124C	College Algebra	4	0	4	
	PLGL 110C	Litigation and Trial Preparation ¹	3	0	3	
	PLGL 225C	Legal Research and Writing ^{1,2}	3	2	4	
					17-18	
SECOND YEAR	Fall Semester					
	ACCT 102C	Accounting II	3	0	3	
	PHIL 242C	Contemporary Ethical Issues	3	0	3	
	PLGL 221C	Real Estate ¹	3	0	3	
	PLGL 251C	Probate Estates and Trusts ¹	3	0	3	
	PLGL 262C	Criminal Law and Procedures ¹	3	0	3	
					15	
Spring Semester						
	FL xxxC	Language or	3	0-2	3-4	
	XX xxxC	General Education elective	3	0	3	
	PLGL 231C	Business Organizations and Bankruptcy ¹	3	0	3	
	PLGL 242C	Domestic Relations Law ¹	3	0	3	
	PLGL 270C	Internship/Seminar ¹	0	9	3	
	XX xxxC	Lab Science elective ³	3	2	4	
	XX xxxC	Social Science elective ⁴	3	0	3	
					19-20	
Total Credits					67-69	

¹Indicates major field course

²A \$125 fee will be assessed for all students taking PLGL 225. This fee will cover costs associated with ABA dues, Lexis/Nexis, and UNH School of Law Library.

³BIOL 100C, CHEM 100C, and PHYS 100C do not meet the science requirement.

⁴Any course with a prefix of ANTH, ECON, HIST, POLS, PSYC or SOCI (except HIST 104C and HIST 105C)

SPORTS MANAGEMENT

Associate in Science

This program is designed for individuals with career interests that combine management skills and knowledge of the sports industry. Courses are offered during the day, evening, and 100% online.

Career Information

The goal of the program is to develop well-trained business professionals who will enter positions in the administration or management of sports businesses or sports organizations. Some careers include media, retail sports, sports travel, facility, and event management. Understanding the business, legal, and marketing aspects of sports management is an invaluable tool.

Accreditation

The Sports Management degree program is accredited by the Accreditation Council for Business Schools and Programs.

Additional Info

One of the major factors contributing to career success in the sports field is experience. Students will work with faculty to find an internship location based on their desired specialization in sports management. The program has the following articulation agreements in place for easy transfer: Southern NH University, Rivier University, and New England College.

Sports Management Associate of Science Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR	
	Fall Semester					
	DCOM 105C	Digital Communications	3	0	3	
	ENGL 101C	English Composition	4	0	4	
	MATH 120C	Quantitative Reasoning or higher-level math course	4	0	4	
	SPTS 101C	Introduction to Sports Management ¹	3	0	3	
	SOCI xxxC	Social Science elective ²	3	0	3	
					17	
Spring Semester						
	ACCT 101C	Accounting I	3	0	3	
	ECON 101C	Macroeconomics or				
	ECON 102C	Microeconomics	3	0	3	
	MATH 251C	Statistics	4	0	4	
	BUS 170C	Principles of Marketing or				
	SPTS 170C	Sports and Recreation Marketing ¹	3	0	3	
	SPTS 180C	Public Relations and Advertising for the Sports Industry ¹	3	0	3	
					16	
SECOND YEAR	Fall Semester					
		ACCT 102C	Accounting II ¹	3	0	3
		SPTS 210C	Sports and Fitness Facilities Management ¹	3	0	3
		SPTS 220C	Sports Communications ¹	3	0	3
		SPTS 290C	Sports Management Internship ¹ or			
		XX xxxC	SPTS/BUS/DCOM elective	3	0	3
		XX xxxC	Humanities/Fine Arts/ Language elective	3	0	3
						15
	Spring Semester					
		BUS 225C	Business Law I or			
		SPTS 225C	Sports and Recreation Law ¹	3	0	3
		BUS 270C	Principles of Management	3	0	3
		SPTS 250C	Sports and Society ¹	4	0	4
	XX xxxC	Science elective ³	3-4	0	3-4	
					13-14	
Total Credits					61-62	

¹Indicates major field course

²Any course with a prefix of ANTH, ECON, HIST, POLS, PSYC or SOCI (except HIST 104C and HIST 105C)

³BIOL 100C, CHEM 100C, and PHYS 100C do not meet the science requirement.

ACCOUNTING ADVANCED

Certificate

The NHTI Accounting program prepares students for entry-level positions in accounting and business and for transfer to four-year colleges and universities. The Basic Accounting certificate is a prerequisite for the Advanced Accounting program. This program is available days, evenings, and online. This program is financial aid-eligible.

Accounting Advanced Certificate Curriculum

Course	Title	CL	LAB	CR
ACCT 205C	Intermediate Accounting I	4	0	4
ACCT 206C	Intermediate Accounting II	4	0	4
ACCT 230C	Taxes	4	0	4
ACCT 250C	Cost Accounting	3	0	3
BUS 270C	Principles of Management	3	0	3
Total Credits				18

ACCOUNTING BASIC

Certificate

The NHTI Accounting program prepares students for entry-level positions in accounting and business and for transfer to four-year colleges and universities. The Basic Accounting certificate is a prerequisite for the Advanced Accounting program. This program is available days, evenings, and online. This program is financial aid eligible.

Accounting Basic Certificate Curriculum

Course	Title	CL	LAB	CR
ACCT 101C	Accounting I	3	0	3
ACCT 102C	Accounting II	3	0	3
BUS 170C	Principles of Marketing	3	0	3
BUS 225C	Business Law	3	0	3
IST 102C	PC Applications	3	0	3
IST 200C	Spreadsheets	3	0	3
Total Credits				18

MANAGEMENT

Certificate

This program is designed to prepare students for the day-to-day challenges in the dynamic field of business. The program offers a broad background for those seeking careers in many areas of business; all courses are directly applicable to the NHTI Associate of Science degree. This program is financial aid-eligible.

Program Learning Outcomes

Upon graduation, students will be able to:

- Demonstrate communication and management skills that result in quality hospitality services.
- Participate in community and/or professional organizations that promote the hospitality industry.
- Use critical thinking skills in the performance of job duties.
- Use computer applications such as word processing.
- Display an understanding of principles of management.
- Identify the legal and ethical issues.
- Practice good human relation and interpersonal skills.

Career Information

Employment growth is expected to be driven by the formation of new organizations and expansion of existing ones, which should require more workers to manage these operations. Career titles include:

- Customer service representative
- Loan officer
- Sales representative
- Business analyst
- Human resource assistant
- Marketing assistant office manager
- Retail manager

Management Certificate Curriculum

Course	Title	CL	LAB	CR
Full Certificate				
ACCT 101C	Accounting I	3	0	3
BUS 101C	Introduction to Business	3	0	3
BUS 225C	Business Law I	3	0	3
BUS 270C	Principles of Management	3	0	3
				12
Choose 2 Electives:				
BUS 152C	Foundations of Leadership	3	0	3
BUS 170C	Principles of Marketing	3	0	3
BUS 174C	Principles of Sales	3	0	3
BUS 221C	Health Care Management	3	0	3
BUS 242C	Business Ethics	3	0	3
BUS 245C	Organizational Behavior	3	0	3
BUS 273C	Human Resource Management	3	0	3
				6
Total Credits				18

PARALEGAL STUDIES

Certificate

This program trains students for professional status as lawyers' assistants with a broad academic curriculum that emphasizes the skills, substantive knowledge, and ethics. Paralegal work requires discretion and independent judgment. It is essential a paralegal have strong writing skills, an analytical approach to organizing and reviewing material, and a foundation in word processing and computers. Although a paralegal works under the supervision and direction of an attorney, it is important that they be well-motivated and self-starting. Even though a paralegal can perform many of the tasks that have otherwise been performed by attorneys, they may not give legal advice, represent a client in court, or otherwise engage in the practice of law. This program is available evenings only and is financial aid eligible.

Program Learning Outcomes

NHTI graduates will be exposed to the legal system and the role of paralegals within the profession, the ethical rules governing lawyers and paralegals, and the operation of a law office. Through the course sequence in the certificate program, NHTI graduates will be:

- Able to assist in most aspects of legal research, and in the preparation of clear and concise legal writings, on a topic of their choosing
- Introduced to Lexis/Nexis
- Able to assist in virtually all phases of litigation and property transactions
- Able to assist in the formation, daily administration, and dissolution of a corporate entity
- Able to assist in the planning and administration of a decedent's estate
- Prepared to assist in the drafting of pleadings and in the completion of preliminary research in the area of family law
- Exposed to the various elements of N.H.'s criminal practice and procedure

Career Information

This certificate trains students for professional status as lawyers' assistants in banks, corporations, government agencies, insurance companies, and law firms. Formally trained paralegals with strong computer and database management skills should have the best job prospects.

Accreditation

This certificate program is approved by the American Bar Association and is designed to prepare students to perform effectively in today's legal and business communities.

Specific Admissions Requirements

- 45 college credits in general education courses from an accredited institution; 18 of these credits must meet distribution and content requirements designated by the ABA in at least three disciplines such as English, languages, humanities, mathematics and natural science.
- Interview with department chair scheduled once applications are complete
- Two confidential letters of reference
- 200-word essay with reasons for choosing the Paralegal Studies program (to evaluate writing skills)

Character Expectations

Background checks are completed by potential employers prior to obtaining any position with arrest or detention power and, typically, before being accepted for an internship. Applicants who have been in difficulty with the law may not be employable or eligible for an internship. Because future goals may be compromised, applicants are advised to discuss any concerns with the department chair.

Paralegal Studies Certificate Curriculum

Course	Title	CL	LAB	CR
PLGL 101C	Foundations of Paralegal Studies	2	0	2
PLGL 103C	Causes of Action in Contract and Tort	2	0	2
PLGL 104C	Legal Research ¹	3	0	3
PLGL 110C	Litigation and Trial Preparation	3	0	3
PLGL 221C	Real Estate	3	0	3
PLGL 231C	Business Organizations and Bankruptcy	3	0	3
PLGL 241C	Family Law	1	0	1
PLGL 251C	Probate Estates and Trusts	3	0	3
PLGL 261C	Criminal Process	1	0	1
PLGL 270C	Internship (Optional)	0	9	3
PLGL 271C	Legal Writing	1	0	1
Total Credits				22-25

¹ A \$125 fee will be assessed for all students taking PLGL 104C. This fee will cover costs associated with ABA dues, Lexis/Nexis, and UNH Franklin Pierce School of Law Library.

SPORTS MANAGEMENT

Certificate

This program familiarizes students with the world of sports-related businesses and provides an overview of possible careers and future studies in sports management. Courses transfer into the Sports Management Associate Degree program. This program is financial aid-eligible.

Additional Info

An internship option is built into the certificate program for students interested in gaining real-world experience.

Sports Management Certificate Curriculum

Course	Title	CL	LAB	CR
SPTS 101C	Introduction to Sports Management	3	0	3
SPTS 170C	Sports and Recreation Marketing	3	0	3
SPTS 180C	Public Relations and Advertising for the Sports Industry	3	0	3
SPTS 210C	Sports Facilities	3	0	3
SPTS 220C	Sports Communications	3	0	3
SPTS 225C	Sports and Recreation Law	3	0	3
SPTS 250C	Sport and Society	4	0	4
SPTS 290C	Sports Management Internship or	0	9	3
SPTS/BUS/RECR xxxC	SPTS/BUS/RECR elective	3	0	3
Total Credits				28

HEALTH SCIENCES AND SERVICES

Associate of Science

- [Dental Hygiene](#)
- [Health and Wellness](#)
- [Health Science](#)
- [Nursing](#)
- [Nursing LPN to RN](#)
- [Orthopaedic Technology](#)
- [Paramedic Emergency Medicine](#)
- [Radiation Therapy](#)
- [Radiologic Technology](#)

Certificate

- [Coaching](#)
- [Dental Assisting](#)
- [Diagnostic Medical Sonography](#)
- [Legal Nurse Consultant](#)
- [Medical Coding](#)
- [Orthopaedic Technology](#)
- [Radiation Therapy](#)

Internship Considerations

NHTI has developed excellent practicum opportunities to foster hands-on learning while simultaneously receiving credit. The college's first priority must be to ensure that patients/clients/children/families are not placed in jeopardy by students during learning experiences. Students in internship, externship, practicum, service learning, and clinical experiences must demonstrate sufficient emotional stability to withstand the stresses, uncertainties, and changing circumstances of patient/client/child/family responsibilities. The student is expected to have the emotional stability to exercise sound judgment, accept direction and guidance from a supervisor or faculty member, and establish rapport and maintain interpersonal relationships and confidentiality with employees, customers, and/or patients/clients/children and their families.

Curriculum Abbreviations

- CL – Number of lecture/classroom hours per week for the course
- LAB – Number of simulation laboratory, laboratory or clinical hours per week for the course
- CR – Number of credit hours for the course

DENTAL HYGIENE

Associate in Science

The dental hygienist is a key member of the professional dental team, providing educational and clinical services to community groups and individuals throughout the life span. Students learn to analyze health information, educate, and provide clinical services to improve oral and overall health. Established in 1970, this program graduates effective dental hygienists who enjoy rewarding, successful careers serving a variety of patients and populations in N.H. and beyond. NHTI offers the only dental hygiene program in N.H., providing excellence in dental hygiene education. Graduates are prepared with the skills and knowledge required of professional dental hygienists.

NHTI Dental Hygiene students experience high success rates on national written and clinical board exams, positive interactions with community health agencies, and excellent preparation for licensure and clinical practice. The NHTI Dental Hygiene curricula provides close clinical supervision with individual and small-group instruction, transferability of general education courses, and integration of current technology into education and clinical practice.

The NHTI Dental Hygiene program:

- Provides a curriculum that integrates general education, biomedical sciences, dental sciences, and current dental hygiene theory, practice, and provision of dental hygiene care
- Prepares students to think critically and implement the dental hygiene process of care to promote and maintain oral and systemic health for diverse populations
- Prepares students to exercise principles of professional, regulatory, and ethical behavior in oral healthcare
- Prepares students to commit to professional growth and learning to maintain compliance and competence through self assessment and evidence-based decision-making in an evolving healthcare system

Program Learning Outcomes

The new dental hygiene graduate must be able to:

- Discern and manage the ethical issues facing dental hygiene practice in a rapidly changing environment.
- Acquire and synthesize information in a critical, scientific, and effective manner.
- Contribute to improving the knowledge, skills, and values of the profession.
- Provide planned educational services using appropriate interpersonal communication skills and educational strategies to promote optimal health.
- Initiate and assume responsibility for health promotion and disease prevention activities for diverse populations in a variety of settings.
- Systematically collect, correlate, critically analyze, and document data on the general, oral, and psychosocial health status for diverse patients using methods consistent with medico-legal-ethical principles.
- Formulate a comprehensive dental hygiene care plan that is evidence-based and patient-centered.
- Provide specialized care that includes educational, preventive, and therapeutic services designed to assist the patient in achieving and maintaining oral health goals.
- Critically evaluate the effectiveness of implemented educational, preventive, and therapeutic services.

Program Outcomes

National Board Dental Hygiene Exam (first attempt)

Year	# Students	NHTI	National
2017	34	100%	94%
2018	25	96%	94%
2019	30	97%	92%
2020	29	100%	TBD

ADEX Patient Treatment Clinical Exam (first attempt)

Year	# Students	NHTI
2017	34	100%
2018	25	96%
2019	30	97%
2020	29	100%

Mission Statement

The mission of the NHTI – Concord’s Community College Dental Hygiene program is to advance the mission of the college by providing a learning environment in which each dental hygiene graduate gains the knowledge, skills, and

values to provide comprehensive educational, preventive, and therapeutic services reflecting the competencies vital to our community and the profession of dental hygiene.

Career Information

Dental hygienists work in clinical, corporate, public health, research, and educational settings. They can serve as program administrators, and some have become successful entrepreneurs, starting their own businesses.

The Roles of the Dental Hygienist

Dental hygienists provide a range of preventive and therapeutic dental services, including dental hygiene assessment and care planning. Services include oral dental and periodontal examination, scaling and debridement, pain management, radiography, dental sealants, in-office whitening, and oral hygiene instruction. Dental hygienists are professionals, licensed by the state in which they practice, who complete extensive educational and clinical preparation in oral disease prevention.

Employment Outlook

The salary of a dental hygienist depends on the responsibilities associated with the specific position, the practice setting, and the geographic location of employment. Full- or part-time employment and benefits are factors. Dental hygienists earn salaries equal to healthcare personnel with similar training and experience such as nurses.

Professional Associations

NHTI encourages students to research the dental hygiene career and connect with local association members. Students may join an association at a reduced rate as a student member. The student chapter of the American Dental Hygienists' Association is an active service organization at NHTI.

- [American Dental Hygienists' Association](#)
- [American Dental Hygienists' Association-New Hampshire Chapter](#)
- [Dental Assisting National Board](#)
- [American Dental Association](#)

NHTI encourages dental hygiene graduates to pursue a bachelor's degree. Our graduates successfully transfer to colleges and universities around the country. Because of the extensive knowledge and skills of dental hygienists, professional organizations are discussing the bachelor's degree as the entry-level degree for dental hygiene.

Accreditation

The NHTI Dental Hygiene program is accredited by the Commission on Dental Accreditation and has been granted accreditation status of "approval without reporting requirements." The Commission is a specialized accrediting body recognized by the United States Department of Education and can be contacted at 312-440-4653 or 211 East Chicago Avenue, Chicago, IL 60611.

Service Learning

Dental Hygiene students apply their skills in the [NHTI Dental Clinic](#), serving more than 7,000 patients. They learn the importance of access to oral healthcare and experience the role of the dental hygienist in community health. The Community Clinic course places students in public health settings where they shadow dental hygienists.

Health, Character, and Technical Standards

Dental Hygiene students must demonstrate the knowledge, skills, and behaviors deemed essential for the practice of dental hygiene. The program adheres to the NHTI [Statement of Nondiscrimination](#). Reasonable accommodations for students with disabilities are made to the extent that there's no fundamental alteration to curriculum, course objectives, or health, character, and technical standards of the program. Students need:

- Intellectual abilities requiring reason, analysis, problem solving, critical thinking, self-evaluation and lifelong learning skills are required. Students must be able to learn, integrate, analyze, and synthesize data. Comprehension of three-dimensional and spatial relationships is necessary. Consistent, accurate, and quick integration of information is required, especially in emergency situations.

- Somatic sensation and functional use of all senses is required. Exteroceptive (i.e., touch) and proprioceptive (i.e., position, pressure, movement) is mandatory. Students must also be able to observe demonstration at a distance and close at hand; performance of procedures in the classroom, lab, and clinic is required. Students must be able to see fine detail, focus at several distances, and discern variations in color, shape, and texture to differentiate normal and abnormal structures. Students must be able to use tactile sense to perceive and interpret vibrations associated with clinical procedures. Visual and intellectual ability is necessary to acquire information from documents such as charts, radiographs, computer images, and other modes of delivery. Students must have sufficient hearing to develop reasonable skills of percussion and auscultation.
- Sufficient fine and gross motor function is required to perform a variety of clinical procedures essential to providing dental hygiene care for patients. Examples of essential motor skills include manipulation of small objects and materials, palpation, percussion, auscultation and other maneuvers. Fine motor ability is a critical necessary skill. Gross motor ability is required in order to perform functions such as basic life support, transfer and position of patients as well as the operator position around the patient and dental chair. Students must be able to operate both foot and hand controls.
- Students must be able to communicate effectively with patients, peers, faculty, and guests. Individuals must have sufficient command of the English language to retrieve information from textbooks, lectures, exams, etc. Students must be able to communicate in verbal, nonverbal, and written form.
- Students must possess the emotional health required for full utilization of their intellectual abilities, exercise of good judgment, and prompt completion of all responsibilities associated with the care of patients. The development of mature, sensitive, professional relationships with patients is essential. Professionalism, compassion, integrity, empathy, and respect for patients are all personal qualities that are necessary for the dental hygienist. Students must be able to endure physically taxing workloads and function effectively under stress. They must be able to accept constructive criticism and respond appropriately by modifying behavior.

Service Learning and Internship Considerations

NHTI's practicum opportunities foster hands-on learning in community dental health. Students develop awareness of the dental hygienist's role in improving oral health while applying knowledge and skills in the NHTI Dental Clinic and various public health settings. Students must demonstrate sufficient emotional stability to withstand the stresses that characterize the dental professionals' responsibilities with patients and/or agency clients. Students must exercise sound judgment, accept direction and guidance from a supervisor or faculty member, establish effective rapport, and maintain sensitive interpersonal relationships and confidentiality on all levels.

Background Check and Drug/Alcohol Testing

As a pre-clinical requirement, students complete a criminal background check and drug and alcohol screening through agencies chosen by the program. Students are subject to random screenings throughout the program without exception. Students learn procedural and cost information during admissions and are responsible for associated testing costs.

Bloodborne Pathogens and Infectious Diseases

Dental Hygiene students may be exposed to blood-borne pathogens and infectious diseases. Faculty provide students with theory and instruction on diseases, mechanisms of disease transmission, and infection control procedures to reduce the risk of disease transmission. Current instruction includes protocols published by national public health agencies, the Occupational Safety and Health Administration, and the U.S. Centers for Disease Control and Prevention.

Specific Admission Requirements

- College preparatory level courses in biology and chemistry, with labs, with a C or higher
- Algebra I with a C or higher, or NHTI's MATH 092C with a C or higher
- Informational group interview with the Dental Admissions Committee; qualified candidates will be contacted to schedule this interview.
- Observation of professional practices in a dental office for a period of not less than 20 hours; students must submit the completed Dental Hygiene Observation Form to the Admissions Office by the application deadline. The completed observation is valid for 2 years only. Current dental office employees are not required to complete the hours of observation but are required to complete and submit the observation form.
- Applicants unable to complete the observation may instead complete an essay about the field; instructions on how to complete this requirement can be downloaded at this link: Dental Hygiene Essay 2021 and are available from the Admissions Office at NHTIadmissions@ccsnh.edu.

Only courses completed (with final grades) by the application deadline will be considered for points in the application review process. Double points are awarded for college science course grades (Anatomy & Physiology I and II, Microbiology, and Introduction to General, Organic, and Biochemistry). These science courses must be completed with a C or higher and no more than 5 years prior to the start term of the program to be applicable. Courses with virtual/online labs are not accepted, except for labs completed online in 2020-21 due to COVID-19.

Successful applicants for the Dental Hygiene program complete most of their college liberal arts courses in advance of applying to the program to obtain a sufficient number of points to be competitive.

Already Enrolled at NHTI?

Students currently who wish to enter the Dental Hygiene program must complete and submit the Change of Program form prior to the application deadline and submit it to the Admissions Office at NHTIadmissions@ccsnh.edu.

Readmission

Students who have withdrawn from the program or have been suspended from the program because of a failure in a non-clinical course may be considered for readmission only one time. Readmission is not guaranteed. Students who have been dismissed from the program because of a failure in a clinical course will not be considered but may apply to other NHTI programs. Contact the Allied Dental Education Department for details.

Health Requirements

Once admitted, students must provide documents for clinical clearance to the Health Services Office by the deadline. Failure to do so will prohibit them from entering the program. Students must maintain clinical clearance throughout the program to remain enrolled and progress in the program. For a complete list of immunizations and clinical clearance requirements, refer to the Allied Health Students tab on the NHTI Health Services webpage. NHTI arranges professional liability insurance for students, applying fees to student accounts.

Dental Hygiene Associate of Science Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR	
		Fall Semester				
	ADED 100C	Dental Hygiene I ¹	2	0	2	
	ADED 113C	Clinical Dental Hygiene I ^{1,2}	1	8	3	
	ADED 134C	Oral Anatomy I ¹	2	1	2	
	BIOL 195C	Anatomy and Physiology I	3	2	4	
	CHEM 125C	Introduction to General, Organic, and Biochemistry	3	2	4	
	ENGL 101C	English Composition	4	0	4	
					19	
	Spring Semester					
	ADED 103C	Dental Hygiene II ¹	2	0	2	
	ADED 114C	Clinical Dental Hygiene II ^{1,2}	1	8	3	
	ADED 136C	Oral Anatomy II ¹	2	0	2	
	ADED 140C	Dental Radiology for Dental Hygiene ¹	2	3	3	
	BIOL 196C	Anatomy and Physiology II	3	2	4	
	MATH 120C	Quantitative Reasoning or				
	MATH xxxC	Higher-level Mathematics elective*	4	0	4	
					18	
	Summer Semester					
	ADED 162C	Dental Materials for Dental Hygiene ¹	2	3	3	
	ADED 201C	Dental Hygiene III ¹	2	1	2	
	ADED 244C	Pain Management for the Dental Hygienist I ^{1,3}	1	3	2	
	BIO 202C	Microbiology	3	3	4	
					11	
SECOND YEAR	Fall Semester					
	ADED 126C	Nutrition ¹	2	0	2	
	ADED 212C	Clinical Dental Hygiene III ^{1,2}	1	12	4	
	ADED 242C	Community Dental Health I ¹	2	0	2	
	ADED 247C	Dental Hygiene Science – Pharmacology ¹	2	0	2	
	ADED 248C	Dental Hygiene Science – Oral Pathology ¹	2	0	2	
	PSYC 105C	Introduction to Psychology	3	0	3	
						15
	Spring Semester					
	ADED 221C	Clinical Dental Hygiene IV ^{1,2}	1	12	4	
	ADED 225C	Dental Hygiene Community Clinic ¹	0	4	1	
	ADED 227C	Dental Ethics and Jurisprudence ¹	1	0	1	
	ADED 243C	Community Dental Health II ¹	1	0	1	
	ADED 246C	Pain Management for the Dental Hygienist II ^{1,3}	0	4	1	
	ENGL 120C/COMM 120C	Communication	3	0	3	
SOCI 105C	Introduction to Sociology	3	0	3		
XX xxxC	Humanities/Fine Arts/Language elective	3	0	3		
					17	
Total Credits						
					80	

¹Indicates major field courses

²All students enrolled in a clinical course will be charged a \$500 per semester clinical surcharge. The following courses carry this charge: ADED 113C, ADED 114C, ADED 212C, and ADED 221C.

³All students enrolled in ADED 244C and ADED 246C will be charged a \$200 pain management supplies fee.

Applicants who successfully complete several of the required general science and liberal arts courses by the application deadline will add strength to their application. For more information, contact the Admissions Office.

HEALTH AND WELLNESS

Associate in Science

This program provides a sound academic foundation for the student who wants to pursue an entry-level position in health and fitness, community health, and health education, and/or transfer to a 4-year program in any of those fields. This program prepares students for the competitive and ever-expanding field of healthcare and personal wellness services. Students in the Medical Coding and Coaching certificates can apply those credits towards this program.

Program Learning Outcomes

- Students will communicate effectively.
 - Students will employ vocabulary pertinent to health science.
 - Students will complete research and use peer-reviewed sources of literature.
- Students will use critical thinking.
 - Students will apply the scientific method.
 - Students will evaluate personal wellness concepts and improve self-selected areas of wellness.
- Students will demonstrate the application of scientific technology.
 - Students will practice lab safety procedures.
 - Students will utilize current technology to collect, analyze, and present data.
- Students will express quantitative and qualitative scientific knowledge.
 - Students will demonstrate knowledge of human anatomy and physiology.
 - Students will design nutrition and wellness education and training programs for individuals and groups.

Career Information

This program provides an academic foundation for the student who wants to pursue an entry-level position in nutrition, health and fitness, public health, and health education, and/or transfer to a 4-year program in any of those fields.

Health and Wellness Associate of Science Curriculum

GENERAL EDUCATION CORE	Course Number	Course Title	CL	LAB	CR
	BIOL 120C	Human Biology			4
BIOL 122C	Basic Pathophysiology			3	
BIOL 125C	Human Genetics and Society			4	
BIOL 129C	Introduction to Sports Nutrition or		3	0	3
BIOL 159C	Personal Nutrition		3	2	4
ENGL 101C	English Composition		4	0	4
ENGL 120C/COMM 120C	Communication				3
HLTH 101C	Medical Terminology		3	0	3
HLTH 150C	Personal Wellness		1	1	1
PSYC 220C	Global Public Health				3
ITC 102C	PC Applications				3
MATH xxxC	Mathematics elective (MATH 120C or higher level)		4	0	4
PHIL 242C	Contemporary Ethical Issues		3	0	3
PSYC 105C	Intro to Psychology				3
PSYC 220C	Human Growth and Development		3	0	3
SOCI 105C	Intro to Sociology				3
					47-48

Health and Wellness Associate of Science Curriculum

MEDICAL CODING

HLTH 104C	Healthcare Data Content and Delivery Systems	3
MCOD 118C	Introduction to Hospital Diagnosis Coding	4
MCOD 119C	Introduction to Hospital Procedure Coding	3
MCOD 218C	Advanced Hospital Coding	3
MCOD 219C	Ambulatory Coding	4
Total Credits		64-65

HEALTH AND WELLNESS

XXXX xxxC	Electives (see list right)	12-13
Total Credits		60

COACHING

BIOL 129C	Introduction to Sports	3
HLTH 120C	Care and Prevention of Athletic	4
HLTH 125C	Coaching Principles I	3
XXXX xxxC	Electives (see list below)	6-7
Total Credits		60

ELECTIVES

BIO 239C	Public Health Nutrition	3
BIO 279C	Lifecycle Nutrition	4
CHEM xxxC	Chemistry elective (not 100C)	4
HLTH 104C	Healthcare Data Content and Delivery Systems	3
HLTH 152C	Personal Training	4
MATH 251C	Statistics	4
PSYC 210C	Abnormal Psychology	3
PSYC 205C	Crisis Intervention	3
SOCI 205C	The Individual and Society	3

HEALTH SCIENCE

Associate in Science

This program provides a foundation for students interested in a health career. It is intended as a transfer program and has three defined tracks, each of which has 60-62 credit hours of well-structured course work:

- *Track 1: Nutrition* is for students who wish to pursue advanced degrees in nutrition and dietetics.
- *Track 2: Baccalaureate* provides a strong base to pursue academic interests in health fields such as exercise science, public health, pre-medical, pre-pharmacy, pre-physical therapy, and pre-veterinary.
- *Allied Health* is for students who want to transfer into an NHTI Allied Health program and fulfills several program pre- and co-requisites.

Program Learning Outcomes

- Students will communicate effectively.
 - Students will employ vocabulary pertinent to health science.
 - Students will complete research and use peer-reviewed sources of literature.
- Students will use critical thinking.
 - Students will apply the scientific method.
 - Students will assess public health and nutrition trends and identify appropriate intervention strategies.
- Students will demonstrate the application of scientific technology.
 - Students will practice lab safety procedures.
 - Students will utilize current technology to collect, analyze, and present data.
- Students will express quantitative and qualitative scientific knowledge.
 - Students will demonstrate knowledge of human anatomy and physiology.
 - Students will compare human health and disease states.

Career Information

The flexible curriculum can be used as a strong base to further educational pursuits – degrees in physical therapy, health information management, dietetics, public health, pharmacology, and exercise science, among others – or as a distinct, self-contained degree for professionals seeking career advancement.

Health Science Associate of Science Curriculum

GENERAL EDUCATION CORE	Course Number	Course Title	CL	LAB	CR
	BIOL 195C	Anatomy and Physiology I ¹	3	2	4
	BIOL 196C	Anatomy and Physiology II ¹	3	2	4
	BIO 222C	Pathophysiology			3
	BIOL 259C	Normal and Therapeutic Nutrition	4	0	4
	CHEM xxxC	Chemistry elective ^{1,2}	3	2	4
	ENGL 101C	English Composition	4	0	4
	ENGL xxxC	English elective	3	0	3
	INDL 120C	Global Public Health ³	3	0	3
	MATH xxxC	Mathematics elective (MATH 120C or higher level) ⁴	4	0	4
	PHIL 242C	Contemporary Ethical Issues ⁵	3	0	3
	PSYC 105C	Introduction to Psychology			3
	PSYC 220C	Human Growth and Development	3	0	3
				42	

¹CHEM 100C does not meet this requirement.

²Some tracks define this course.

³Meets Social Science requirement

⁴MATH 129C does not meet the minimum math requirements.

⁵Meets Humanities/Language/Fine Arts requirement

Health Science Associate of Science Curriculum

NUTRITION	BIOL 202C	Microbiology	4
	BIOL 229C	Nutrition in Exercise and Sports	3
	BIOL 279C	Lifecycle Nutrition	3
	CHEM 103C	General Chemistry I	4
	CHEM 104C	General Chemistry II	4
	XXXX xxxC	Elective (see list below)	4
Total Credits			60

ALLIED HEALTH	BIOL 202C	Microbiology	4
	ENGL 120C/ MC or COMM 120C/MC	Communication	3
	HLTH 101C	Medical Terminology	3
	SOCI 105C	Intro to Sociology	3
	XXXX xxxC	Electives (see list below)	8
	Total Credits		

BACCALAUREATE	BIOL 111C	General Biology I	4
	BIOL 112C	General Biology II	4
	CHEM 103C	General Chemistry I	4
	CHEM 104C	General Chemistry II	4
	MATH 251C	Statistics	4
	XXXX xxxC	Electives (see list below)	4
Total Credits			62

ELECTIVES	BIOL 202C	Microbiology	4
	BIO 239C	Public Health Nutrition	3
	BIO 279C	Lifecycle Nutrition	4
	CHEM 125C	Intro to General, Organic, and	4
	CHEM 205C	Organic Chemistry	4
	HLTH 101C	Medical Terminology	3
	HLTH 104C	Healthcare Data Content and	3
	HLTH 120C	Care and Prevention of Athletic	4
	HLTH 125C	Coaching Principles I	3
	HLTH 150C	Personal Wellness	1
	HLTH 152C	Personal Training	4
	PHYS 133C	Physics I (Algebra-based)	4
	PHYS 135C	Physics II (Algebra-based)	4
	SOCI 105C	Intro to Sociology	3

NURSING

Associate in Science

This program prepares students for a career as a registered nurse (RN) to provide patient care in healthcare settings. Our faculty creates learning experiences that foster innovative teaching and learning, support and enhance student development, promote the use of college resources, and encourage civic engagement. The mission of the Nursing program is to prepare students to qualify as collaborative members of the interdisciplinary healthcare team as an entry-level registered nurse, to meet the needs of a diverse community in an evolving world, and to pursue higher education.

End-of-Program Student Learning Outcomes/Program Competencies

Graduates will be able to:

- Use the nursing process, clinical reasoning, and evidence-based practice to design, implement, and evaluate care focusing on the self-care requirements for the patient with commonly occurring illnesses.
- Incorporate principles and concepts from nursing knowledge and liberal arts education using critical thinking, clinical reasoning, clinical judgement, and humanistic values.
- Design and implement a plan of care in collaboration with the patient and healthcare team with a focus on the wholly compensatory nursing system.
- Evaluate effective therapeutic and collegiate communication needed to enhance health outcomes.
- Manage nursing care directly and/or through delegation for the patient with a range of self-care deficits.
- Create an optimal environment for the patient using microsystem resources, evidence-based practice, quality improvement processes, and patient safety standards.
- Establish a caring relationship with the patient to provide holistic and culturally-sensitive nursing care.
- Demonstrate accountability for standard-based nursing care given by self and delegated to others adhering to professional, ethical, and legal standards within nursing.

Student Achievement of Program Outcomes (Aggregated Data)

Performance on Licensure Exam: NCLEX-RN Pass Rates (first-time test takers)

Pass Rates	Class of 2016	Class of 2017	Class of 2018	Class of 2019	Class of 2020
NHTI Pass Rate	95.35%	97.87%	97.5%	96.49%	98.24%
N.H. Pass Rate	90.31%	90.85%	96.71%	95.68%	TBA%
National Pass Rate	84.56%	87.12%	88.29%	88.18%	86.57%

Job Placement Rates (employed within 9 months after graduation), based on survey responses

Program completion rates (within 150% of program-stated length time)

Graduating Class	Employment Rates
2020	TBA
2019	100%
2018	100%
2017	100%
2016	96%

Time Frame (Fall to Spring)	Completion Rates
2017-2020	82%
2016-2019	65%
2015-2018	68%
2014-2017	62%
2013-2016	64%

Career Information

There's a strong demand for nurses. Our graduates have been offered jobs immediately after graduation and passing the National Council Licensing Examination for Registered Nurses (NCLEX-RN®) licensing exam. They work in intensive care units, emergency rooms, maternity, pediatrics, home care, long-term care, and other healthcare settings. Upon graduation, students are eligible to sit for the NCLEX-RN®. Our graduates' first-time pass rates on the NCLEX licensing exam exceed the national average. Once a student passes the exam and becomes an RN, they can work full-time and continue their education online to earn a bachelor's/master's degree in nursing through one of our transfer opportunities; many of our partners offer tuition discounts. Matriculated students may be eligible to apply to the N.H. Board of Nursing (NHBON) for licensure prior to completing program requirements. After successful completion of the following nursing courses with a C or higher, they may apply for licensure by comparable education:

- NURS 115C: Nursing I - Licensed Nursing Assistant (LNA)
- NURS 115C: Nursing I; NURS 116C: Nursing IIA; and NURS 117C: Nursing IIB - Licensed Practical Nurse (LPN)

Accreditation

The Nursing program is approved by the New Hampshire Board of Nursing (NHBON) and accredited by the Accreditation Commission for Education in Nursing (ACEN). Upon satisfactory completion of the program, graduates are eligible to take the NCLEX-RN®. Graduates should contact the Board of Nursing in the state in which they intend to practice regarding licensure requirements. NHTI's NCLEX-RN® pass rates can be viewed at <https://www.oplc.nh.gov/new-hampshire-board-nursing>. NHBON licensing regulations may restrict candidates who have been involved in civil or criminal legal proceedings. Questions should be addressed to NHBON or individual states' Board of Nursing.

New Hampshire Board of Nursing

7 Eagle Square
Concord, NH 03301
603-271-2323

The Associate Nursing Program at NHTI - Concord's Community College in Concord, N.H., is accredited by the:

Accreditation Commission for Education in Nursing (ACEN)

3390 Peachtree Road NE, Suite 1400
Atlanta, GA 30326
[404-975-5000](tel:404-975-5000)

The most recent accreditation decision made by the ACEN Board of Commissioners for the Associate Nursing Program is Continuing Accreditation: <http://www.acenursing.us/accreditedprograms/programSearch.htm>

Specific Admission Requirements

Priority consideration will be given to students whose applications are complete and received by the Admissions Office by the application deadline.

- High school or college biology with lab with a C or higher
- High school or college chemistry with lab with a C or higher
- College preparatory Algebra I with a C or higher, or NHTI's MATH 092C with a C or higher
- Complete the ATI Test of Essential Academic Skills (TEAS) exam with a minimum score of 74.5% on Reading Comprehension, 68.8% on Mathematics, 55.3% on Science, 66.7% on English and Language Usage. For information regarding testing locations and registration, contact Admissions at 603-230-4011 or 800-247-0179.
- Submit, on NHTI nursing reference forms, two references from professionals, supervisors, or teachers. Contact the Admissions Office at 603-230-4011 or 800-247-0179.
- Submit an NHTI application to the Admissions Office.

College-level science and technical courses (BIOL 195C/196C/202C) taken more than five years prior to desired entry into the program must be repeated; final decisions will rest with the Nursing department chair. Courses with virtual/online labs are not accepted, except for labs completed online because of COVID-19. Transfer credit will depend on course content, applicability to the program, grade earned, and length of time since completion.

- *Current NHTI Students:* Students who wish to enter the Nursing program and are currently enrolled in General Studies or another NHTI program must complete and submit the Change of Program form prior to the application deadline and return them to the Admissions Office at NHTIadmissions@ccsnh.edu.
- *Previously Enrolled in Another Nursing Program:* Candidates who attended a nursing RN program at another institution within the last 5 years must also submit a "Letter of Good Standing" from their prior program's department head and complete a Success Plan and submit it to the Admissions Office at NHTIadmissions@ccsnh.edu by the application; qualified candidates will be contacted for an interview with the Nursing Student Affairs Committee.
- *Advanced Standing Transfer into Nursing:* Candidates seeking transfer and credit for prior nursing coursework may review the policy for Nursing Advanced Standing Transfer and the registration form for the required Advanced Standing Exam.

Selection Criteria

Admission is determined by a cumulative point system based on high school-level prerequisite courses and grades,

applicable college courses and grades, and TEAS exam scores. References are considered critical to the admission process and are evaluated. Qualified candidates not accepted may be assigned to a prioritized waiting list based on the above criteria. They may be admitted if an opening becomes available prior to the beginning of the fall semester. The waiting list will be discarded 6-8 weeks prior to classes beginning; students must reapply.

Upon Acceptance

Acceptance is conditional based on the submission the following documents no later than four weeks prior to the beginning of the semester:

- Submit health requirements for Allied Health clinical clearance to Health Services. Prior to the start of the clinical nursing courses, students are required to have on file in the Health Services Office documentation of current medical insurance, a complete physical exam, current immunizations, and current CPR for Healthcare Providers/Professional Rescuer. Professional liability malpractice insurance is arranged by the college and will automatically be charged to the student's account. Students' health insurance plans must meet N.H. requirements. Yearly Marketplace health insurance open enrollment is November-mid December and is effective Jan. 1. This is the only time to sign up unless a qualifying life-changing event occurs.
- Complete criminal background check as directed through NHTI's approved vendor. Background checks from previous employers or other vendors are not accepted. Students are required to undergo and meet the Nursing Department's criteria for a criminal background check. No student is exempt. Students are provided with procedural and cost information and are responsible for all costs associated with these testing procedures. Students will repeat the criminal background check prior to their second year.
- Complete drug and alcohol testing as directed through NHTI's approved vendor. Drug testing from previous employers or other vendors are not accepted. Students are required to undergo and successfully meet the Nursing department's criteria for drug and alcohol screening. No student will be exempt. Students are provided with procedural and cost information and are responsible for all costs associated with these testing procedures. Drug and alcohol screenings are required prior to clinical, prior to the second year, and randomly throughout the program.

Readmission Procedure

Matriculated nursing students who have withdrawn, have been suspended for not achieving the minimum grade in a nursing, science or math course, and are not able to continue in the Nursing program may be considered for readmission only once. Readmission is not guaranteed, and students must reapply to the semester they left. Returning students must satisfy the admission criteria. Readmission will depend on space and clinical/faculty availability. Students who have failed a Nursing course due to unsafe clinical performance may not be eligible for readmission and should consult with the Nursing department chair to determine readmission eligibility. The Nursing department chair will notify students of the specific readmission procedure after course failure or withdrawal. Students must submit a [new application](#) to the Admissions Office and complete a [Success Plan](#) to be considered for readmission to the program. These must be submitted by the application deadline (Oct. 1 for Spring readmission and March 1 for Fall readmission); after the deadline, qualified candidates will be contacted for an interview with the Nursing Student Affairs Committee.

Health, Character, and Technical Standards

Standards have been established to provide guidance to students as to skills and abilities requisite to participate in the Nursing program.

- *General abilities:* The student must possess functional use of the senses of vision, touch, hearing, and smell so that data received by the senses may be integrated, analyzed, and synthesized in a consistent and accurate manner. A student must also possess the ability to perceive pain, pressure, temperature, position, vibration, and movement that are important to the student's ability to gather significant information needed to effectively evaluate patients. A student must be able to respond promptly to urgent situations that may occur during clinical training activities and must not hinder the ability of other members of the healthcare team to provide prompt treatment and care to patients.
- *Observational ability:* The student must have sufficient capacity to make accurate visual observations and interpret them in the context of laboratory studies, medication administration, and patient care activities. In addition, the student must be able to document these observations and maintain accurate records.

- *Communication ability:* The student must be able to communicate effectively both verbally and non-verbally to elicit information and to translate that information to others. Each student must have the ability to read, write, comprehend, and clearly speak the English language to facilitate communication with patients, their family members, and other professionals in healthcare settings. In addition, the student must be able to maintain accurate patient records, present information in a professional, logical manner, and provide patient counseling and instruction to effectively care for patients and their families. The student must also be able to clearly communicate effectively verbally and in writing with instructors and other students in the classroom setting.
- *Motor ability:* The student must be able to perform gross and fine motor movements with sufficient coordination needed to perform complete physical examinations using the techniques of inspection, palpation, percussion, auscultation, and other diagnostic maneuvers. A student must be able to develop the psychomotor skills reasonably needed to perform or assist with procedures, treatments, administration of medication, management and operation of diagnostic and therapeutic medical equipment, and such maneuvers to assist with patient care activities such as lifting, wheel chair guidance, and mobility. The student must have sufficient levels of neuromuscular control and eye-to-hand coordination as well as possess the physical and mental stamina to meet the demands associated with extended periods of sitting, standing, moving, and physical exertion required for satisfactory and safe performance in the clinical and classroom settings including performing CPR if necessary. The student must possess the manual and visual dexterity to draw up solutions in a syringe.
- *Intellectual, conceptual, and quantitative abilities:* The student must be able to develop and refine problem-solving skills crucial to practice as a nurse. Problem-solving involves the abilities to measure, calculate, reason, analyze, and synthesize objective and subjective data, and to make decisions, often in a time-urgent environment, that reflect consistent and thoughtful deliberation and sound clinical judgment. Each student must demonstrate mastery of these skills and possess the ability to incorporate new information from peers, teachers, and the nursing and medical literature to formulate sound judgment in patient assessment, intervention, evaluation, teaching, and setting short- and long-term goals. Students must demonstrate arithmetic competence that would allow the student to read and understand columns and/or writing, tell time, use measuring tools, and add, subtract, multiply, and divide.
- *Behavioral and social attributes:* Compassion, integrity, motivation, effective interpersonal skills, and concern for others are personal attributes required of those in the Nursing programs. Personal comfort and acceptance of the role of a nurse functioning under supervision of a clinical instructor or preceptor is essential for a nursing student. The student must possess the skills required for full usage of the student's intellectual abilities; the exercise of good judgment; the prompt completion of all responsibilities in the classroom and clinical settings; and the development of mature, sensitive, and effective relationships with patients and other members of the healthcare team. Each student must be able to exercise stable, sound judgment and to complete assessment and interventional activities in a timely manner to assure patient safety and well being. The ability to establish rapport and maintain sensitive, interpersonal relationships with individuals, families, and groups from a variety of social, emotional, cultural, and intellectual backgrounds is critical for practice as a nurse. The student must be able to adapt to changing environments; display flexibility; accept and integrate constructive criticism given in the classroom and clinical settings; effectively interact in the clinical setting with other members of the healthcare team; and learn to function cooperatively and efficiently in the face of uncertainties inherent in clinical practice.
- *Examinations:* Certain courses in the Nursing programs require students to take timed and/or online exams. Students may be required to take timed, online, and/or other types of examinations in a proctored, secure setting that is acceptable to the program.
- *Ability to manage stressful situations:* The student must be able to adapt to and function effectively to stressful situations in both the classroom and clinical settings, including emergency situations. Students will encounter multiple stressors while in the Nursing program. These stressors may be (but are not limited to) personal, patient care/family, faculty/peer, and or program-related.

The healthcare environment contains substantial amounts of latex. Applicants with latex allergies place themselves at risk of reaction. The Nursing Department does not recommend that individuals with a latex allergy pursue a career in healthcare.

RN to BSN Pathways

The Nursing program maintains articulation agreements with colleges so students can continue their education to earn a bachelor's or master's degree in Nursing. Our articulation agreements include but are not limited to Aspen University, Chamberlain University, Colby-Sawyer College, Franklin Pierce University, Granite State College, Rivier University, Salve Regina University, and Southern New Hampshire University. These programs accept our Nursing program credits, and

most will transfer in up to 90 credits. This allows students to take additional general education credits at NHTI. Some also offer NHTI graduates who have successfully passed their NCLEX-RN exam a discounted tuition rate. Transfer policies vary. The receiving college or university has sole discretion in determining the amount of credit to be awarded. Students should not make assumptions about which credits are transferable even if an articulation agreement exists. It is the student's responsibility to contact the appropriate person at the receiving institution to discuss policy, learn what documentation is required, and determine and confirm transferable credit.

Nursing Grade and Progression

All Nursing courses integrate theory and clinical experience. Failure to receive a satisfactory grade in either theory or the clinical experience portion of the course will result in a failing grade. All Nursing courses must be passed with a C or higher before proceeding to the next level. A grade of C or higher is required in BIOL 195C, BIOL 196C and BIOL 202C and Math elective to enter or progress in the Nursing courses.

Length of Time to Complete the Nursing Program

All required Nursing courses must be completed within four years from when the student begins the first Nursing course regardless of whether that first course was taken at NHTI or in another Nursing program. Eligible students will be readmitted to the Nursing program per specifications of the Readmission Policy. Students may be readmitted only once during the four years. Readmission will depend on space and clinical/faculty availability. Students who do not complete the program within the required timeframe must reapply for admission into NURS 115.

Clinical Experiences

Students must satisfactorily meet the health requirements for Allied Health Clinical Clearance, criminal background check, and drug and alcohol testing prior to participating in clinical. All students may be required to do a day, evening and/or weekend clinical rotation depending on clinical agency/faculty availability. Transportation to and from the clinical agency is the student's responsibility.

NHTI has developed practicum opportunities for students to foster hands-on learning while simultaneously receiving credit. The college's first priority must be to ensure that patient safety is not compromised by students during learning experiences. Students must demonstrate sufficient emotional stability to withstand the stresses, uncertainties and changing circumstances that characterize patient responsibilities. Students are expected to exercise sound judgment, accept direction and guidance from a supervisor or faculty member, and establish rapport and maintain sensitive interpersonal relationships and confidentiality with peers, staff, and/or patients. Technical standards have been established to provide guidance to students as to skills and abilities requisite to participate in the nursing program. Clinical sites are in hospitals and community-based settings:

- Catholic Medical Center, Manchester, N.H.
- Concord Hospital, Concord, N.H.
- New Hampshire Hospital, Concord, N.H.
- Community agencies throughout N.H.

Nursing Associate of Science Curriculum

The following program reflects a full-time, four-semester curriculum that students enrolled in the Nursing program are required to complete for graduation. Many students decide to enroll at NHTI as a General Studies student and complete the corequisite general education courses prior to applying to the Nursing Program. Non-nursing courses must be taken in the semester indicated or may be taken earlier. Nursing courses must be taken in the sequence below. Nursing theory classroom, simulation lab, and clinical instruction must be completed concurrently.

FIRST YEAR	Course	Title	CL	LAB	CR
	Fall Semester				
	BIOL 195C	Anatomy and Physiology I	3	2	4
	ENGL 101C	English Composition	4	0	4
	NURS 115C	Nursing I ^{1,2}	5	9	8
	PSYC 105C	Introduction to Psychology	3	0	3
					19
Spring Semester					
	BIOL 196C	Anatomy and Physiology II	3	2	4
	NURS 116C	Nursing IIA ^{1,2} or			
	NURS 117C	Nursing IIB ^{1,2}	6	15	11
	PSYC 220C	Human Growth and Development: The Life Span	3	0	3
					18

SECOND YEAR	Fall Semester				
		BIOL 202C	Microbiology	3	3
	NURS 116C	Nursing IIA ^{1,2} or			
	NURS 117C	Nursing IIB ^{1,2}	6	15	11
	MATH xxxC	Math elective ⁴	4	0	4
					19
Spring Semester					
	ENGL xxxC	English elective	3	0	3
	NURS 215C	Nursing III ^{1,2}	4	15	9
	XX xxxC	Humanities/Fine Arts/Language elective	3	0	3
					15
	Total Credits				71

FEES	Fees		
	Fee	Course #	Semester
	\$615 ⁵	NURS115C	Fall
	\$615 ⁵	NURS116C/NURS 117C	Fall
	\$615 ⁵	NURS116C/NURS 117C	Spring
	\$615 ⁵	NURS 215C	Spring

¹Indicates major field courses.

²All students enrolled in a clinical course will be charged a \$500 per semester clinical surcharge. The following courses carry this charge: NURS 115C, NURS 116C, NURS 117C, and NURS 215C.

³Students enrolled in the course will be charged a \$125 nursing lab supply kit fee.

⁴MATH 120C or higher-level math. Students who wish to continue their education and pursue a bachelor's or master's degree in Nursing are encouraged to complete MATH 251C.

⁵These fees will cover costs associated with ATI online practice and proctored assessments and tutorials, detailed individualized remediation plans, and end-of-program testing.

All fees are subject to change.

NURSING—LPN TO RN COMPLETION OPTION

Associate in Science

This program prepares students for a career as a registered nurse (RN) to provide direct patient care in healthcare settings. Our faculty members create learning experiences that foster innovative teaching and learning, support and enhance student development, promote the use of college resources, and encourage civic engagement. The mission of the Nursing program is to prepare students to qualify as members of the interdisciplinary healthcare team as an entry-level registered nurse, to meet the needs of a diverse community in an evolving world, and to pursue higher education.

End-of-Program Student Learning Outcomes/Program Competencies

Graduates will be able to:

- Use the nursing process, clinical reasoning, and evidence-based practice to design, implement, and evaluate care focusing on the self-care requirements for the patient with commonly occurring illnesses.
- Incorporate principles and concepts from nursing knowledge and liberal arts education using critical thinking, clinical reasoning, clinical judgement, and humanistic values.
- Design and implement a plan of care in collaboration with the patient and healthcare team with a focus on the wholly compensatory nursing system.
- Evaluate effective therapeutic and collegiate communication needed to enhance health outcomes.
- Manage nursing care directly and/or through delegation for the patient with a range of self-care deficits.
- Create an optimal environment for the patient using microsystem resources, evidence-based practice, quality improvement processes, and patient safety standards.
- Establish a caring relationship with the patient to provide holistic and culturally-sensitive nursing care.
- Demonstrate accountability for standard-based nursing care given by self and delegated to others adhering to professional, ethical, and legal standards within nursing.

Student Achievement of Program Outcomes (Aggregated Data)

Performance on Licensure Exam: NCLEX-RN Pass Rates (first-time test takers)

Pass Rates	Class of 2016	Class of 2017	Class of 2018	Class of 2019	Class of 2020
NHTI Pass Rate	95.35%	97.87%	97.5%	96.49%	98.24%
N.H. Pass Rate	90.31%	90.85%	96.71%	95.68%	TBA%
National Pass Rate	84.56%	87.12%	88.29%	88.18%	86.57%

Job Placement Rates (employed within 9 months after graduation), based on survey responses

Graduating Class	Employment Rates
2020	TBA
2019	100%
2018	100%
2017	100%
2016	96%

Program completion rates (within 150% of program-stated length time)

Time Frame (Fall to Spring)	Completion Rates
2017-2020	82%
2016-2019	65%
2015-2018	68%
2014-2017	62%
2013-2016	64%

Career Information

There's a strong demand for nurses. Our graduates have been offered jobs immediately after graduation and passing the National Council Licensing Examination for Registered Nurses (NCLEX-RN®) licensing exam. They work in intensive care units, emergency rooms, maternity, pediatrics, home care, long-term care, and other healthcare settings. Upon graduation, students are eligible to sit for the NCLEX-RN®. Our graduates' first-time pass rates on the NCLEX licensing exam exceed the national average. Once a student passes the exam and becomes an RN, they can work full-time and continue their education online to earn a bachelor's/master's degree in nursing through one of our transfer opportunities; many of our partners offer tuition discounts. Matriculated students may be eligible to apply to the N.H. Board of Nursing (NHBON) for licensure prior to completing program requirements. After successful completion of the following nursing courses with a C or higher, they may apply for licensure by comparable education:

- NURS 115C: Nursing I - Licensed Nursing Assistant (LNA)
- NURS 115C: Nursing I; NURS 116C: Nursing IIA; and NURS 117C: Nursing IIB - Licensed Practical Nurse (LPN)

Accreditation

The Nursing program is approved by the New Hampshire Board of Nursing (NHBON) and accredited by the Accreditation Commission for Education in Nursing (ACEN). Upon satisfactory completion of the program, graduates are eligible to take the NCLEX-RN®. Graduates should contact the Board of Nursing in the state in which they intend to practice regarding licensure requirements. NHTI's NCLEX-RN® pass rates can be viewed at <https://www.oplc.nh.gov/new-hampshire-board-nursing>. NHBON licensing regulations may restrict candidates who have been involved in civil or criminal legal proceedings. Questions should be addressed to NHBON or individual states' Board of Nursing.

New Hampshire Board of Nursing

7 Eagle Square
Concord, NH 03301
603-271-2323

The Associate Nursing Program at NHTI - Concord's Community College in Concord, N.H., is accredited by the:

Accreditation Commission for Education in Nursing (ACEN)

3390 Peachtree Road NE, Suite 1400
Atlanta, GA 30326
[404-975-5000](tel:404-975-5000)

The most recent accreditation decision made by the ACEN Board of Commissioners for the Associate Nursing Program is Continuing Accreditation. View the public information disclosed by the ACEN regarding this program at <http://www.acenursing.us/accreditedprograms/programSearch.htm>

Specific Admission Requirements

Priority consideration will be given to students whose applications are complete and received by the Admissions Office by the application deadline.

- High school or college biology with lab with a C or higher
- High school or college chemistry with lab with a C or higher
- College preparatory Algebra I with a C or higher, or NHTI's MATH 092C with a C or higher
- Complete the ATI Test of Essential Academic Skills (TEAS) exam with a minimum score of 74.5% on Reading Comprehension, 68.8% on Mathematics, 55.3% on Science, 66.7% on English and Language Usage. Information regarding testing locations and registration is available here as a PDF or contact the Admissions Office at 603-230-4011 or 800-247-0179.
- Submit, on NHTI nursing reference forms, two references from professionals, supervisors, or teachers. The form is available here as a PDF, or contact the Admissions Office at 603-230-4011 or 800-247-0179.
- Submit the online application or download the PDF application and submit to the Admissions Office.

College-level science and technical courses (BIOL 195C/196C/202C) taken more than five years prior to desired entry into the program must be repeated; final decisions will rest with the Nursing department chair. Courses with virtual/online labs are not accepted, except for labs completed online because of COVID-19. Transfer credit will depend on course content, applicability to the program, grade earned, and length of time since completion.

- *Current NHTI Students:* Students who wish to enter the Nursing program and are currently enrolled in General Studies or another NHTI program must complete and submit the Change of Program form prior to the application deadline and return them to the Admissions Office at NHTIadmissions@ccsnh.edu.
- *Previously Enrolled in Another Nursing Program:* Candidates who attended a nursing RN program at another institution within the last 5 years must also submit a "Letter of Good Standing" from their prior program's department head and complete a Success Plan and submit it to the Admissions Office at NHTIadmissions@ccsnh.edu by the application deadline; qualified candidates will be contacted for an interview with the Nursing Student Affairs Committee.
- *Advanced Standing Transfer into Nursing:* Candidates seeking transfer and credit for prior nursing coursework may review the policy for Nursing Advanced Standing Transfer and the registration form for the required Advanced Standing Exam.

Selection Criteria

Admission is determined by a cumulative point system based on high school-level prerequisite courses and grades, applicable college courses and grades, and TEAS exam scores. References are considered critical to the admission process and are evaluated. Qualified candidates not accepted may be assigned to a prioritized waiting list based on the above criteria. They may be admitted if an opening becomes available prior to the beginning of the fall semester. The waiting list will be discarded six to eight weeks prior to classes beginning; students must reapply.

Upon Acceptance

Acceptance is conditional based on the submission the following documents no later than four weeks prior to the beginning of the semester:

- Submit health requirements for Allied Health clinical clearance to Health Services. Prior to the start of the clinical nursing courses, students are required to have on file in the Health Services Office documentation of current medical insurance, a complete physical exam, current immunizations, and current CPR for Healthcare Providers/Professional Rescuer. Professional liability malpractice insurance is arranged by the college and will automatically be charged to the student's account. Students' health insurance plans must meet N.H. requirements. Yearly Marketplace health insurance open enrollment is November-mid December and is effective Jan. 1. This is the only time to sign up unless a qualifying life-changing event occurs.
- Complete criminal background check as directed through NHTI's approved vendor. Background checks from previous employers or other vendors are not accepted. Students are required to undergo and meet the Nursing Department's criteria for a criminal background check. No student is exempt. Students are provided with procedural and cost information and are responsible for all costs associated with these testing procedures. Students will repeat the criminal background check prior to their second year.
- Complete drug and alcohol testing as directed through NHTI's approved vendor. Drug testing from previous employers or other vendors are not accepted. Students are required to undergo and successfully meet the Nursing department's criteria for drug and alcohol screening. No student will be exempt. Students are provided with procedural and cost information and are responsible for all costs associated with these testing procedures. Drug and alcohol screenings are required prior to clinical, prior to the second year, and randomly throughout the program.

Readmission Procedure

Matriculated nursing students who have withdrawn, have been suspended for not achieving the minimum grade in a nursing, science or math course, and are not able to continue in the Nursing program may be considered for readmission only once. Readmission is not guaranteed, and students must reapply to the semester they left. Returning students must satisfy the admission criteria. Readmission will depend on space and clinical/faculty availability. Students who have failed a Nursing course due to unsafe clinical performance may not be eligible for readmission and should consult with the Nursing department chair to determine readmission eligibility. The Nursing department chair will notify students of the specific readmission procedure after course failure or withdrawal. Students must submit a new application to the Admissions Office and complete a Success Plan to be considered for readmission to the program. These must be submitted by the application deadline (Oct. 1 for Spring readmission and March 1 for Fall readmission); after the deadline, qualified candidates will be contacted for an interview with the Nursing Student Affairs Committee.

Health, Character, and Technical Standards

Standards have been established to provide guidance to students as to skills and abilities requisite to participate in the Nursing program.

- *General abilities:* The student must possess functional use of the senses of vision, touch, hearing, and smell so that data received by the senses may be integrated, analyzed, and synthesized in a consistent and accurate manner. A student must also possess the ability to perceive pain, pressure, temperature, position, vibration, and movement that are important to the student's ability to gather significant information needed to effectively evaluate patients. A student must be able to respond promptly to urgent situations that may occur during clinical training activities and must not hinder the ability of other members of the healthcare team to provide prompt treatment and care to patients.
- *Observational ability:* The student must have sufficient capacity to make accurate visual observations and interpret them in the context of laboratory studies, medication administration, and patient care activities. In addition, the student must be able to document these observations and maintain accurate records.

- *Communication ability:* The student must be able to communicate effectively both verbally and non-verbally to elicit information and to translate that information to others. Each student must have the ability to read, write, comprehend, and clearly speak the English language to facilitate communication with patients, their family members, and other professionals in healthcare settings. In addition, the student must be able to maintain accurate patient records, present information in a professional, logical manner, and provide patient counseling and instruction to effectively care for patients and their families. The student must also be able to clearly communicate effectively verbally and in writing with instructors and other students in the classroom setting.
- *Motor ability:* The student must be able to perform gross and fine motor movements with sufficient coordination needed to perform complete physical examinations using the techniques of inspection, palpation, percussion, auscultation, and other diagnostic maneuvers. A student must be able to develop the psychomotor skills reasonably needed to perform or assist with procedures, treatments, administration of medication, management and operation of diagnostic and therapeutic medical equipment, and such maneuvers to assist with patient care activities such as lifting, wheel chair guidance, and mobility. The student must have sufficient levels of neuromuscular control and eye-to-hand coordination as well as possess the physical and mental stamina to meet the demands associated with extended periods of sitting, standing, moving, and physical exertion required for satisfactory and safe performance in the clinical and classroom settings including performing CPR if necessary. The student must possess the manual and visual dexterity to draw up solutions in a syringe.
- *Intellectual, conceptual, and quantitative abilities:* The student must be able to develop and refine problem-solving skills crucial to practice as a nurse. Problem-solving involves the abilities to measure, calculate, reason, analyze, and synthesize objective and subjective data, and to make decisions, often in a time-urgent environment, that reflect consistent and thoughtful deliberation and sound clinical judgment. Each student must demonstrate mastery of these skills and possess the ability to incorporate new information from peers, teachers, and the nursing and medical literature to formulate sound judgment in patient assessment, intervention, evaluation, teaching, and setting short- and long-term goals. Students must demonstrate arithmetic competence that would allow the student to read and understand columns and/or writing, tell time, use measuring tools, and add, subtract, multiply, and divide.
- *Behavioral and social attributes:* Compassion, integrity, motivation, effective interpersonal skills, and concern for others are personal attributes required of those in the Nursing programs. Personal comfort and acceptance of the role of a nurse functioning under supervision of a clinical instructor or preceptor is essential for a nursing student. The student must possess the skills required for full usage of the student's intellectual abilities; the exercise of good judgment; the prompt completion of all responsibilities in the classroom and clinical settings; and the development of mature, sensitive, and effective relationships with patients and other members of the healthcare team. Each student must be able to exercise stable, sound judgment and to complete assessment and interventional activities in a timely manner to assure patient safety and well being. The ability to establish rapport and maintain sensitive, interpersonal relationships with individuals, families, and groups from a variety of social, emotional, cultural, and intellectual backgrounds is critical for practice as a nurse. The student must be able to adapt to changing environments; display flexibility; accept and integrate constructive criticism given in the classroom and clinical settings; effectively interact in the clinical setting with other members of the healthcare team; and learn to function cooperatively and efficiently in the face of uncertainties inherent in clinical practice.
- *Examinations:* Certain courses in the Nursing programs require students to take timed and/or online exams. Students may be required to take timed, online, and/or other types of examinations in a proctored, secure setting that is acceptable to the program.
- *Ability to manage stressful situations:* The student must be able to adapt to and function effectively to stressful situations in both the classroom and clinical settings, including emergency situations. Students will encounter multiple stressors while in the Nursing program. These stressors may be (but are not limited to) personal, patient care/family, faculty/peer, and or program-related.

The healthcare environment contains substantial amounts of latex. Applicants with latex allergies place themselves at risk of reaction. The Nursing Department does not recommend that individuals with a latex allergy pursue a career in healthcare.

RN to BSN Pathways

The Nursing program maintains articulation agreements with colleges so students can continue their education to earn a bachelor's or master's degree in Nursing. Our articulation agreements include but are not limited to Aspen University, Chamberlain University, Colby-Sawyer College, Franklin Pierce University, Granite State College, Rivier University, Salve Regina University, and Southern New Hampshire University. These programs accept our Nursing program credits, and

most will transfer in up to 90 credits. This allows students to take additional general education credits at NHTI. Some also offer NHTI graduates who have successfully passed their NCLEX-RN exam a discounted tuition rate. Transfer policies vary. The receiving college or university has sole discretion in determining the amount of credit to be awarded. Students should not make assumptions about which credits are transferable even if an articulation agreement exists. It is the student's responsibility to contact the appropriate person at the receiving institution to discuss policy, learn what documentation is required, and determine and confirm transferable credit.

Nursing Grade and Progression

All Nursing courses integrate theory and clinical experience. Failure to receive a satisfactory grade in either theory or the clinical experience portion of the course will result in a failing grade. All Nursing courses must be passed with a C or higher before proceeding to the next level. A grade of C or higher is required in BIOL 195C, BIOL 196C and BIOL 202C and Math elective to enter or progress in the Nursing courses.

Length of Time to Complete the Nursing Program

All required Nursing courses must be completed within four years from when the student begins the first Nursing course regardless of whether that first course was taken at NHTI or in another Nursing program. Eligible students will be readmitted to the Nursing program per specifications of the Readmission Policy. Students may be readmitted only once during the four years. Readmission will depend on space and clinical/faculty availability. Students who do not complete the program within the required timeframe must reapply for admission into NURS 115.

Clinical Experiences

Students must satisfactorily meet the health requirements for Allied Health Clinical Clearance, criminal background check, and drug and alcohol testing prior to participating in clinical. All students may be required to do a day, evening and/or weekend clinical rotation depending on clinical agency/faculty availability. Transportation to and from the clinical agency is the student's responsibility.

NHTI has developed practicum opportunities for students to foster hands-on learning while simultaneously receiving credit. The college's first priority must be to ensure that patient safety is not compromised by students during learning experiences. Students must demonstrate sufficient emotional stability to withstand the stresses, uncertainties and changing circumstances that characterize patient responsibilities. Students are expected to exercise sound judgment, accept direction and guidance from a supervisor or faculty member, and establish rapport and maintain sensitive interpersonal relationships and confidentiality with peers, staff, and/or patients. Technical standards have been established to provide guidance to students as to skills and abilities requisite to participate in the nursing program. Clinical sites are in hospitals and community-based settings:

- Catholic Medical Center, Manchester, N.H.
- Concord Hospital, Concord, N.H.
- New Hampshire Hospital, Concord, N.H.
- Community agencies throughout N.H.

Nursing – LPN to RN Associate of Science Curriculum

The following program of study, which begins each May, reflects a three-semester curriculum plan that students enrolled in the Nursing program are required to complete for graduation. Eleven (11) credits are awarded from the NLN Nursing Acceleration Challenge Exam I: Foundations of Nursing score. Transfer credit for the five prerequisite college courses will be evaluated on an individual basis and may result in an additional 18 credits awarded. Non-nursing courses must be taken in the semester indicated in the plan of study below or may be taken earlier. Nursing courses must be taken in the sequence listed below. Nursing theory classroom, simulation lab and clinical instruction must be completed concurrently.

Course	Title	CL	LAB	CR
Summer Semester				
NURS 178C	LPN-RN Completion ^{1,2}	4	10	7
				7
Fall Semester				
BIOL 202C	Microbiology	3	3	4
MATH xxxC	Math elective ³	4	0	4
NURS 116C	Nursing IIA ^{1,2,4}	6	15	11
				19
Spring Semester				
ENGL xxxC	English elective	3	0	0
NURS 215C	Nursing III ^{1,2,4}	4	15	9
XX xxxC	Humanities/Fine Arts/Language elective	3	0	3
				15
Total Credits				70⁵

FEES

Fee	Course #	Semester
\$615 ⁴	NURS 178C	Summer
\$615 ⁴	NURS 116C	Fall
\$615 ⁴	NURS 215C	Spring

¹Indicates major field courses

²All students enrolled in a clinical course will be charged a \$500 per semester clinical surcharge. The following courses carry this charge: NURS 116C, NURS 178C, and NURS 215C.

³MATH 120C or higher-level math. Students who wish to continue their education and pursue a bachelor's or master's degree in Nursing are encouraged to complete MATH 251C.

⁴These fees will cover costs associated with ATI online practice and proctored assessments and tutorials, detailed individualized remediation plans, and end-of-program testing.

⁵All students enrolled in a clinical course will be charged a \$500 per semester clinical surcharge. All fees are subject to change.

ORTHOPAEDIC TECHNOLOGY

Associate in Science

Orthopaedic Technology is the art of casting and splinting broken bones and muscular injuries. This program is one of only seven in the country and the only one in New England. Students are trained in casting, splinting, and anatomy and physiology of the body and patient care specific to the field. Students complete hands-on training in the on-campus lab and in externships throughout N.H. and in the U.S. All courses and clinical externships are taught by industry professionals and leaders. Students in this program are active on campus with the Orthoplast Club. This program is financial aid-eligible.

Career Information

Job placement for graduates is excellent. Graduates have opportunities to work in private practice, hospitals, clinics, and athletics. Our students complete externships through clinical facilities such as Concord Orthopedic, the Children's Hospital in Washington, D.C., and Massachusetts General Hospital. Upon completion of the program students are eligible to take the national registry exam. Graduates are eligible to take the national certification exam.

Accreditation

This program is recognized by the National Board for Certification of Orthopaedic Technologists (NBCOT).

Specific Admissions Requirements

Preference will be given to applicants whose applications are complete (with the exception of the interview) and received by the Admissions Office at NHTIadmissions@ccsnh.edu by the deadline.

- High school diploma or proof of high school equivalency
- Personal interview
- Applicants must write an essay on their desire to enter the Orthopaedic Technology program; instructions on how to complete this requirement can be downloaded at this link: Orthopaedic Technology Admission Essay Requirements and are available from the Admissions Office at NHTIadmissions@ccsnh.edu.
- Complete a course in CPR and Airway Obstruction Management for healthcare providers/professional rescuers prior to program registration; this may be completed after acceptance.

Students who wish to enter this degree program and are enrolled in another NHTI program must complete and submit the Change of Program form and submit it to the Admissions office at NHTIadmissions@ccsnh.edu.

Orthopaedic Technology Associate of Science Curriculum

	Course Number	Course Title	CL	LAB	CR
FIRST YEAR	Fall Semester				
	BIOL 120C	Human Biology	3	2	4
	ENGL 101C	English Composition	4	0	4
	HLTH 101C	Medical Terminology	3	0	3
	PSYC 105C	Introduction to Psychology	3	0	3
					14
	Spring Semester				
	ENGL 120MC/COMM 120MC	Communication: Mindful or			
	ENGL xxxC	English elective ¹	3	0	3
	MATH 120C	Quantitative Reasoning or			
MATH xxxC	Math elective	4	0	4	
PHIL 242C	Contemporary Ethical Issues	3	0	3	
PSYC 220C	Human Growth and Development	3	0	3	
				13	
SECOND YEAR	Fall Semester				
	ORTH 101C	Orthopaedic Anatomy and Physiology I ²	3	0	3
	ORTH 103C	Basic Radiology Interpretation ²	3	0	3
	ORTH 108C	Casting and Splinting I ^{2,3}	2	6	5
	ORTH 109C	Introduction to Orthopaedics ^{2,3}	2	1	2
	ORTH 113C	Orthopaedic Patient Care ²	2	2	3
					16
	Spring Semester				
	ORTH 102C	Orthopaedic Anatomy and Physiology II ²	3	0	3
	ORTH 104C	Physical Assessment of the Orthopaedic Patient ²	3	2	4
	ORTH 150C	Spring Externship ^{2,4,5}	0	16	3
	ORTH 208C	Casting and Splinting II ^{2,3}	2	6	5
					15
	Summer Semester				
	ORTH 112C	Traction ²	1	2	2
ORTH 220C	Senior Externship and Capstone Experience ^{2,3,4}	1	16	6	
				8	
Total Credits					
				66	

¹Does not include ENGL 100C

²Indicates major field courses.

³\$750 specialty supplies fee will be added to the cost of ORTH 108C and ORTH 208C, and a \$350 specialty supplies fee for ORTH 220C.

⁴All students enrolled in a clinical course will be charged a \$500 per semester clinical surcharge. The following courses carry this charge: ORTH 150C, ORTH 220C.

⁵A \$89 fee will be assessed for all student taking ORTH 150C. This fee covers the cost of the radiation badge, which is required per state/national law and accreditation to monitor student radiations dose.

Students must achieve grades of C or higher in all general education courses including HLTH 101C and IST 102C to be eligible to register for ORTH 101C and other major field courses.

PARAMEDIC EMERGENCY MEDICINE

Associate in Science

NHTI's Paramedic Emergency Medicine Program is the only one of its kind in N.H. and has been educating paramedic students since 1977. The program has small classes taught by degreed-instructors, current equipment, and a full-sized ambulance simulator. It combines paramedic courses, general education requirements, specialty certifications, and diverse hospital and pre-hospital experiences. Students have opportunities to work with some of New England's finest hospital and prehospital affiliates. This degree program offers:

- Rigorous curriculum that exceeds the national standards
- Paired lectures and labs to allow for hands-on practice of the weekly topics
- Comprehensive courses in anatomy and physiology and pathophysiology
- In-depth cardiology education, which includes BLS, ACLS, and PALS certifications
- Progressive clinical track for hospital and field experience
- Updated Gaumard and Laerdal simulation mannequins (adult and pediatric)
- Physio-Control LIFEPAK 15 and iSimulateALS monitors and Glide Scope Go video laryngoscopes

Upon successful completion of all freshmen courses and their hospital clinic, students may test for the AEMT; the NHTI program pass rate is 100%.

Program Learning Outcomes

The program's emphasis is on the development of paramedic knowledge and theory, practical skills application, and the development of professional behaviors required of the entry level paramedic. The development of leadership skills, individual professional growth, and academic excellence are integral parts of the program.

Career Information

Those considering paramedic education should take the associate degree. For many, it provides competitive entry into the job market, a stronger advantage for career advancement, and the potential for academic advancement with the ability to transfer course credits to a four-year college. Our graduates have a 100% pass rate for NREMT written and practical exams as well as 100% job placement after graduation.

Clinical rotations include high-volume, fire-based, hospital-based, and private ambulance services. Students who complete this program can enter into the following professions (not an inclusive list):

- Ambulance-based paramedicine (private, public, and/or volunteer services)
- Hospital-based paramedicine (typically in the emergency department setting) and urgent care facilities
- Mobile integrated healthcare/community paramedicine
- Cruise ships, oil rigs, entertainment venues (sports, movie/TV sets, concerts)

Accreditation

The NHTI Paramedic Emergency Medicine program is accredited by the [Commission on Accreditation of Allied Health Education Programs](#) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP).

Commission on Accreditation of Allied Health Education Programs

1361 Park Street
Clearwater, FL 33756
727-210-2350
www.caahep.org

To contact CoAEMSP:
8301 Lakeview Parkway
Suite 111-312
Rowlett, TX 75088
Phone: 214-703-8445
Fax: 214-703-8992
www.coaemsp.org

	Cohort Graduation Year								3 Year Total	5 Year Total
	2021		2020		2019		2018	2017		
Enrollment	10	4	10	1	12	2	9	10	39	58
Graduates	8	2	4	1	10	1	5	8	26	39
Attrition (cohort)	20%	50%	60%	0%	17%	50%	44%	20%	33%	33%
Attrition (year)	29%		55%		21%		44%	20%	35%	34%
Retention (year)	71%		45%		79%		56%	80%	65%	66%
National Registry - Cognitive (% attempting)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
National Registry - Cognitive (% pass rate)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
National Registry - Psychomotor (% attempting)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
National Registry - Psychomotor (% pass rate)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Job Placement	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Specific Admission Requirements

- Be at least 18 years old and hold a valid driver's license
- High school-level (or higher) courses in lab-based Biology and Chemistry completed with a C or higher or college-level Anatomy and Physiology I and II with labs with a C or higher
- High school-level (or higher) Algebra I, completed with a C or higher
- Current National Registry or State EMT/AEMT certification
- Current CPR certification
- Letter of recommendation from EMS supervisor
- Documentation of experience as an ambulance-based EMT/AEMT to include at least 100 patient contacts and 25 team leads
- Interview with department chair of Paramedic Emergency Medicine

Students who wish to enter this degree program and are enrolled in another NHTI program must complete and submit the [Change of Program form](#) and submit it to the Admissions office at NHTIadmissions@ccsnh.edu.

Technical/Physical Standards

Students in this program must have sufficient strength and motor coordination required to perform the following physical activities: standing and walking for sustained periods of time; driving an ambulance and/or rescue unit under emergency conditions; frequent reaching and manual dexterity in handling equipment often in confined spaces; and frequently transporting, moving, lifting, and transferring patients of various sizes to and from a stretcher and other patient transport devices.

Health and Additional Requirements

- Annual TB testing; Hepatitis B vaccine; personal health insurance; completed health physical; drug screening; and NHTI liability insurance
- Never been convicted of a felony (may interfere with National Registry eligibility)
- Sufficient eyesight to observe patients, manipulate equipment, and interpret data
- Visual acuity sufficient to work with data, figures, and computer terminals and make equipment inspections
- Sufficient hearing to assess patient needs and to understand instructions
- Sufficient written and oral skills to communicate needs promptly and effectively and to interact with patients, physicians, peers, and medical and other public service emergency personnel
- Ability to work with frequent interruptions and respond appropriately to unexpected situations
- Ability to work with wide variations in workload and stress levels
- Mental health to cope with personal stresses in a way that does not adversely affect performance

Students that do not meet entrance requirements may need an alternate plan for the scheduling of their courses.

Students enrolled at NHTI often take non-major courses, easing the class load when admitted to the Paramedic Emergency Medicine Program. The core classes for this degree program are only offered during the day. Because of the sequential nature of the course work, these classes are only available to those who have been accepted into the program.

Clinical Affiliations

Hospital Clinic Sites: During the freshmen-year clinic, students spend at least 224 hours working in multiple settings within the hospital. Each clinical site is provided with program-faculty supervision and advocacy.

- Concord Hospital, Concord, N.H.
- Dartmouth-Hitchcock Medical Center, Lebanon, N.H.
- Southern New Hampshire Medical Center, Nashua, N.H.

ALS Field Clinic Sites: During senior-year field clinics, students spend 320 hours working with an Advanced Life Support ambulance service. Each student is assigned a paramedic preceptor for the duration of the experience.

- | | |
|--|--|
| <ul style="list-style-type: none"> • American Medical Response (AMR), Manchester/ Nashua, N.H. • Cataldo Ambulance Service, Somerville, Mass. • Concord Fire Department, Concord, N.H. • Derry Fire Department, Derry, N.H. • Greater Lowell EMS, Lowell, Mass. | <ul style="list-style-type: none"> • Fallon Ambulance, Quincy, Mass. • Frisbie Memorial Hospital EMS, Rochester, N.H. • Lawrence General Hospital ALS, Lawrence, Mass. • Portland Fire Department, Portland, Maine • Salem Fire Department, Salem, N.H. |
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Paramedic Emergency Medicine Associate of Science Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR	
	Fall Semester					
	BIOL 195C	Anatomy and Physiology I	3	2	4	
	ENGL 101C	English Composition	4	0	4	
	PEM 117C	Physical Assessment ¹	2	0	2	
	PEM 142C	Cardiology I ¹	2	0	2	
	PEM 150C	Advanced Trauma ¹	2	0	2	
	PEM 161C	Integration Lab I ¹	0	4	2	
					16	
Spring Semester						
	BIOL 196C	Anatomy and Physiology II	3	2	4	
	MATH 120C	Quantitative Reasoning or higher-level math course	4	0	4	
	PEM 111C	Paramedic Procedures ¹	1	3	2	
	PEM 126C	Pharmacology ¹	3	0	3	
	PEM 135C	Medical Emergencies ¹	2	0	2	
	PEM 162C	Integration Lab II ¹	0	4	2	
	PEM 244C	Advanced Cardiology ¹	2	0	2	
					19	
Summer Semester						
	PEM 190C	Introduction to Clinical Environment ¹	1	0	1	
	PEM 194C	Hospital Clinical ^{1,2}	0	18	5	
	PEM 290C	Field Clinic Primer ³	0	6	2	
					8	
SECOND YEAR	Fall Semester					
		BIOL 222C	Pathophysiology	3	0	3
	PEM 163C	Integration Lab III	0	4	3	
	PEM 201C	Special Populations	2	0	2	
	PEM 292C	12 Lead EKG Interpretation/Difficult Airway Seminar	2	0	2	
	PEM 296C	Field Clinical I	0	9	3	
	PSYC 105C	Introduction to Psychology	3	0	3	
					15	
Spring Semester						
	ENGL 120C/COMM 120C	Communication	3	0	3	
	PEM 164C	Integration Lab IV	0	4	2	
	PEM 210C	Field Operations	2	0	2	
	PEM 278C	Advanced Paramedic Practice	2	0	2	
	PEM 297C	Field Clinical II	0	7	3	
	PEM 298C	Field Clinical III	0	2	1	
	XX xxxC	Humanities/Fine Arts/Language elective	3	0	3	
					15	
Total Credits					72	

¹Indicates major field courses.

²All students enrolled in a clinical course will be charged a \$500 per semester clinical surcharge. The following course carries this charge: PEM 194C.

³Optional, unless faculty determines student is in need of additional time in field clinic. Not included in total credits

RADIATION THERAPY

Associate in Science

This program uses didactic, laboratory, and clinical education to train students to work as radiation therapists in cancer treatment centers. Radiation therapists work under the direction of an oncologist to treat patients with malignant diseases using ionizing radiation. A certificate option is available for students with prior degrees in radiological sciences. The radiation therapist uses creativity in a patient care environment with new technology. NHTI offers the only Radiation Therapy program in N.H. We offer students in northern New England the opportunity to enter Radiation Therapy with state-of-the-art clinical facilities.

Program Learning Outcomes

The mission of the radiation therapy program is to educate and produce highly qualified radiation therapists through an objective based didactic education and competency based clinical education. Student growth and professional development will be instilled through the community college system and atmosphere in conjunction with the NHTI's Mission Statement.

- The student/graduate will be clinically competent.
 - Student/graduate will select appropriate treatment setup factors.
 - Students will practice radiation protection.
 - Students will be exposed to a variety of alternate treatment setups.
- The student/graduate will communicate effectively.
 - Students will articulate the setup procedure to the patient.
 - Students will practice effective communication with the radiation therapist community.
- The student/graduate will use critical thinking.
 - Students will create a reproducible patient position in simulation.
 - Students will demonstrate competence when setting up an IMRT treatment.
- The student/graduate will demonstrate professionalism.
 - Students will examine the importance of continued professional development.
 - Students will demonstrate professional and ethical behavior when interacting with patients and members of the healthcare team.

Career Information

This program boasts excellent job opportunities with high employer satisfaction. Graduates are eligible to take the national certification exam administered by the American Registry of Radiologic Technologists (ARRT) and find employment in hospitals and private clinics.

Accreditation

NHTI is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). The program was evaluated according to the Standards for an Accredited Educational Program in Radiography in 2014 and was awarded the maximum accreditation for a period of 8 years. An interim report was completed and accepted in 2018. The next site visit is tentatively scheduled for the second quarter of 2022. Contact information for JRCERT:

JRCERT

20 N. Wacker Drive Suite 2850

Chicago IL 60606-3182

312-704-5300

Mail.@jrcert.org

Program Effectiveness Data

The following is the most current program effectiveness data. Our programmatic accreditation agency, JRCERT, defines and publishes this information. [Click here](#) to go directly to the JRCERT webpage.

Credentialing Examination: The number of students who pass, on the first attempt, the American Registry of Radiologic Technologists (ARRT) certification examination, or an unrestricted state licensing examination, compared with the number of graduates who take the examination within six months of graduation. The five-year average benchmark established by the JRCERT is 75%.

Credentialing Examination Rate	Number passed on first attempt divided by number of attempted within 6 months of graduation
Year	Results
Year 1: 2021	7 of 8—87.5%
Year 2: 2020	6 of 6—100%
Year 3: 2019	4 of 7—57%
Year 4: 2018	4 of 4—100%
Year 5: 2017	5 of 5—100%
Program 5-Year Average	26 of 30—89%

Job Placement: The number of graduates employed in the radiologic sciences compared to the number of graduates actively seeking employment in the radiologic sciences within twelve months of graduating. The five-year average benchmark established by the JRCERT is 75%.

Job Placement Rate	Number employed divided by number actively seeking employment within 12 months of graduation
Year	Results
Year 1: 2021	8 of 8—100%
Year 2: 2020	6 of 6—100%
Year 3: 2019	6 of 6—100%
Year 4: 2018	4 of 4—100%
Year 5: 2017	5 of 5—100%
Program 5-Year Average	29 of 29—100%

Program Completion: The number of students who complete the program within the stated program length. The annual benchmark established by the program is 75%.

Program Completion Rate	Number graduated by number started the program
Year	Results
Year 1: 2021	8 of 9—89%
Year 2: 2020	6 of 8—75%
Year 3: 2019	7 of 11—64%
Year 4: 2018	4 of 7—51%
Program 5-Year Average	24 of 30—71%

Clinical Rotations

We offer clinical rotations at eight oncology sites in N.H., six in Maine, and two in Mass. and Vt., offering students broad experience in procedures, equipment, and patients. Students can rotate to a different radiation oncology clinic each semester, enabling versatility.

Specific Admissions Requirements

The deadline for Fall 2021 admission is March 5, 2021. The deadline for Fall 2022 admission is March 4, 2022. Preference will be given to applicants whose applications are complete (with the exception of the interview) and received by the Admissions Office at NHTIadmissions@ccsnh.edu by the deadline.

- High school or college biology with lab and chemistry with lab, both with C or higher
- College prep Algebra I with a C or higher, or NHTI's MATH 092C with a C or higher
- High school-level physics is recommended.
- Applicants must write an essay on their desire to enter the field of Radiation Therapy; instructions on how to complete this requirement can be downloaded at this link: Radiation Therapy Essay (PDF); and are available from the Admissions Office at NHTIadmissions@ccsnh.edu.
- Complete a course in CPR and Airway Obstruction Management for the Healthcare Provider/Professional Rescuer before program registration
- An interview with the Admissions Office will be arranged by the department after the application deadline.

Students who wish to enter this program and are currently enrolled in another NHTI program must complete and submit the [Change of Program form](#) to the Admissions Office prior to the application deadline. For additional information on the Radiation Therapy Program, please visit our site on Canvas at: <https://canvas-prod.ccsnh.edu/courses/30551>.

Essential Student Functions and Requirements

Essential functions have been established as a guidance tool for use in realistically informing the student of the minimum standards needed to satisfactorily function in the program and, ultimately, the profession. Applicants who feel they may not meet one or more of the essential functions listed below should contact program officials to discuss. If any of the below essential functions pose an issue, both a licensed physician directly caring for the student and NHTI Health Services clearance are necessary for participation in the clinic.

The student must have sufficient strength and motor coordination required to perform the following physical activities:

- Standing and walking constantly during the clinical day to accomplish tasks; days can be up to 10 hours.
- Frequent reaching and manual dexterity in handling accessory equipment for diagnostic imaging purposes including typing on computer terminals
- Frequent bending and twisting
- Frequent overhead reaching, above shoulder level, to utilize radiologic equipment
- Ability to lift up to 50 pounds with frequent lifting/and or carrying objects up to 25 pounds
- Sufficient upper and lower body strength to assist patients; including transfer of patients from a wheelchair or stretcher to and from a chair or examination table. Patient transfer requires the ability to push/pull up to 200 (equipment and or patient).
- Manual dexterity to manipulate equipment, patient care equipment, and computers frequently

In addition, the student must have:

- No medical restrictions concerning the operation of diagnostic imaging equipment
- Sufficient hearing to distinguish different audio signals from equipment as well as assess patient needs
- Sufficient eyesight to observe patients, manipulate equipment and evaluate radiographic quality. Visual acuity sufficient to work with analyzing data and figures, small print, working with computer terminals, extensive reading, visual inspection involving small defects, small parts, and operation of machines. Vision must be maintained within dim lighting.
- Sufficient writing skills to communicate needs promptly and effectively. Ability to express or exchange ideas by means of the spoken word. Primary function includes activities in which the student must convey detailed or important instructions to patients, physicians, families, and other employees, accurately, loudly or quickly.
- Ability to work with frequent interruptions and respond appropriately to unexpected situations
- Ability to work with wide variations in workload and stress levels
- Approval of the clinical facility if there is any question of meeting essential functions

Clinical Rotations and Obligations

We offer clinical rotations at eight oncology sites in N.H., six in Maine, and two in Mass. and Vt., offering students broad experience in procedures, equipment, and patients. Students can rotate to a different radiation oncology clinic each semester, enabling versatility.

The student must complete all of the following to receive a clinical pass (P) for the semester:

- Passing grade on all mandatory competencies for that semester (within 2 attempts)
- Passing grade (>75%) on end of semester clinical exam
- >70% average on clinical affective evaluations
- Completion of required clinical hours for that semester
- Complete criminal background check as directed through NHTI's approved vendor. Background checks from previous employers or other vendors are not accepted. Students are required to undergo and meet the Diagnostic Medical Imaging Department's criteria for a criminal background check. No student is exempt. Students are provided with procedural and cost information and are responsible for all costs associated with these testing procedures. Students will repeat the criminal background check prior to their second year.
- Complete drug and alcohol testing as directed through NHTI's approved vendor. Drug testing from previous employers or other vendors are not accepted. Students are required to undergo and successfully meet the Diagnostic Medical Imaging department's criteria for drug and alcohol screening. No student will be exempt.

Students are provided with procedural and cost information and are responsible for all costs associated with these testing procedures. Drug and alcohol screenings are required prior to clinical, prior to the second year, and randomly throughout the program.

If a student does not complete any of the above requirements, they will be issued a no pass (NP). If a student is dismissed from the clinical semester due to performance or behavioral issues, they will be issued an AF. Any student receiving a failing grade in a clinical course will be dismissed from the program and is not eligible to reapply. Clinical practice is the essence of the profession and a failure in the clinical environment indicates that the student is not competent to continue in the program.

Additional Information

- Prior to the start of clinical Radiation Therapy courses, students are required to have on file in the Health Services Office documentation of: current medical insurance; a complete physical examination; current immunizations; current CPR certification for one- and two-person adult, infant, and child. Professional liability malpractice insurance is arranged by the college and will be charged to the student's account.
- College-level science and technical courses (i.e., Anatomy and Physiology I and II) taken more than five years prior to desired entry into the Radiation Therapy program must be repeated. Courses with virtual/online labs are not accepted, except for labs completed online in 2020-21 due to COVID-19.
- The program integrates all theory coursework with clinical experience. All Radiation Therapy major field courses must be passed with a C- or higher before proceeding to the next level. Grades of C or higher in BIOL 195C and BIOL 196C are required to enter or progress in the Radiation Therapy courses.

Radiation Therapy Associate of Science Curriculum

	Course	Title	CL	LAB	CR
FIRST YEAR	Fall Semester				
	BIOL 195C	Anatomy and Physiology I	3	2	4
	RDTH 101C	Introduction to Radiation Therapy ¹	3	0	3
	RDTH 110C	Principles and Practice of Radiation Therapy I ¹	3	2	4
	RDTH 115C	Patient Care ¹	1	0	1
					12
	Spring Semester				
	BIOL 196C	Anatomy and Physiology II	3	2	4
	ENGL 101C	English Composition	4	0	4
	RDTH 190C	Clinical Practice I ^{1,2}	0	16	4
	RDTH 215C	Sectional Anatomy and Pathology ¹	3	0	3
					15
	Summer Semester				
	MATH 124C	College Algebra	4	0	4
	RDTH 150C	Medical Imaging and Processing ¹	2	0	2
	RDTH 180C	Radiologic Physics for the Radiation Therapist ¹	2	0	2
RDTH 195C	Clinical Practice II ^{1,2}	0	17	4	
				12	
SECOND YEAR	Fall Semester				
	ENGL 120C/COMM 120C	Communication	3	0	3
	RDTH 200C	Radiation Protection and Biology ¹	3	0	3
	RDTH 210C	Principles and Practice of Radiation Therapy II ¹	3	2	4
	RDTH 290C	Clinical Practice III ^{1,2}	0	24	5
					15
	Spring Semester				
	PHIL 242C	Contemporary Ethical Issues	3	0	3
	RDTH 205C	Treatment Planning ¹	3	0	3
	RDTH 220C	Radiation Therapy Physics ¹	3	0	3
	RDTH 293C	Clinical Practice IV ^{1,2}	0	24	5
					14
	Summer Semester				
	PSYC 105C	Introduction to Psychology	3	0	3
	RDTH 280C	Registry Review ¹	1	0	1
	RDTH 295C	Clinical Practice V ^{1,2}	0	23	5
				9	
Total Credits					77

¹Indicates major field courses.

²All students enrolled in a clinical course will be charged a \$500 per semester clinical surcharge. The following courses carry this charge: RDTH 190C, RDTH 195C, RDTH 290C, RDTH 293C and RDTH 295C.

RADIOLOGIC TECHNOLOGY

Associate in Science

In this program, students obtain the knowledge and clinical skills to function as a radiographer using ionizing radiation to produce diagnostic images, which are interpreted by specialized physicians to detect disease or injury. Students are placed in a variety of clinical settings to develop their clinical skills and knowledge. They gain competence in properly using x-ray equipment, positioning the patient, selecting technical factors, and practicing safely, providing optimal patient care in settings such as hospitals, clinics, ERs, and ORs. Students are taught to use prudent judgement and effective communication to care for patients and collaborate with patients and all members of the healthcare team.

Program Learning Outcomes

In conjunction with NHTI's Mission Statement, the Radiologic Technology Program provides the highest standards of theoretical and clinical experiences for its' students, thereby empowering them to improve the public's health by ensuring access to quality Radiologic healthcare. Through a process of continuous improvement, we will exceed expectations in educating our students.

- Students will be clinically competent. Student learning outcomes:
 - Students will obtain diagnostic quality images.
 - Students will practice effective patient care including radiation safety.
- Students will communicate effectively. Student learning outcomes:
 - Students will practice effective oral communication skills.
 - Students will use clear and concise written communication.
- Students will demonstrate critical thinking. Student learning outcomes:
 - Students will make corrections for positioning and/or technique.
 - Students will adapt to new procedures and situations.
- Students will demonstrate professionalism. Student learning outcomes:
 - Students will be respectful and tactful in all interactions.
 - Students will display ethical behavior when interacting with patients and the healthcare team.

Career Information

Graduates are eligible to take the national certification exam administered by the American Registry of Radiologic Technologists (ARRT) and find employment in hospitals and private clinics.

Accreditation

NHTI is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). The program was evaluated according to the Standards for an Accredited Educational Program in Radiography in 2014 and was awarded the maximum accreditation for a period of 8 years. An interim report was completed and accepted in 2018. The next site visit is tentatively scheduled for the second quarter of 2022. Contact information for JRCERT:

JRCERT

20 N. Wacker Drive Suite 2850

Chicago IL 60606-3182

312-704-5300

Mail@jrcert.org

Program Effectiveness Data

The following is the most current program effectiveness data. Our programmatic accreditation agency, the Joint Review Committee on Education in Radiologic Technology (JRCERT), defines and publishes this information. [Click here](#) to go directly to the JRCERT webpage.

Credentialing Examination: The number of students who pass, on the first attempt, the American Registry of Radiologic Technologists (ARRT) certification examination, or an unrestricted state licensing examination, compared with the number of graduates who take the examination within six months of graduation. The five-year average benchmark established by the JRCERT is 75%.

Credentialing Examination Rate	Number passed on first attempt divided by number of attempted within 6 months of graduation
Year	Results
Year 5: 2021	32 of 33–97%
Year 4: 2020	29 of 30–97%
Year 3: 2019	31 of 32–97%
Year 2: 2018	29 of 30–97%
Year 1: 2017	33 of 34–97%
Program 5-Year Average	154 of 159–97%

Job Placement: The number of graduates employed in the radiologic sciences compared to the number of graduates actively seeking employment in the radiologic sciences within twelve months of graduating. The five-year average benchmark established by the JRCERT is 75%.

Job Placement Rate	Number employed divided by number actively seeking employment within 12 months of graduation
Year	Results
Year 5: 2021	33 of 33–100%
Year 4: 2020	28 of 28–100%
Year 3: 2019	31 of 31–100%
Year 2: 2018	29 of 29–100%
Year 1: 2017	34 of 34–100%
Program 5-Year Average	155 of 155–100%

Program Completion: The number of students who complete the program within the stated program length. The annual benchmark established by the program is 80%.

Program Completion Rate	Number graduated by number started the program
Year	Results
Year 1: 2021	33 of 36
Program 5-Year Average	91.7%

Specific Admissions Requirements

Admission to the Radiologic Technology program is competitive. Selection is determined by a cumulative point system based on the high school prerequisite courses and grades, college courses, and grades. The best qualified candidates are invited to interview. Interviews are limited to approximately double program capacity.

Preference will be given to applicants whose applications are complete (with the exception of the interview) and received by the Admissions Office at NHTIadmissions@ccsnh.edu by the deadline.

- High school or college biology with lab and chemistry with lab, both with C or higher
- College prep Algebra I with a C or higher, or NHTI's MATH 092C with a C or higher
- Personal interview, arranged by the Admissions Office once file is complete
- Course in CPR and Airway Obstruction Management for the Healthcare Provider/Professional Rescuer before program registration; this may be completed after acceptance.

Students who wish to enter this program and are currently enrolled in another NHTI program must complete and submit the [Change of Program form](#) to the Admissions Office prior to the application deadline.

Essential Student Functions and Requirements

Essential functions have been established as a guidance tool for use in realistically informing the student of the minimum standards needed to satisfactorily function in the program and, ultimately, the profession. Applicants who feel they may not meet one or more of the essential functions listed below should contact program officials to discuss. If any

of the below essential functions pose an issue, both a licensed physician directly caring for the student and NHTI Health Services clearance are necessary for participation in the clinic.

The student must have sufficient strength and motor coordination to perform the following physical activities:

- Standing and walking constantly during the clinical day to accomplish tasks. Days can be up to 10 hours.
- Frequent reaching and manual dexterity in handling accessory equipment for diagnostic imaging purposes including typing on computer terminals
- Frequent bending and twisting
- Frequent overhead reaching, above shoulder level, to utilize radiologic equipment
- Ability to lift up to 50 pounds with frequent lifting/and or carrying objects up to 25 pounds
- Sufficient upper and lower body strength to assist patients; including transfer of patients from a wheelchair or stretcher to and from a chair or examination table. Patient transfer requires the ability to push/pull up to 200 (equipment and or patient).
- Manual dexterity to manipulate diagnostic imaging equipment, patient care equipment and computers.

In addition, the student must have:

- No medical restrictions concerning the operation of diagnostic imaging equipment
- Sufficient hearing to distinguish different audio signals from equipment as well as assess patient needs
- Sufficient eyesight to observe patients, manipulate equipment and evaluate radiographic quality. Visual acuity sufficient to work with analyzing data and figures, small print, working with computer terminals, extensive reading, visual inspection involving small defects, small parts, and operation of machines. Vision must be maintained within dim lighting.
- Sufficient writing skills to communicate needs promptly and effectively. Ability to express or exchange ideas by means of the spoken word. Primary function includes activities in which the student must convey detailed or important spoken instructions to patients, physicians, families, and other employees, accurately, loudly or quickly.
- Ability to work with frequent interruptions and respond appropriately to unexpected situations
- Ability to work with wide variations in workload and stress levels
- Approval of the clinical facility if there is any question of meeting essential functions

Clinical Rotations and Obligations

The clinical coordinator will assign students two clinical sites: one for the first-year for Fall, Spring, and first half of senior Summer semester; and a second for the remainder of their education. Clinical hours are day time only and do not include nights/weekends.

Each student is required to provide their own transportation to and from the clinic. Students may be required to drive long distances to accommodate their clinic scheduling. Students must complete all orientation processes as assigned by their respective hospitals and are responsible for all costs. This includes health requirements for allied health clinical clearance, criminal background check, and drug and alcohol testing.

- Criminal background checks are required prior to attending clinical placement and again prior to the second year. Checks are completed through NHTI's approved vendor. Background checks from previous employers or other vendors are not accepted. No student is exempt. Students will be instructed when these checks are to be completed.
- Complete drug and alcohol testing may be required by the clinical site. These tests are completed through NHTI's approved vendor. Students will be instructed as to when these tests are to be completed

NHTI maintains a list of hospitals that have, through formal affiliation agreements, agreed to act as the clinical agencies through which NHTI students in this program complete the required clinical education. These agencies must also be approved by JRCERT. It is for this reason that only these hospitals may be used in conjunction with the Radiologic Technology program. [Click here for a list of approved clinical sites.](#)

The semester clinical grade comprises multiple assessment tools as listed in the course syllabus. A student must receive a 70 or greater for the clinical component to pass the course. If a student does not complete the requirements, they will be issued a no pass (NP). If a student is dismissed from the clinical semester because of performance or behavioral issues, they will be issued an AF. Any student receiving a failing grade in a clinical course will be dismissed from the program and is not eligible to reapply. Clinical practice is the essence of the profession and a failure in the clinical environment indicates that the student is not competent to continue in the program.

Radiologic Technology Associate of Science Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR	
	Summer Semester					
	MATH 120C	Quantitative Reasoning	4	0	4	
	RADT 103C	Radiographic Positioning I ¹	1	2	2	
	RADT 109C	Introduction to Healthcare in Radiologic Technology ¹	1	0	1	
	RADT 180C	Radiographic Physics ¹	3	0	3	
					10	
Fall Semester						
	BIOL 195C	Anatomy and Physiology I	3	2	4	
	RADT 116C	Radiographic Imaging Technology ¹	2	2	3	
	RADT 151C	Patient Care for the Radiographer ¹	2	0	2	
	RADT 159C	Radiographic Positioning II and Clinical Procedures I ^{1,2}	3	26	9	
					18	
Spring Semester						
	BIOL 196C	Anatomy and Physiology II	3	2	4	
	RADT 164C	Radiographic Positioning III and Clinical Procedures II ^{1,2}	3	26	9	
	RADT 220C	Digital Processing and Computed Tomography ¹	2	2	3	
					16	
SECOND YEAR	Summer Semester					
		ENGL 101C	English Composition	4	0	4
		RADT 165C	Radiographic Clinical Procedures III ^{1,2}	0	23	5
		RADT 203C	Advanced Radiographic Procedures ¹	3	0	3
						12
	Fall Semester					
		ENGL 120C/COMM 120C	Communication	3	0	3
		PSYC 105C	Introduction to Psychology	3	0	3
		RADT 123C	Radiation Protection ¹	3	0	3
		RADT 294C	Radiographic Clinical Procedures IV ^{1,2}	0	16	4
						13
	Spring Semester					
		PHIL 242C	Contemporary Ethical Issues	3	0	3
		RADT 209C	Pathology and Cross-Sectional Anatomy ¹	3	0	3
		RADT 295C	Radiographic Clinical Procedures V ^{1,2}	0	16	4
					10	
Total Credits					79	

¹Indicates major field courses.

²All students enrolled in a clinical course will be charged a \$500 per semester clinical surcharge. The following courses carry this charge: RADT 159C, RADT 164C, RADT 165C, RADT 294C and RADT 295C.

COACHING

Certificate

This certificate program focuses on enhancing the leadership skills of coach and athlete. Courses emphasize topics that foster successful coaching strategies at any level. This specialization is designed for those interested in athletic coaching while offering professional development for existing coaches through an exploration of relevant topics. The curriculum develops a working knowledge of the skills needed to coach successfully and to facilitate a transfer to a four-year college or university program. This program is financial aid-eligible.

Program Learning Outcomes

Graduates are able to:

- Communicate effectively, employ vocabulary pertinent to health science, and complete research and analyze popular ergogenic aids.
- Use critical thinking, apply the scientific method, and evaluate dietary intakes and physical activity throughout the human lifespan.
- Demonstrate the application of scientific technology, practice lab safety procedures, and use current technology to collect, analyze, and present data.
- Express quantitative and qualitative scientific knowledge, demonstrate knowledge of human anatomy and physiology, and compare human health and disease states.

Career Information

Graduates can enter into the following professions (not an inclusive list):

- Fitness specialist with coaching skills
- College coach
- Recreational team coach
- Youth sports coach

Coaching Certificate Curriculum

Course	Title	CL	LAB	CR
Fall Semester				
ENGL 120C	Communications	3	0	3
HLTH 150C	Introduction to Personal Wellness	1	1	1
PHIL 242C	Contemporary Ethical Issues	3	0	3
				7
Spring Semester				
BIOL 129C	Introduction to Sports Nutrition	3	0	3
HLTH 120C	Care and Prevention of Athletic Injuries	3	2	4
HLTH 125C	Coaching Principles I	3	0	3
				10
Total Credits				17

DENTAL ASSISTING

Professional Certificate

Dental assistants greatly increase the efficiency of the dentist in the delivery of quality oral healthcare. In conjunction with the NHTI's mission statement, the Dental Assisting program strives to provide a learning environment in which each dental assisting student is instilled with the knowledge, skills and values to offer the most comprehensive educational, preventive, and therapeutic services reflecting the competencies vital to the profession of dental assisting. This program's goals include:

- To prepare students for all aspects of employment in a dental assisting career, including traditional and non-traditional settings, working with diverse multicultural populations
- To encourage students in the development of leadership skills to facilitate the advancement of dental assisting in all areas of the dental assisting profession
- To promote self-esteem to encourage critical thinking within a quality curriculum and in the field
- To entice students to pursue continuing education courses, advanced degree, and value lifelong learning
- To guide students in the discovery of global perspectives so as to adapt to the changing social needs of self, the patient population, and society in general
- To aid students in the formation of collaborative skills to work within a multi-disciplined health field and an ever-changing profession
- To instill in students, the value of community education and community service

NHTI offers the only accredited Dental Assisting program in New Hampshire. Upon completion of the program, graduates are eligible to sit for the Dental Assisting National Board (DANB) national certification exam. This program is financial aid-eligible.

Program Learning Outcomes

This program strives to provide a learning environment in which each dental assisting student is instilled with the knowledge, skills, and values to offer the most comprehensive educational, preventive, and therapeutic services reflecting the competencies vital to the profession of dental assisting. The program prepares students to provide patient care in a variety of clinical settings and to be active members of a dental healthcare team. Students who complete the Dental Assisting program will be able to:

- Perform basic chairside procedures in general or specialty practice.
- Perform basic clinical/laboratory support procedures.
- Practice universal precautions and safety standards consistent with OSHA and CDC guidelines.
- Perform emergency procedures.
- Provide oral health instruction.
- Perform basic business office procedures.
- Perform advanced intraoral functions that may be delegated to a dental assistant in the state of N.H.
- Exhibit professionalism and communicate effectively with patients and coworkers.

Student Outcomes

Year	# Students	DANB Radiation Health and Safety Exam (NHTI Results*)	DANB Radiation Health and Safety Exam (National Results*)
2022	19	100%	
2021	22	77%	63%
2020	18	89%	69%
2019	20	85%	69%
2018	23	100%	65%

*First attempt pass rate

Career Information

Dental assistants are in high demand in N.H., with great part- and full-time job opportunities. This program offers students the opportunity to become involved in a healthcare profession as a member of the dental team in private dental offices, public dental clinics, and institutions. NHTI graduates are qualified to take the Certification for Dental Assistants national exam. Compared to non-accredited programs in the state, our graduates are legal to take x-rays, place seal-

ants, take impressions, remove sutures and place and remove periodontal packs, do coronal polishing, apply fluoride treatments, monitor nitrous oxide, expanded duties orthodontics, make provisional crowns, place and remove rubber dams, and apply desensitizing right after completion of the program. Graduates can also further their career in NHTI's Expanded Functions Dental Auxiliary certificate program.

The salary of a dental assistant depends on the responsibilities associated with the specific position and the geographic location of employment. Dental assistants earn salaries equal to other healthcare personnel with similar training and experience such as medical assistants, physical therapy assistants, occupational therapy assistants, veterinary technicians, and pharmacy assistants.

Accreditation

NHTI's Dental Assisting program is accredited by the Commission on Dental Accreditation and has been granted the accreditation status of "approval without reporting requirements." The Commission is a specialized accrediting body recognized by the U.S. Department of Education. The Commission on Dental Accreditation can be contacted at 312-440-4653 or at 211 East Chicago Avenue, Chicago, IL 60611. The commission's web address is <http://www.ada.org/en/coda>.

Specific Admission Requirements

Preference will be given to applicants whose applications are complete and received by the Admissions Office by the deadline. Applications received after the deadline will only be considered if space remains in the program after qualified candidates have been reviewed.

- A course in high school Biology or Chemistry with a C or higher
- An informational group interview with the Dental Admissions Committee; qualified candidates are contacted after the deadline to arrange interview
- Observation of professional practices in a dental office for a period of not less than 20 hours; students must submit the completed Dental Assisting Observation Form to the Admissions Office by the application deadline. The completed observation is valid for 2 years only. Current dental office employees are not required to complete the hours of observation but are required to complete and submit the observation form.
- See Health, Character, and Technical Standards for additional requirements.

Students who wish to enter this program and are currently enrolled in another NHTI program must complete and submit the Change of Program form to the Admissions Office prior to the application deadline.

Externships

NHTI has developed practicum opportunities to foster hands-on-learning while receiving credit. Requirements are met by assisting in dental offices. Students in internship, externship, practicum, service learning, and clinical opportunities must demonstrate sufficient emotional stability to withstand the stresses that characterize the dental professionals' responsibilities with patient/agency clients. They will exercise sound judgment, accept direction and guidance from a supervisor or faculty member, and establish rapport and maintain sensitive interpersonal relationships and confidentiality on all levels.

Health, Character, and Technical Standards

Students must be aware of the abilities and characteristics necessary to complete the Dental Assisting program. The program adheres to the NHTI Statement of Nondiscrimination. Reasonable accommodations for students with disabilities are made to the extent that there is no fundamental alteration to curriculum, course objectives, or health, character, and technical standards of the program. Failure to consistently exhibit the technical standards for a career in dental assisting may result in dismissal from the program. Individuals must satisfactorily accomplish/possess the following:

- Intellectual abilities requiring reason, analysis, problem solving, critical thinking, and self-evaluation skills. Ability to learn, integrate, analyze, and synthesize data. Comprehension of 3D and spatial relationships is necessary. Consistent, accurate, and quick integration of information is required, especially in emergency situations.
- Somatic sensation and functional use of all senses. Students must be able to observe demonstrations, see fine detail, focus at several distances, and be able to discern variations in color, shape, and texture. They must possess sufficient hearing to assess patient needs and communicate effectively. They must have sufficient eyesight to observe patients, operate dental equipment, and work with small measurements and instruments in preparing and manipulating dental materials.

- Ability to sit for a sustained length of time with frequent reaching and turning.
- Sufficient fine and gross motor function to safely perform intraoral instrumentation and the manipulation of small objects, equipment, tools, and materials. Students must be able to perform functions such as basic life support, transfer and position of patients, and operation around the patient and dental chair. They must be able to operate both foot and hand controls.
- Effective communication with sufficient command of the English language to retrieve information from textbooks, lectures, exams, etc. and communicate in verbal, nonverbal, and written form.
- Emotional health required to exercise good judgment and complete all responsibilities. Professionalism, compassion, integrity, empathy, and respect for patients are all necessary. Students must be able to endure physically taxing workloads and function under stress. They must accept constructive criticism and respond appropriately by modifying behavior.

Use of Computers in the Allied Dental Education Programs

Students use computers throughout the program. Faculty instructs them in the application of dental software and use of conventional software to generate papers, oral presentations, and spreadsheets. It is strongly recommended students have a good working knowledge of computers before entering the program. Computer literacy courses, such as IST 102C, are available through the college.

Dental Assisting Certificate Curriculum – Full Time

Course	Title	CL	LAB	CR
Fall Semester				
ADED 110C	Dental Assisting Science I ¹	3	0	3
ADED 105C	Dental Radiology for Dental Assisting ¹	2	3	3
ADED 161C	Dental Materials – Dental Assisting ¹	2	3	3
ADED 175C	Dental Assisting Theory I ¹	2	0	2
ADED 191C	Dental Assisting Clinical Experience I ^{1,2}	0	4	1
ENGL 101C	English Composition	4	0	4
				19
Spring Semester				
ADED 111C	Dental Assisting Science II	2	0	2
ADED 155C	Oral Hygiene Education/Nutrition	2	0	2
ADED 182C	Office Procedures and Management with Computer Applications	1	0	1
ADED 196C	Dental Assisting Clinical Experience II ^{1,2}	0	15	5
ADED 239C	Concepts of Risk Management	2	0	2
ADED 275C	Dental Assisting Theory II	1	3	2
				17
Summer Semester				
ADED 298C	Dental Assisting Clinical Experience III (6 weeks)	2	8	4
PSYC 105C	Introduction to Psychology	3	0	3
ENGL 120C/COMM 120C	Communication ³	3	0	3
				4
Total Credits				40

¹Indicates major field courses.

²All students enrolled in a clinical course will be charged a \$500 per semester clinical surcharge. The following courses carry this charge: ADED 191C and ADED 196C.

³May be taken in the Spring or Summer semester to access Financial Aid, which requires a minimum of 6 credit hours.

Dental Assisting Certificate Curriculum – Part Time

Course	Title	CL	LAB	CR
Summer Semester				
ADED 110C	Dental Assisting Science I ¹	3	0	3
ADED 161C	Dental Materials – Dental Assisting ¹	2	3	3
				6
Fall Semester				
ADED 105C	Dental Radiology for Dental Assisting ¹	2	3	3
ADED 175C	Dental Assisting Theory I ¹	2	0	2
ADED 191C	Dental Assisting Clinical Experience I ^{1,2}	0	4	1
				6
Spring Semester				
ADED 111C	Dental Assisting Science II	2	0	2
ADED 239C	Concepts of Risk Management	2	0	2
ADED 275C	Dental Assisting Theory II	1	3	2
				6
Summer Semester				
ENGL 101C	English Composition	4	0	4
ENGL 120C/COMM 120C	Communication ³	3	0	3
				7
Fall Semester				
ADED 182C	Office Procedures and Management with Computer Applications	1	0	1
ADED 196C	Dental Assisting Clinical Experience II ^{1,2}	0	15	5
PSYC 105C	Introduction to Psychology	3	0	3
				9
Spring Semester		Spring Semester		
ADED 155C	Oral Hygiene Education/Nutrition	2	0	2
ADED 298C	Dental Assisting Clinical Experience III (6 weeks)	2	8	4
				6
Total Credits				40

¹Indicates major field courses.

²All students enrolled in a clinical course will be charged a \$500 per semester clinical surcharge. The following courses carry this charge: ADED 191C and ADED 196C.

³May be taken in the Spring or Summer semester to access Financial Aid, which requires a minimum of 6 credit hours.

DIAGNOSTIC MEDICAL SONOGRAPHY

Certificate

This 16-month program is designed for students who have completed an AMA Allied Health degree or a bachelor's program with a science or health major. Students obtain the knowledge and clinical skills to function as a diagnostic medical sonographer. Graduates provide exceptional patient care while using sophisticated ultrasound instrumentation to perform medical imaging procedures. The images assist physicians in diagnosing medical conditions. NHTI's intensive program requires four semesters of full-time study of ultrasound specialties such as abdomen, small parts, obstetrics, and gynecology, plus an introduction to vascular sonography. Our small class and lab sizes provide extensive, supervised, hands-on practice. Our faculty assigns clinical sites, providing a well-rounded clinical experience. This program is financial aid-eligible.

Program Mission Statement

This program provides the highest standards of theoretical and clinical educational experiences for its students, thereby empowering them to improve the public's health by ensuring access to quality sonographic healthcare. Through a process of continuous improvement, we will strive to exceed expectations in educating our students.

Program Goals

- To prepare competent entry-level abdominal, obstetric, and gynecologic sonographers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains
- To prepare students to function in a diverse healthcare environment
- To promote safe practices, independent life-long learning, and professional contribution
- To provide students with the skills and attributes necessary to obtain employment and professional registration through the American Registry of Diagnostic Medical Sonographer

Program Learning Outcomes

Graduates from this program are able to:

- Obtain, review, and integrate pertinent patient history and clinical data to facilitate diagnostic results.
- Perform appropriate sonographic procedures and record, analyze, and process diagnostic data for presentation to the interpreting physician.
- Demonstrate knowledge and understanding of anatomy, physiology, pathology, and pathophysiology.
- Demonstrate knowledge and understanding of acoustic physics and instrumentation including Doppler principles and emerging technologies.
- Employ ergonomically correct scanning techniques and the principles of ALARA.
- Exercise discretion and judgment in the performance of sonographic and/or other diagnostic services.
- Demonstrate effective and appropriate communication skills with patients and colleagues.
- Provide basic patient care and comfort while acting in a professional and ethical manner.

Career Information

Graduates are prepared to take the national certification exam administered by the American Registry of Diagnostic Medical Sonography (ARDMS) and find employment in hospitals and private clinics.

Accreditation

The DMS program is accredited by the Commission on Accreditation of Allied Health Education Programs upon the recommendation of the Joint Review of Education in Diagnostic Medical Sonography.

Commission on Accreditation of Allied Health Education Programs

9355 – 113th St. N, #7709

Seminole, FL 33775

727-210-2350

<https://www.caahep.org/>

Graduates are qualified to take national certification examinations with no additional work experience required.

Program Effectiveness Data

Year	Pass rate on credentialing exam			Program completion rate	Job placement rate
2015	SPI 100% (8/)	ABD 100% (8/8)	OB/GYN 86% (6/7)	89% (8/9)	100% (8/8)
2016	SPI 100% (9/9)	ABD 100% (8/8)	OB/GYN 100% (3/3)	82% (9/11)	100% (9/9)
2017	SPI 90% (9/10)	ABD 100% (9/9)	OB/GYN 80% (4/5)	100% (10/10)	100% (10/10)
2018	SPI 100% (14/14)	ABD 100 (14/14)	OB/GYN 75% (3/4)	100% (14/14)	100% (13/13)
2019	SPI 100% (13/13)	ABD 100 (13/13)	OB/GYN 100% (10/10)	93% (13/14)	100% (13/13)
3-year	97% (36/37)	100% (36/36)	85.7% (18/21)	97.3% (37/38)	100% (37/37)
5-year	98% (53/54)	100% (52/52)	87% (27/31)	93% (54/58)	100% (54/54)

Specific Admissions Requirements

Preference will be given to applications that are complete and received by the Admissions Office by the deadline.

- Applicants must have completed a two-year AMA or AMA-equivalent Allied Health training program that is patient-care related such as Radiologic Technology or Nursing; Medical Assisting is not considered an AMA Allied Health program. In lieu of the AMA Allied Health program, a bachelor's degree with a major in a science field would also qualify for admission.
- The following college-level courses are required with a C or higher: Algebra, Statistics or higher-level math course; Anatomy and Physiology I and II with labs; Communications (may be met by courses including English, speech, or composition); general college-level Physics and/or Radiographic Physics
- A personal interview is required; qualified candidates will be contacted to arrange an interview.
- Three letters of recommendation, submitted to the Admissions Office
- A course in CPR and Airway Obstruction Management for the Healthcare Provider/Professional Rescuer, completed before program registration

Essential Functions

The student must have sufficient strength and motor coordination to perform the following physical activities:

- Standing for sustained periods of time and walking most of the work day
- Frequent reaching and manual dexterity in handling equipment; frequently transporting, moving, lifting, and transferring patients from a wheelchair/stretchers to and from an exam table

In addition, the student must have:

- Sufficient eyesight to observe patients, manipulate equipment, and evaluate image quality
- Visual acuity sufficient to work with analyzing data, figures, and computer terminals involving small defects, small parts, and operation of equipment
- Sufficient hearing to assess patient needs
- Sufficient writing skills to communicate needs promptly and effectively
- Ability to express or exchange ideas to convey detailed or important spoken instructions to patients, physicians, families, and other employees accurately, loudly, and/or quickly
- Ability to work with frequent interruptions and respond appropriately to unexpected situations
- Ability to work with wide variations in workload and stress levels

Applicants who feel they may not be able to meet one or more of the essential functions should contact program officials to discuss individual cases. Program officials will consider all academically qualified candidates providing that the essential functions can be met with reasonable accommodations.

Clinical Clearance

Background checks: As a pre-clinical requirement, students are required to undergo and successfully meet the Diagnostic Medical Sonography department's criteria for a criminal background check and drug and alcohol screening. No student is exempt. Students are provided with procedural and cost information subsequent to admission to the DMS program and are responsible for all costs associated with these testing procedures. Drug and alcohol screening is required prior to clinical and randomly throughout the program.

Clinical Affiliates: The program affiliates with clinical sites throughout N.H., Maine and Vt. Students rotate through sites throughout the program.

Diagnostic Medical Sonography Certificate Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR
	Fall Semester				
	DGMS 201C	Principles of Sonography ¹	3	2	4
	DGMS 265C	Sonographic Anatomy and Pathology I ¹	3	0	3
	DGMS 275C	Sonographic Principles of OB/GYN I ¹	3	0	3
	DGMS 291C	DMS Clinical Procedures I ¹	0	12	4
					14
Spring Semester					
	DGMS 221C	Sonographic Physics ¹	3	0	3
	DGMS 266C	Sonographic Anatomy and Pathology II ¹	3	0	3
	DGMS 277C	Sonographic Principles of OB/GYN II ¹	3	0	3
	DGMS 296C	DMS Clinic II ^{1,2,3}	0	24	6
					15
Summer Semester					
	DGMS 241C	Principles of Vascular Ultrasound ¹	3	2	4
	DGMS 297C	DMS Clinic III ^{1,2}	0	21	5
					9
SECOND YEAR	Fall Semester				
	DGMS 233C	Seminars in Sonography ¹	4	0	4
	DGMS 298C	DMS Clinic IV ^{1,2}	0	32	8
					12
	Total Credits				50

¹Indicates major field courses.

²All students enrolled in a clinical course will be charged a \$500 per semester clinical surcharge. The following courses carry this charge: DGMS 291C, DGMS 296C, DGMS 297C, and DGMS 298C.

³All students enrolled in the following course will be charged a \$150 clinical documentation fee per class: DGMS 296C.

LEGAL NURSE CONSULTANT

Certificate

This program is for experienced RNs interested in serving as consultants and liaisons to the legal and healthcare profession. It combines business and legal theory and analysis with practical field experience. It is available evenings and weekends only and can be completed in one calendar year. This program is financial aid-eligible.

Program Learning Outcomes

Students will be exposed to the legal system and the role of the LNC/paralegal within the profession; the ethical rules governing lawyers, paralegals, nurses, and doctors; and the operation of a law office and a healthcare facility. Through the course sequence in the certificate program, NHTI LNC graduates will:

- Demonstrate an understanding of the legal system and master the litigation process.
- Use legal research skills to analyze issues related to damages, causation, liability within the legal process, and guidelines and regulatory issues related to the healthcare industry.
- Examine the insurance and healthcare industries as they relate to medical-legal issues.
- Review, summarize, and analyze medical records and other pertinent healthcare and legal documents for use in litigation or other medical-legal matters.
- Draft legal documents under supervision of an attorney and prepare opinions.
- Identify the role of the LNC and the ethical responsibilities associated with performing legal services.

Career Information

LNCs serve in healthcare facilities, insurance companies, law firms, and medical malpractice and workers' compensation organizations. Legal work performed by an LNC must be done under the supervision and direction of an attorney. An LNC cannot give legal advice, represent a client, or engage in the unauthorized practice of law.

Accreditation

The LNC certificate program is approved by the American Bar Association (ABA) and is designed to prepare students to perform effectively in today's legal and healthcare communities.

Specific Admission Requirements

- 45 college credits in general education courses from an accredited institution; 18 must meet distribution and content requirements designated by the ABA in at least three disciplines such as English, languages, humanities, math, and natural science.
- Proof of active RN license
- [Work verification form](#) demonstrating 6,000 hours of practice
- Two confidential letters of reference or [completed Reference form](#)
- Two hundred-word essay regarding reasons for choosing the NHTI LNC program
- Official high school and college transcripts

Legal Nurse Consultant Certificate Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR
	<u>LGNC 101C</u>	Legal Nurse Consulting	1	0	1
	<u>LGNC 102C</u>	Risk Management	1	0	1
	<u>LGNC 103C</u>	Administrative Law	1	0	1
	<u>LGNC 104C</u>	Healthcare Law	2	0	2
	<u>LGNC 105C</u>	Legal and Healthcare Ethics	1	0	1
	<u>LGNC 106C</u>	Internship	0	9	3
	<u>PLGL 101C</u>	Foundations of Paralegal Studies	2	0	2
	<u>PLGL 103C</u>	Causes of Action in Contract and Tort	2	0	2
	<u>PLGL 104C</u>	Legal Research ¹	3	0	3
	<u>PLGL 110C</u>	Litigation and Trial Preparation	3	0	3
Total Credits				19	

¹A \$125 fee will be assessed for all students taking PLGL 104C. This fee will cover costs associated with ABA dues, Lexis/Nexis, and UNH Franklin Pierce School of Law Library.

MEDICAL CODING

Certificate

Health information management is a dynamic field and a growing profession. Coding professionals are trained specialists in classifying medical data and transforming diagnoses, conditions, diagnostic and therapeutic procedures into coded data that serve as the basis for local, regional, state-wide, national, and world-wide comparison. Coding specialists work with the most current codes, medical information and reimbursement systems. These codes change on a yearly basis and ongoing training is required. Payment for medical care is contingent on the coded data provided by medical coding specialists. This program is only available online and is financial aid-eligible.

Program Learning Outcomes

- Students will communicate effectively.
 - Students will employ vocabulary pertinent to medical coding.
 - Students will evaluate science periodicals and use peer-reviewed sources of literature.
- Students will use critical thinking.
 - Students will apply the Official Guidelines for Coding and Reporting.
 - Students will assess health records content and compare regulatory agency requirements.
- Students will demonstrate the application of scientific technology.
 - Students will use health information management software to select codes and calculate payments.
 - Students will utilize current technology to collect, analyze, and present data.
- Students will express quantitative and qualitative scientific knowledge.
 - Students will demonstrate knowledge of human anatomy and physiology.
 - Students will compare human health and disease states.

Career Information

Employment opportunities include positions in hospitals, clinics, physician offices, nursing homes, insurance companies, and mental health facilities. The program provides students with the tools to sit for the CCA exam.

Specific Admission Requirements

- Proof of high school completion or the equivalent

Medical Coding Certificate Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR
		Fall Semester			
	HLTH 101C	Medical Terminology	3	0	3
	BIOL 120C	Human Biology	3	2	4
					7
	Spring Semester				
	BIOL 122C	Basic Pathophysiology	3	0	3
	HLTH 104C	Healthcare Data Content and Delivery Systems	3	0	3
					6
	Summer Semester				
	IST 102C	PC Applications	3	0	3
					3
	Fall Semester				
	MCOD 118C	Introduction to Hospital Diagnosis Coding	4	0	4
	MCOD 119C	Introduction to Hospital Procedure Coding	3	0	3
					7
	Spring Semester				
	MCOD 218C	Advanced Hospital Coding	3	0	3
	MCOD 219C	Ambulatory Coding	4	0	4
					7
	Total Credits				30

ORTHOPAEDIC TECHNOLOGY

Certificate

This program trains students in casting and splinting. Students complete hands-on training in the on-campus lab as well as externships throughout N.H. and the U.S. All courses and clinical externships are taught by industry professionals and leaders. The students in the Orthopaedic Program are very active on campus with the Orthoblast Club. This program is financial aid eligible.

Career Information

Upon completion, students are eligible to take the National Registry Exam and can work anywhere in the country.

Health, Character and Technical Standards

Standards have been established as to the skills and abilities required to function successfully in the program and profession.

- Sufficient hearing to assess patient needs and understand instructions, emergency signals, and phone conversation
- Sufficient visual acuity to observe patients, manipulate equipment, and interpret data
- Visual acuity sufficient to ensure a safe environment, identify color changes, read fine print/writing, and calculate fine calibrations
- Sufficient verbal ability to express and exchange information and ideas and to interact with patients, family members, physicians, peers, and other ancillary medical personnel
- Sufficient writing skills to record medical data and communicate with other medical professionals
- The ability to express ideas to educate the client and exchange information with other health professionals, including typing on a computer
- Ability to work with frequent interruptions, to respond appropriately in emergencies or unexpected situations, and to cope with extreme variations in workload and stress levels
- Sufficient strength and motor coordination to perform the following physical activities: manual dexterity in handling and lifting equipment; frequent moving and lifting of patients; stooping and bending for sustained periods of time; and performing CPR
- Standing for sustained periods of time and walking most of the work day
- Frequent reaching and manual dexterity in handling durable medical equipment
- Ability to secure transportation to practicum sites and classes

Applicants will be exposed to latex during clinical settings. Those who think they may not be able to meet one or more of the technical standards should contact the department chair or faculty to discuss individual cases.

Specific Admission Requirements

Preference will be given to applicants whose applications are complete (with the exception of the interview) and received by the Admissions Office at NHTIadmissions@ccsnh.edu by the deadline.

- High school diploma or proof of high school equivalency
- Personal interview
- Applicants must write an essay on their desire to enter the Orthopaedic Technology program; instructions on how to complete this requirement can be downloaded at this link: Orthopaedic Technology Admission Essay Requirements and are available from the Admissions Office at NHTIadmissions@ccsnh.edu.
- Complete a course in CPR and Airway Obstruction Management for healthcare providers/professional rescuers prior to program registration; this may be completed after acceptance.

Students who wish to enter this degree program and are enrolled in another NHTI program must complete and submit the Change of Program form and submit it to the Admissions office at NHTIadmissions@ccsnh.edu.

Orthopaedic Technology Certificate Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR
	Fall Semester				
	HLTH 101C	Medical Terminology	3	0	3
	ORTH 101C	Orthopaedic Anatomy and Physiology I	3	0	3
	ORTH 103C	Basic Radiology Interpretation	3	0	3
	ORTH 108C	Casting and Splinting I ¹	2	6	5
	ORTH 109C	Introduction to Orthopaedics ¹	2	1	2
	ORTH 113C	Orthopaedic Patient Care	2	2	3
					19
Spring Semester					
	ORTH 102C	Orthopaedic Anatomy and Physiology II	3	0	3
	ORTH 104C	Physical Assessment of the Orthopaedic Patient	3	2	4
	ORTH 150C	Spring Externship ^{2,3}	0	16	3
	ORTH 208C	Casting and Splinting II ¹	2	6	5
	PHIL 242C	Contemporary Ethical Issues	3	0	3
					18
Summer Semester					
	ORTH 112C	Traction	1	2	2
	ORTH 220C	Senior Externship and Capstone Experience	1	16	6
					8
Total Credits					45

¹\$750 specialty supplies fee will be added to the cost of ORTH 108C & ORTH 208C, and a \$350 specialty supplies fee for ORTH 220C.

²All students enrolled in a clinical course will be charged a \$500 per semester clinical surcharge. The following courses carry this charge: ORTH 150C, ORTH 220C.

³A \$89 fee will be assessed for all student taking ORTH 150C. This fee covers the cost of the radiation badge, which is required per state/national law and accreditation to monitor student radiations dose.

RADIATION THERAPY

Certificate

This program is an advanced placement option for students with prior degrees in the Radiologic Sciences. This program is for students who want to work in patient care using technology, known as “high touch, high technology,” with advancement opportunities. The radiation therapist uses creativity in a patient care environment with ever-changing technology. NHTI offers the only Radiation Therapy program in N.H.

Program Learning Outcomes

The mission of the radiation therapy program is to educate and produce highly qualified radiation therapists through an objective based didactic education and competency based clinical education. Student growth and professional development will be instilled through the community college system and atmosphere.

- The student/graduate will be clinically competent.
 - Student/graduate will select appropriate treatment setup factors.
 - Students will practice radiation protection.
 - Students will be exposed to a variety of alternate treatment setups.
- The student/graduate will communicate effectively.
 - Students will articulate the setup procedure to the patient.
 - Students will practice effective communication with the radiation therapist community.
- The student/graduate will use critical thinking.
 - Students will create a reproducible patient position in simulation.
 - Students will demonstrate competence when setting up an IMRT treatment.
- The student/graduate will demonstrate professionalism.
 - Students will examine the importance of continued professional development.
 - Students will demonstrate professional and ethical behavior when interacting with patients and members of the healthcare team.

Career Information

Our program boasts excellent job opportunities to the graduate with high-employer satisfaction.

Accreditation

The Radiation Therapy certificate is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). For further information, please contact:

JRCERT

20 N. Wacker Drive, Suite 2850

Chicago, IL 60606

Tel: 312-704-5300

Fax: 312-304-5304

mail@jrcert.org, www.jrcert.org

Program Effectiveness Data

The following is the most current program effectiveness data. Our programmatic accreditation agency, the Joint Review Committee on Education in Radiologic Technology (JRCERT), defines and publishes this information. [Click here](#) to go to the JRCERT webpage.

Credentialing Examination: The number of students who pass, on the first attempt, the American Registry of Radiologic Technologists (ARRT) certification examination, or an unrestricted state licensing examination, compared with the number of graduates who take the examination within 6 months of graduation. The 5-year average benchmark established by the JRCERT is 75%.

Credentialing Examination Rate	Number passed on first attempt divided by number of attempted within 6 months of graduation
Year	Results
Year 1: 2021	7 of 8—87.5%
Year 2: 2020	6 of 6—100%
Year 3: 2019	4 of 7—57%
Year 4: 2018	4 of 4—100%
Year 5: 2017	5 of 5—100%
Program 5-Year Average	26 of 30—89%

Job Placement: The number of graduates employed in the radiologic sciences compared to the number of graduates actively seeking employment in the radiologic sciences within 12 months of graduating. The 5-year average benchmark established by the JRCERT is 75%.

Job Placement Rate	Number employed divided by number actively seeking employment within 12 months of graduation
Year	Results
Year 1: 2021	8 of 8—100%
Year 2: 2020	6 of 6—100%
Year 3: 2019	6 of 6—100%
Year 4: 2018	4 of 4—100%
Year 5: 2017	5 of 5—100%
Program 5-Year Average	29 of 29—100%

Program Completion: The number of students who complete the program within the stated program length. The annual benchmark established by the program is 75%.

Program Completion Rate	Number graduated by number started the program
Year	Results
Year 1: 2021	8 of 9—89%
Year 2: 2020	6 of 8—75%
Year 3: 2019	7 of 11—64%
Year 4: 2018	4 of 7—51%
Program 5-Year Average	24 of 30—71%

Clinical Rotations

We offer clinical rotations at eight oncology sites in New Hampshire, six sites in Maine, and two sites in Massachusetts and Vermont. This gives our students broad experience in procedures, equipment, and patients. Students will have the opportunity to rotate to a different radiation oncology clinic each semester, enabling versatility field.

Specific Admissions Requirements

Preference will be given to applicants whose applications are complete (with the exception of the interview) and received by the Admissions Office at NHTIadmissions@ccsnh.edu by the deadline.

- Completion of a Radiological Sciences program
- High school or college biology with lab and chemistry with lab, both with C or higher
- College prep Algebra I with a C or higher, or NHTI's MATH 092C with a C or higher
- High school-level physics is recommended.
- Applicants must write an essay on their desire to enter the field of Radiation Therapy; instructions on how to complete this requirement [can be downloaded here](#) and are available from the Admissions Office at NHTIadmissions@ccsnh.edu.
- Complete a course in CPR and Airway Obstruction Management for the Healthcare Provider/Professional Rescuer before program registration
- An interview with the Admissions Office will be arranged by the department after the application deadline.

Students who wish to enter this program and are currently enrolled in another NHTI program must complete and submit the Change of Program form to the Admissions Office prior to the application deadline. For additional information on the Radiation Therapy Program, please visit our site on Canvas at: <https://canvas-prod.ccsnh.edu/courses/30551>.

Essential Student Functions and Requirements

Students must have sufficient strength and motor coordination to perform the following physical activities:

- Standing and walking for up to eight hours during the work day
- Frequent reaching and manual dexterity in handling accessory equipment for radiation therapy purposes
- Frequently transporting, moving, lifting items up to 40 lbs unassisted
- Sufficient strength to assist patients including transfer of patients from a wheelchair/stretchers to and from a treatment/simulation table

In addition, the student must have:

- No medical restrictions concerning operation of radiation producing equipment
- Sufficient hearing to distinguish audio signals from equipment and assess patient needs
- Sufficient eyesight to observe patients, manipulate equipment, and evaluate radiographic quality; sufficient visual acuity to analyze data, figures, and small print; work with computer terminals; and inspect small defects, small parts, and operation of machines. Vision must be maintained within dim lighting.
- Sufficient writing skills to communicate needs promptly and effectively.
- Ability to express or exchange ideas includes conveying detailed or important spoken instructions to patients, physicians, families, and other employees, accurately, loudly or quickly
- Ability to work with frequent interruptions and respond appropriately to unexpected situations
- Ability to work with wide variations in workload and stress levels
- Approval of the clinical facility if there is any question of meeting essential functions

Clinical Rotations and Obligations

We offer clinical rotations at eight oncology sites in N.H., six in Maine, and two in Mass. and Vt., offering students broad experience in procedures, equipment, and patients. Students can rotate to a different radiation oncology clinic each semester, enabling versatility. The student must complete the following to receive a clinical pass for the semester:

- Passing grade on all mandatory competencies for that semester (within 2 attempts)
- Passing grade (>75%) on end of semester clinical exam
- >70% average on clinical affective evaluations
- Completion of required clinical hours for that semester
- If a student does not complete any of the above requirements, they will be issued an NP.
- Complete criminal background check as directed through NHTI's approved vendor. Background checks from previous employers or other vendors are not accepted. Students are required to undergo and meet the Diagnostic Medical Imaging Department's criteria for a criminal background check. No student is exempt. Students are provided with procedural and cost information and are responsible for all costs associated with these testing procedures. Students will repeat the criminal background check prior to their second year.
- Complete drug and alcohol testing as directed through NHTI's approved vendor. Drug testing from previous employers or other vendors are not accepted. Students are required to undergo and successfully meet the Diagnostic Medical Imaging department's criteria for drug and alcohol screening. No student will be exempt. Students are provided with procedural and cost information and are responsible for all costs associated with these testing procedures. Drug and alcohol screenings are required prior to clinical, prior to the second year, and randomly throughout the program.

If a student is dismissed from the clinical semester due to performance or behavioral issues, they will be issued an AF. Any student receiving a failing grade in a clinical course will be dismissed from the program and is not eligible to reapply. Clinical practice is the essence of the profession and a failure in the clinical environment indicates that the student is not competent to continue in the program.

Radiation Therapy Certificate Curriculum

	Course	Title	CL	LAB	CR
FIRST YEAR	Fall Semester				
	RDTH 101C	Introduction to Radiation Therapy	3	0	3
	RDTH 110C	Principles and Practice of Radiation Therapy I	3	2	4
	RDTH 200C	Radiation Protection and Biology	3	0	3
	RDTH 210C	Principles and Practice of Radiation Therapy II	3	2	4
	RDTH 290C	Clinical Practice III ¹	0	24	5
					19
	Spring Semester				
	RDTH 205C	Treatment Planning	3	0	3
	RDTH 215C	Sectional Anatomy and Pathology	3	0	3
	RDTH 220C	Radiation Therapy Physics	3	0	3
	RDTH 293C	Clinical Practice IV ¹	0	24	5
					14
	Summer Semester				
RDTH 295C	Clinical Practice V ¹	0	23	5	
				5	
SECOND YEAR	Fall Semester				
	RDTH 280C	Registry Review	1	0	1
	RDTH 296C	Clinical Practice VI ¹	0	32	
					8
	Total Credits				46

¹All students enrolled in clinical nursing, diagnostic medical imaging, and dental courses will be charged a \$500/per semester clinical surcharge. The following courses carry this charge: RDTH 290C, RDTH 293C, RDTH 295C, and RDTH 296C.

HOSPITALITY

Associate of Science

- [Hospitality and Tourism Management](#)
- [Recreation and Leisure Studies](#)
- [Sports Management](#)

Certificate

- [Digital Communications](#)
- [Event and Conference Management](#)
- [Hotel Administration](#)
- [Recreation and Leisure Studies](#)
- [Sports Management](#)
- [Travel and Tourism](#)
- [Wedding Planning Management](#)

Internship Considerations

NHTI has developed excellent practicum opportunities for our students to foster hands-on learning while simultaneously receiving credit. The college's first priority must be to ensure that patients/clients/children/families are not placed in jeopardy by students during learning experiences. Therefore, students in internship, externship, practicum, service learning, and clinical experiences must demonstrate sufficient emotional stability to withstand the stresses, uncertainties and changing circumstances that characterize patient/client/child/family responsibilities.

Further, the student is expected to have the emotional stability required to exercise sound judgment, accept direction and guidance from a supervisor or faculty member, and establish rapport and maintain sensitive interpersonal relationships and confidentiality with employees, customers, and/or patients/clients/children and their families.

Curriculum Abbreviations

- CL – Number of lecture/classroom hours per week for the course
- LAB – Number of simulation laboratory, laboratory or clinical hours per week for the course
- CR – Number of credit hours for the course

HOSPITALITY AND TOURISM

Associate in Science

The hospitality and tourism industry is seeing growth N.H. This program offers students the opportunity to specialize in digital communications, event/conference management, hotel administration, travel and tourism, and wedding planning management. Courses are offered during the day and evening and can be taken 100% online.

Program Learning Outcomes

Upon completion of the program, graduates are able to:

- Apply logical, critical, ethical, and creative processes and information to identify problems, evaluate alternative solutions, and make decisions.
- Apply mathematical concepts and skills to interpret, understand, and communicate quantitative data.
- Effectively search for and obtain appropriate information through both traditional and electronic media, evaluate alternative solutions, and make decisions.
- Demonstrate an understanding and appropriate application of computer technology.
- Demonstrate effective use of individual and team workplace skills.
- Appropriately integrate and apply the fundamental principles and methods of scientific inquiry, social sciences, and arts and humanities.
- Identify and evaluate ethical issues and conflicts, and recognize the responsibility of the individual.
- Understand the individual business disciplines and their relationship to the world of business, and realize the importance of and understand the U.S. economic and legal system.

Career Information

Students who complete this program can enter careers in hotels, conference centers, wedding planning, sales and marketing, guest services, tourism associations, travel agencies, airlines, and attractions.

Accreditation

The A.S. in Hospitality and Tourism Management degree program is accredited by the Accreditation Council for Business Schools and Programs (ACBSP).

Specific Admission Requirements

- College preparatory course (or equivalent) in English and/or Communications
- Good verbal abilities and writing skills
- Computer keyboarding skills

All degree programs at NHTI require successful completion of at least one semester of college-level math. We recommend all applicants complete high school Algebra I with a C or higher prior to admission.

Health, Character, and Technical Standards

Technical standards provide guidance as to skills and abilities required to function successfully in this program and profession. Students must demonstrate:

- The ability to act in a professional manner on field trips or at internship locations
- Sufficient vision, hearing, and verbal abilities to express, interpret, and exchange information and ideas
- The ability to work with frequent interruptions, respond appropriately to unexpected situations, and cope with variations in workload and stress levels

Although not a technical standard for entry, some positions require the physical ability to stand for long periods and lift up to 70 pounds.

Internship

Students can earn course credit while building industry experience by working with a faculty member to find an internship based on their desired specialization. While working at the internship site, they learn necessary skills to become a successful member of the N.H. hospitality industry.

Hospitality and Tourism Management Associate of Science Degree Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR	
	Fall Semester					
	ENGL 101C	English Composition	4	0	4	
	HSTM 101C	Introduction to Hospitality and Tourism ^{1,2}	3	0	3	
	BUS 170C	Principles of Marketing ¹	3	0	3	
	DCOM 105C	Digital Communications	3	0	3	
	MATH 120C	Quantitative Reasoning or higher-level math	4	0	4	
					17	
Spring Semester						
	ACCT 101C	Accounting I	3	0	3	
	GEOG 110C	Introduction to Cultural Geography ¹	3	0	3	
	XX xxxC	Humanities/Fine Arts/Language elective	3	0	3	
	HSTM 205C	Quality Service Management ¹	3	0	3	
	HSTM xxxC	Hospitality and Tourism Management elective ^{1,3} or				
	DCOM xxxC	Digital Communications elective ^{1,3} or				
	BUS 174C*	Principles of Sales ^{1,3}	3	0	3	
					15	
SECOND YEAR	Fall Semester					
		BUS 225C	Business Law I	3	0	3
		HSTM 245C	Event Meeting and Conference Planning ¹	3	0	3
		ACCT 102C	Accounting II	3	0	3
		SOCI xxxC	Social Science Elective	3	0	3
		HSTM xxxC	Hospitality and Tourism Management elective ^{1,3} or			
		DCOM xxxC	Digital Communications elective ^{1,3} or			
		BUS 174C*	Principles of Sales ^{1,3}	3	0	3
						15
	Spring Semester					
		BUS 270C	Principles of Management ¹	3	0	3
		HSTM 280C	Senior Travel Seminar ¹	3	0	3
		BUS 273C	Human Resource Management	3	0	3
		XX xxxC	Science Elective ⁴	3-4	0	3-4
		HSTM xxxC	Hospitality and Tourism Management elective ^{1,3} or			
	DCOM xxxC	Digital Communications elective ^{1,3} or				
	BUS 174C*	Principles of Sales ^{1,3}	3	0	3	
					15-16	
Total Credits					62-63	

¹Indicates major field course

²A travel fee of \$75 will be assessed for all students. The money will be used to defray costs associated with student travel experiences. Additional costs will be associated with the more extensive trips.

³Any course with an HSTM prefix is not a required course including ACCT 102C.

⁴BIOL 100C, CHEM 100C, and PHYS 100C do not meet this requirement.

Students must maintain Internet access and a professional working email address throughout their participation in this program.

RECREATION AND LEISURE STUDIES

Associate in Science

This program is not currently accepting new students.

This program is designed for students who seek entry-level employment in the recreation and leisure industry. Students examine the recreational needs of a community and foster leadership skills to work with diverse populations. Time management, organizational skills, and managing activities are emphasized.

Program Learning Outcomes

Graduates are able to:

- Understand the historical and current context of leisure and recreation.
- Create, plan, implement, and evaluate a recreation activity program for a designated community.
- Develop effective communication and leadership skills in working in leisure and recreation environments.
- Educate others on the value and benefits of recreation and leisure for personal growth and fulfillment.
- Identify risk management concerns in recreation program development.
- Evaluate career pathways in the recreation and leisure industry.

Career Information

Employment opportunities have expanded in many areas including municipal parks and recreation departments, non-profit organizations such as YMCA, and medical institutions. There are many career paths to pursue with a degree in Recreation and Leisure Studies. Through the advisement process, faculty work with students to assist in course selection based on transfer or career interest.

Recreation and Leisure Studies Associate of Science Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR
	Fall Semester				
	ENGL 101C	English Composition	4	0	4
	HTLH 150C	Introduction to Personal Wellness	1	1	1
	IST 102C	PC Applications	3	0	3
	MATH 120C	Quantitative Reasoning or higher-level math	3	0	3
	RECR 101C	Introduction to Recreation and Leisure Studies ¹	3	0	3
					15
Spring Semester					
	BIOL 129C	Introduction to Sports Nutrition or			
	XX xxxC	Science elective	3	0-2	3-4
	HLTH 120C	Care and Prevention of Athletic Injuries	3	2	4
	RECR 120C	Recreation Program and Planning ¹	3	0	3
	RECR 125C	Risk Management in Recreation ¹	3	0	3
	SPTS 170C	Sports and Recreation Marketing	3	0	3
					16-17
SECOND YEAR	Fall Semester				
	BUS 225C	Business Law I or			
	SPTS 225C	Sports and Recreation Law	3	0	3
	PSYC 105C	Introduction to Psychology or			
	XX xxxC	Social Science elective	3	0	3
	RECR 230C	Leadership for Recreation, Parks, and Leisure Services ¹	3	0	3
	RECR xxxC	Recreation Activity elective ¹	0	2	1
	SPTS 210C	Sports and Fitness Facilities Management	3	0	3
	SPTS 220C	Sports Communications	3	0	3
					16
Spring Semester					
	ACCT 101C	Accounting I or			
	RECR 290C	Recreation and Leisure Internship ¹ or			
	XX xxxC	RECR/SPTS/BUS/HSTM elective	0-3	0-9	3
	HSTM 115C	Introduction to Fitness, Spa, and Wellness Management or			
	RECR 220C	Outdoor Recreation ¹ or			
	RECR 250C	Principles of Therapeutic Recreation ¹	3	0	3
	PHIL 242C	Contemporary Ethical Issues	3	0	3
	RECR xxxC	Recreation Activity elective	0	2	1
	XX xxxC	General education elective	3	0	3
					13
Total Credits					60-61

¹Indicates major field course

SPORTS MANAGEMENT

Associate in Science

Courses are offered during the day, evening, and 100% online.

Career Information

Sports management offers a variety of career options and paths. Some of the areas include media, retail sports, sports travel, facility, and event management. Students can pursue coaching or promoting sporting events by understanding the business, legal, and marketing aspects of sports management.

Accreditation

The A.S. in Sports Management degree program is accredited by the Accreditation Council for Business Schools and Programs (ACBSP).

Internships

One of the major factors contributing to career success in the sports field is experience. Students work with faculty to find an internship location based on their desired specialization in sports management. These are some of the places that have welcomed NHTI interns:

- Concord Chamber of Commerce
- Concord Sports Center
- ESC-Brine Sports
- Everett Ice Arena
- Fun Intelligent Training
- Meadowbrook Music Pavilion
- NH Fisher Cats
- NH Motor Speedway
- Winnepesaukee Muskrats
- WMUR-TV

Sports Management Associate of Science Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR	
	Fall Semester					
	DCOM 105C	Digital Communications	3	0	3	
	ENGL 101C	English Composition	4	0	4	
	SPTS 101C	Introduction to Sports Management ¹	3	0	3	
	MATH 120C	Quantitative Reasoning or higher-level math course	4	0	4	
	SOCI xxxC	Social Science elective ²	3	0	3	
					17	
Spring Semester						
	ACCT 101C	Accounting I	3	0	3	
	ECON 101C	Macroeconomics or				
	ECON 102C	Microeconomics	3	0	3	
	MATH 251C	Statistics	4	0	4	
	BUS 170C	Principles of Marketing or				
	SPTS 170C	Sports and Recreation Marketing ¹	3	0	3	
	SPTS 180C	Public Relations and Advertising for the Sports Industry ¹	3	0	3	
					16	
SECOND YEAR	Fall Semester					
		ACCT 102C	Accounting II ¹	3	0	3
		SPTS 210C	Sports and Fitness Facilities Management ¹	3	0	3
		SPTS 220C	Sports Communication ¹	3	0	3
		SPTS 290C	Sports Management Internship ¹ or	0	9	3
		XX xxxC	SPTS/BUS/DCOM elective	3	0	3
		XX xxxC	Humanities/Fine Arts/Language elective	3	0	3
						15
	Spring Semester					
		BUS 225C	Business Law I or			
		SPTS 225C	Sports and Recreation Law ¹	3	0	3
		BUS 270C	Principles of Management	3	0	3
		SPTS 250C	Sports and Society ¹	4	0	4
	XX xxxC	Science elective ³	3-4	0	3-4	
					13-14	
Total Credits					61-62	

¹Indicates major field course

²Any course with a prefix of ANTH, ECON, HIST, POLS, PSYC, or SOCI (except HIST 104C and HIST 105C)

³BIOL 100C, CHEM 100C, and PHYS 100C do not meet this requirement.

DIGITAL COMMUNICATIONS

Certificate

This program offers students a skill set that can be used across many industries and disciplines. Web development, marketing analytics, and analysis are skills needed for a digital/social media presence in the global market place. This program instructs students in social media marketing, website management, data analysis, accounting, relationship marketing, email marketing, and mobile application marketing. This program is financial aid-eligible.

Career Information

Graduates are prepared for careers in data management, social media, website management, sales, marketing, guest services, tourism associations, and business administration, or for transfer to bachelors programs in information technology, business administration, and the sports, recreation and tourism fields. Graduates can obtain the following professional certifications:

- Google Analytics Individual Qualification Certification
- Google Ads Search Certification
- Google Shopping Ads Certification
- Google Ads Mobile Certification
- HubSpot In Bound Certification
- HubSpot Email Marketing Certification
- Facebook Blueprint Associate-Level

Digital Communications Certificate Curriculum

Course	Title	CL	LAB	CR
DCOM 105C	Digital Communications	3	0	3
DCOM 130C	Ecommerce, Websites, and Blogging	3	0	3
DCOM 150C	Social Media Strategy	3	0	3
DCOM 210C	Search Engine Optimization	3	0	3
DCOM 230C	Email and Mobile Promotion and Marketing	3	0	3
DCOM 250C	Digital Analytics	3	0	3
Total Credits				18

EVENT AND CONFERENCE MANAGEMENT

Certificate

This program gives students an understanding of the hospitality industry and instructs them on how to plan and organize conferences and events. Students gain skills in meeting software, web applications, and social media. Courses transfer into NHTI's Associate in Science in Hospitality and Tourism Management. This program is financial aid-eligible.

Program Learning Outcomes

Upon completion of the program, graduates will be able to:

- Design an event from conception to implementation.
- Create measurable event objectives that include timelines, budgets, and program design.
- Review event venues including convention centers, hotels, meeting facilities, and/or civic centers.
- Design program schedule.
- Create an event catering food and beverage plan.
- Complete a risk management plan: parking, security, safety, ADA, etc.
- Design a marketing plan including social media options.

Career Information

Students in this program acquire the skills needed to work at a hotel, conference center, sports arena, or corporate organization as their program or events coordinator.

Health, Character, and Technical Standards

Technical standards provide guidance as to skills and abilities required to function successfully in this program and profession. Students must demonstrate:

- The ability to act in a professional manner on field trips or at internship locations
- Sufficient vision, hearing, and verbal abilities to express, interpret, and exchange information and ideas
- The ability to work with frequent interruptions, respond appropriately to unexpected situations, and cope with variations in workload and stress levels

Although not a technical standard for entry, some positions require the physical ability to stand for long periods and lift up to 70 pounds.

Event and Conference Management Certificate Curriculum

Course	Title	CL	LAB	CR
BUS 170C	Principles of Marketing	3	0	3
BUS 225C	Business Law	3	0	3
DCOM 105C	Digital Communications	3	0	3
HSTM 101C	Introduction to the Hospitality and Tourism Industry	3	0	3
HSTM 205C	Quality Service Management	3	0	3
HSTM 245C	Event, Meeting and Convention Planning	3	0	3
HSTM 269C	Food and Beverage Management	3	0	3
Total Credits				21

Students are expected to possess a working knowledge of software applications including word processing, spreadsheets, and presentation software, or to have successfully completed NHTI's IST 102C (PC Applications) or comparable course. Students must maintain Internet access, including a professional working email address, throughout their participation in this program.

HOTEL ADMINISTRATION

Certificate

This program prepares students for entry-level positions in the hotel industry. Students explore positions and responsibilities as they relate to the size and needs of hotels, inns, lodges, and resorts. Courses transfer into NHTI's Associate in Science in Hospitality and Tourism Management program. This program is financial aid-eligible.

Health, Character, and Technical Standards

Technical standards provide guidance as to skills and abilities required to function successfully in this program and profession. Students must demonstrate:

- The ability to act in a professional manner on field trips or at internship locations
- Sufficient vision, hearing, and verbal abilities to express, interpret, and exchange information and ideas
- The ability to work with frequent interruptions, respond appropriately to unexpected situations, and cope with variations in workload and stress levels

Although not a technical standard for entry, some positions require the physical ability to stand for long periods and lift up to 70 pounds.

Hotel Administration Certificate Curriculum

Course	Title	CL	LAB	CR
HSTM 101C	Introduction to the Hospitality and Tourism Industry ¹	3	0	3
HSTM 110C	Introduction to Hotel Operations	3	0	3
HSTM 205C	Quality Service Management	3	0	3
HSTM 225C	Front Office Operations	3	0	3
HSTM 245C	Event, Meeting, and Convention Planning	3	0	3
HSTM 269C	Food and Beverage Management	3	0	3
BUS 273C	Human Resources Management	3	0	3
Total Credits				21

¹A travel fee of \$75 will be assessed for all students. The money is used to defray costs associated with student travel experiences. Additional costs will be associated with the more extensive trips.

RECREATION AND LEISURE STUDIES

Certificate

This program emphasizes the skills needed to work in recreation positions such as the YMCA or parks and recreation department. The curriculum focuses on leadership, program planning, communications, and risk management. Students understand the impact recreation and leisure has on the overall wellness of individuals participating in a recreation program. This program is available days and evenings and is financial aid-eligible.

Recreation and Leisure Studies Certificate Curriculum

Course	Title	CL	LAB	CR
DCOM 105C	Digital Communications or	3	0	3
XX xxxC	RECR/SPTS elective	1-3	0	1-3
RECR 101C	Introduction to Recreation and Leisure Studies	3	0	3
RECR 120C	Recreation Program and Planning	3	0	3
RECR 125C	Risk Management in Recreation	3	0	3
RECR 230C	Leadership for Recreation, Parks, and Leisure Services	3	0	3
SPTS 220C	Sports and Recreation Communication	3	0	3
SPTS 225C	Sports and Recreation Law	3	0	3
Total Credits				19-21

¹A travel fee of \$75 will be assessed for all students. The money is used to defray costs associated with student travel experiences. Additional costs will be associated with the more extensive trips.

SPORTS MANAGEMENT

Certificate

This program familiarizes students with the world of sports-related businesses while providing a broad overview of possible careers or future studies in sports management. Courses transfer into NHTI's Associate in Science in Sports Management Program. This program is financial aid-eligible.

Sports Management Certificate Curriculum

Course	Title	CL	LAB	CR
SPTS 101C	Introduction to Sports Management	3	0	3
SPTS 170C	Sports and Recreation Marketing	3	0	3
SPTS 180C	Public Relations and Advertising for the Sports Industry	3	0	3
SPTS 210C	Sports Facilities	3	0	3
SPTS 220C	Sports Communication	3	0	3
SPTS 225C	Sports and Recreation Law	3	0	3
SPTS 250C	Sport and Society	4	0	4
SPTS 290C	Sports Management Internship or	0	9	3
XX xxxC	SPTS/BUS/RECR elective	3	0	3
Total Credits				21

¹A travel fee of \$75 will be assessed for all students. The money is used to defray costs associated with student travel experiences. Additional costs will be associated with the more extensive trips.

TRAVEL AND TOURISM

Certificate

This program has a travel counselor/agent focus. Emphasis is placed on geography, cruise and tour, ecotourism, digital marketing, and sales. Courses transfer into NHTI's Associate in Science in Hospitality and Tourism Management Program. This program is financial aid-eligible.

Health, Character, and Technical Standards

Technical standards provide guidance as to skills and abilities required to function successfully in this program and profession. Students must demonstrate:

- The ability to act in a professional manner on field trips or at internship locations
- Sufficient vision, hearing, and verbal abilities to express, interpret, and exchange information and ideas
- The ability to work with frequent interruptions, respond appropriately to unexpected situations, and cope with variations in workload and stress levels

Although not a technical standard for entry, some positions require the physical ability to stand for long periods and lift up to 70 pounds.

Travel and Tourism Certificate Curriculum

Course	Title	CL	LAB	CR
DCOM 105C	Digital Communications	3	0	3
GEOG 110C	Introduction to Cultural Geography	3	0	3
HSTM 101C	Introduction to the Hospitality and Tourism Industry ¹	3	0	3
HSTM 205C	Quality Service Management	3	0	3
HSTM 230BC	Principles of Ecotourism Management	3	0	3
HSTM 260C	Hospitality Sales and Marketing	3	0	3
HSTM 263C	Tourism Planning and Cruise Sales	3	0	3
Total Credits				21

¹A travel fee of \$75 will be assessed for all students. The money is used to defray costs associated with student travel experiences. Additional costs will be associated with the more extensive trips.

Students matriculating into this certificate program are expected to possess a working knowledge of software applications including word processing, spreadsheets, and presentation software, or to have successfully completed NHTI's IST 102C (PC Applications) or comparable course. Students must maintain Internet access, including a professional working email address, throughout their participation in this program.

WEDDING PLANNING

Certificate

This program instructs on the fundamentals of wedding planning and creating and organizing exceptional parties and weddings. Students develop an understanding of the essential role of the wedding planner, the elements of a successful wedding event, and the critical skills needed for a successful career as a wedding planner. Courses in this program transfer into NHTI's Associate in Science in Hospitality and Tourism Management program.

Program Learning Outcomes

Graduates are able to:

- Describe the role of the wedding planner in organizing and coordinating a wedding and describe the elements of professionalism, creativity, and expertise required to achieve success as a wedding planner.
- Describe the origins of the most common customs, rituals, and traditions used in wedding ceremonies and explain the factors that couples typically consider when determining the style and size of their wedding.
- Identify the various events associated with weddings, including parties, showers, and the wedding reception and the processes that must be followed to successfully schedule and manage these events.
- Explain the responsibilities associated with planning and organizing a wedding including vendor selection and contracting and the selection of appropriate wedding attire for all members of the wedding party.
- Describe the critical business considerations of running a wedding planning business such as financial planning and management, legal concerns, record keeping, marketing, and technical aspects and outline typical fee structures used by wedding planning businesses.

Health, Character, and Technical Standards

Technical standards have been established to provide guidance to students regarding skills and abilities required to function successfully. Students must be able to demonstrate:

- The ability to act in a professional manner on field trips or at internship locations
- Sufficient vision, hearing, and verbal abilities to express and exchange information and ideas, as well as to interpret important instructions in the classroom or at internship locations
- The ability to work with frequent interruptions, to respond appropriately to unexpected situations, and to cope with extreme variations in workload and stress levels

Although not a technical standard for admission, applicants should be aware that some positions may require the physical ability to stand for long periods and to lift up to 70 pounds.

Wedding Planning Certificate Curriculum

Course	Title	CL	LAB	CR
DCOM 105C	Digital Communications	3	0	3
HSTM 101C	Introduction to the Hospitality and Tourism Industry ¹	3	0	3
HSTM 110C	Introduction to Hotel Operations	3	0	3
HSTM 205C	Quality Service Management	3	0	3
HSTM 227C	Legal Issues for the Hospitality Industry	3	0	3
HSTM 247C	Principles of Wedding Planning Management	3	0	3
HSTM 260C	Hospitality Sales and Marketing+	3	0	3
HSTM 270C	Catering Operations	3	0	3
Total Credits				21

¹A travel fee of \$75 will be assessed for all students. The money is used to defray costs associated with student travel experiences. Additional costs will be associated with the more extensive trips.

Students are expected to possess a working knowledge of software applications including word processing, spreadsheet, and presentation software, or to have successfully completed NHTI's IST 102C (PC Applications) or comparable course. Students must maintain Internet access, including a professional working email address, throughout their participation in this program.

SOCIAL, EDUCATIONAL, AND BEHAVIORAL SCIENCE

Associate of Science

- [Addiction Counseling](#)
- [Child and Family Studies](#)
- [Criminal Justice](#)
- [Early Care and Education for Young Children with Disabilities](#)
- [Early Childhood Education](#)
- [Education](#)
- [Human Service](#)

Certificate

- [Advanced Human Service](#)
- [Career and Technical Education Alternative](#)
- [Early Childhood Education](#)
- [Early Childhood Education Advanced](#)
- [Early Childhood Education Entry Level](#)
- [Education](#)
- [ESOL](#)
- [Human Service](#)
- [Special Education](#)
- [Substance Abuse Disorder Treatment](#)
- [Teacher Education Conversion Program](#)
- [Teacher Education Conversion Program for English Speakers of Other Languages](#)
- [Teacher Education Conversion Program – General Education \(with certification\)](#)
- [Teacher Education Conversion Program – General Education \(without certification\)](#)
- [Teacher Education Conversion Program – Mathematics or Science](#)
- [Young Children with Autism and Exceptionalities](#)

Internship Considerations

NHTI has developed excellent practicum opportunities to foster hands-on learning while simultaneously receiving credit. The college's first priority must be to ensure that patients/clients/children/families are not placed in jeopardy by students during learning experiences. Students in internship, externship, practicum, service learning, and clinical experiences must demonstrate sufficient emotional stability to withstand the stresses, uncertainties, and changing circumstances of patient/client/child/family responsibilities. The student is expected to have the emotional stability to exercise sound judgment, accept direction and guidance from a supervisor or faculty member, and establish rapport and maintain interpersonal relationships and confidentiality with employees, customers, and/or patients/clients/children and their families.

Curriculum Abbreviations

- CL – Number of lecture/classroom hours per week for the course
- LAB – Number of simulation laboratory, laboratory or clinical hours per week for the course
- CR – Number of credit hours for the course

ADDICTION COUNSELING

Associate in Science

The Addiction Counseling associate degree provides the education and training required for a career in the substance use disorder treatment (SUD Tx) profession and to become licensed in alcohol and drug counseling in N.H. Students acquire a broad understanding of SUD Tx to include an interdisciplinary knowledge base and the skills required to be an addiction counselor: critical thinking, complex reasoning, communication, being a team member, engaging in human interaction, applying content knowledge, lifelong learning, ongoing professional development, and personal growth. Students are prepared to assist individuals and families coping with the effects of substance use. Graduates are trained to support prevention, addiction treatment, and recovery efforts in a variety of settings. Program-specific courses are taught by instructors with practical experience.

We offer 3 options that can lead to employment on the way to degree completion and employer demands:

- *SUD Tx Certificate*: The 6-course, 19-credit SUD Tx certificate includes five courses embedded in the Addiction Counseling degree.
- *Certified Recovery Support Worker (CRSW) course*: The ADCL 230C course provides the education required in N.H. for eventual credentialing as a CRSW.
- *Mindful Communications Certificate*: This includes four courses that teach skills to improve focus, attention, and mood, and reduce stress. They are embedded in the Addiction Counseling degree.

This program is financial aid-eligible.

Program Learning Outcomes

- Practice and engage in the competent, respectful, non-judgmental, supportive, and professional relationships in interactions with individuals in various situations, e.g., academically, one-on-one, groups, therapeutically, as treatment team members, and at a practicum site with clients and staff.
- Understand the facts, concepts, theories, and principles taught in core curriculum courses and how each informs and is related to the knowledge, skills, attitudes, capabilities, interest in life-long learning, professional development, self-care, and socially conscious behavior required of the competent, ethical, and multi-culturally aware substance use disorder professional.
- Identify, analyze, evaluate, and select the appropriate strategies, methods, and tools required for effective communication (verbally, non-verbally, in writing, and on computers and electronic devices) with individuals in a variety of substance use disorder professional contexts and settings.
- Actively listen, process information, ask questions, seek answers, integrate knowledge, search for meaning, and develop ideas and concepts that result in relevant and consequential therapeutic action.
- Understand the importance of developing healthy practices of self-care, self-reflection, increased self-awareness, and personal responsibility, all of which are critical to being a best practices substance use disorder professional and a productive member of society.
- In addition to the above, Addiction Counseling graduates will be able to:
 - Describe the obligations required of the substance use disorder professional with respect to adhering to best practices behavioral, ethical, and legal standards of conduct and confidentiality.
 - Establish therapeutic relationships and boundaries with diverse clients exhibiting substance use disorder issues.
 - Demonstrate basic, entry-level interviewing, counseling, and other skills needed to therapeutically interact with and (psycho)educate individuals, groups, and families.
 - Demonstrate an understanding of effects of alcohol and other drugs on the body and brain.
 - Use appropriate screening tools and instruments to gather initial data on a client's substance use and co-occurring disorders.
 - Develop case management plans for clients that include a thorough framework for action: treatment, recovery, relapse prevention, and continuing aftercare.
 - Conduct a thorough biopsychosocial assessment, diagnose clients with substance use disorders using the DSM-5 diagnostic criteria, and develop an individualized treatment plan based on a client's strengths, weaknesses, problems, and needs.

- Demonstrate knowledge of accepted principles of client documentation and record management.
- Interact with counselors, other professionals, community resources, and a client's collaterals as part of an interdisciplinary treatment team with regard to ongoing client treatment and provision of services.
- Meet the educational and training requirements required by the state of N.H. for eventual licensure as a licensed alcohol and drug counselor.
- Apply the 12 core functions and 46 global criteria required of the substance use disorder counselor.

Click here for the full [PDF of learning outcomes](#).

Career Information

Substance use disorder treatment and specifically addiction counseling are professions seeking qualified workers now. NHTI provides the education and training employers need and want. Students who complete this program can enter the following professions (not an inclusive list):

- Addiction counseling
- SUD Tx
- Recovery support
- Residential/intake worker
- Case management

The AS in Addiction Counseling degree may serve as a stepping stone to a career in the SUD Tx profession and/or to a 4-year degree in addiction counseling, psychology, mental health, social work, or related majors.

Internships/Practica

Our program provides supervised, hands-on training in the form of two 15-week practica, each 125 hours (~8 hours/week). Site options include SUD Tx facilities in N.H. (residential, IOP, OP, MAT) in a variety of settings and populations (adolescent, adult, families, correctional).

Students will practically apply classroom knowledge and theory while gaining confidence. They will build a solid foundation and a competitive advantage for future success and employment. This foundation also includes the development of soft skills. The practicum experience often leads to full-time entry-level positions.

Specific Admissions Requirements

Candidates may be required to have a personal interview with a department faculty member.

Addiction Counseling Associate of Science Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR	
	Fall Semester					
	ADCL 120C	Survey of Addictive Behaviors and Treatment ¹	3	0	3	
	ENGL 120MC	Communications: Mindful	3	0	3	
	HSV 111C	Introduction to Human Service ¹	3	0	3	
	MHTH 187C	Helping Relationship: Interpersonal Communication Skills for Today's Professional ¹	4	0	4	
	PSYC 105C	Introduction to Psychology	3	0	3	
					16	
Spring Semester						
	ADCL 205C	Fundamentals of Dependency Counseling Skills ¹	3	0	3	
	ADCL 235C	Physiology and Pharmacology of Addiction ¹	3	0	3	
	ENGL 101MC	English Composition: Mindful	4	0	4	
	HSV 242C	Ethics and the Professional Helper ¹	3	0	3	
	PSYC 283C	Group Counseling ¹	3	0	3	
					16	
SECOND YEAR	Fall Semester					
		ADCL 296C	Addiction Practicum I ^{1,2}	2	8	4
		BIOL 120C	Human Biology	3	2	4
		ENGL 102MC	Introduction to Literature: Mindful	3	0	3
		PSYC 220C	Human Growth and Development: The Life Span	3	0	3
		PSYC 280C	Individual Counseling: Theory and Practice ¹	3	0	3
						17
	Spring Semester					
		ADCL 297C	Addiction Practicum II ^{1,2}	2	8	4
		ENGL 294MC	Communicating Mindfully Capstone	1	0	1
		MATH 120C	Quantitative Reasoning ³	4	0	4
	SOCI 250C	Conflict Resolution in Modern Society ¹	3	0	3	
					12	
	Total Credits				61	

¹Indicates major field course

²To enroll in ADCL 296C and ADCL 297C, a student must have achieved a C or higher in each practicum prerequisite, an overall GPA of 2.0, and permission of the department chair of Human Service. Students must achieve a C or higher in ADCL 296C to enroll in ADCL 297C.

³Students must complete MATH 120C to graduate. Depending on results of placement testing, students may be required to complete MATH 092C prior to MATH 120C.

CHILD AND FAMILY STUDIES

Associate in Science

The Child and Family Studies degree represents an integration of theory, research, and practice from multiple disciplines and offers a well-rounded education for students wanting to work with children and families. Students participate in a variety of hands-on experiences catered toward individual career goals; the practicum courses allow students to work with their populations of interest. This degree provides a foundation of course work for students who intend to pursue continued education in the areas of counseling, social work, public administration, juvenile justice, conflict resolution, or other related disciplines. The degree is offered both in person and online.

Program Learning Outcomes

The Child and Family Studies Department is a hands-on, project-centered, competency- and evidence-based program that facilitates the growth of leaders preparing to work with children, families, and communities. Graduates are able to:

- Describe the development, roles, and interaction patterns of children, youth, and families within social systems.
- Describe the contributions of multiple theories or practices to the field of child and family development, both within and across disciplines.
- Demonstrate the ability to synthesize multiple information sources and points of view into a discussion of major child and family development issues.
- Present a project or paper linking knowledge from work, community, or research activities with knowledge acquired in the study of child and family development.
- Identify dimensions of diversity in children, youth, and families and recognize oppressive forces that hinder their positive development.
- Demonstrate professional standards of ethical conduct.

Career Information

Students who complete this program can enter into the following professions: early childhood educators, family/parent educators, home-visiting service providers, social services caseworkers, early intervention/special education assistants, and service providers for community agencies serving children, youth, and families.

Additional Info

Child and Family Studies students complete supervised, hands-on training in the form of two 15-week practica, each 125 hours (~ 8 hours/week) as part of their program of study. These experiences offer the opportunity to apply theories and principles to real-world situations. Students in Child and Family Studies must have successfully completed HSV 111C, HSV 242C, MHTH 187C, PSYC 105C, and PYSC 283C, each with a C or higher, and have permission of department chair of Child and Family Studies.

Child and Family Studies Associate of Science Curriculum

	Course	Title	CL	LAB	CR
FIRST YEAR	Fall Semester				
	ECE 101C	Growth and Development of the Young Child	3	0	3
	HSV 111C	Introduction to Human Services	3	0	3
	MHTH 187C	The Helping Relationship	4	0	4
	ENGL 101	English Composition	4	0	4
					14
	Spring Semester				
	MATH 120C	Quantitative Reasoning	4	0	4
	PSYC 105C	Introduction to Psychology	3	0	3
	HSV 242C	Ethics and The Professional Helper	3	0	3
ECE 167C	Positive Behavior Guidance and Supporting Young Children w/ Challenging Behaviors	3	0	3	
PSYC 283C	Group Counseling	3	0	3	
				16	
SECOND YEAR	Fall Semester				
	ECE 195C	Child and Family Practicum I	2	8	4
	CRMJ 150C	Criminology	3	0	3
	ENGL 120MC/COMM 120MC	Communication: Mindful	3	0	3
	XXxxxC	Social Science elective ¹	3	0	3
	XXxxxC	General elective ²	3	0	3
					16
	Spring Semester				
	ECE 242C	Child, Family, and Community	3	0	3
	ECE 298C	Child and Family Practicum II or			
	ECE 283C	Early Intervention Practicum	2	8	4
	XX xxxC	Lab Science elective ³	4	0	4
	XX xxxC	Humanities/Fine Arts/Language elective ⁴	3	0	3
				14	
Total Credits					
				60	

¹Choose from SOCI 240C or PSYC 220C.

²Choose from CRMJ 230, SOC 250, ADCL 120, or additional ECE course approved by department chair.

³Choose from BIOL 120, BIOL 159, or BIOL 125.

⁴Choose from PHIL 242 or ASL 104.

CRIMINAL JUSTICE

Associate in Science

Students are taught by professionals who have spent a significant amount of time as practitioners in the field. They learn field basics and the rules of criminal procedure and criminal law. Students begin to learn about specialty fields from juvenile justice to corrections operations to police-community relations in justice and the community.

Program Learning Outcomes

Upon completion of the program, students will be able to:

- Evaluate theoretical frameworks and application of decision-making in criminal justice.
- Critique police and community interactions and predict response/reactions.
- Deconstruct approaches to substance abuse enforcements.
- Discuss specialized fields within the criminal justice system.

Character Expectations

Background checks are completed by potential employers prior to obtaining any position with arrest or detention powers and typically before being accepted for an internship. Applicants who have been in difficulty with the law may not be employable or eligible for an internship. Because future goals may be compromised, applicants are advised to discuss any concerns with the department chair.

Internship Sites

- CASA of New Hampshire
- DCYF Juvenile Services
- Merrimack County Attorney's Office
- Merrimack County Juvenile Diversion
- N.H. Department of Corrections
- N.H. Division of Children Youth and Families
- N.H. Fish and Game Department
- N.H. Prison for Women
- N.H. Public Defender's Office
- N.H. State Police
- N.H. State Prison for Women
- N.H. State Prison Volunteers
- Tobey School
- U.S. Probation Office
- Victims Inc.

Criminal Justice Associate of Science Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR	
	Fall Semester					
	CRMJ 101C	Introduction to the Criminal Justice System ¹	3	0	3	
	CRMJ 121C	Criminal Procedure ¹	4	0	4	
	ENGL 101C	English Composition	4	0	4	
	IST 102C	PC Applications	3	0	3	
	PSYC 105C	Introduction to Psychology	3	0	3	
					17	
Spring Semester						
	CRMJ 123C	Criminal Law ¹	4	0	4	
	CRMJ 210C	Juvenile Justice Administration ¹	3	0	3	
	ENGL 120C/COMM 120C	Communication or				
	ENGL xxxC	English elective	3-4	0	3	
	PHIL 242C	Contemporary Ethical Issues	3	0	3	
	SOCI 105C	Introduction to Sociology	3	0	3	
					16	
SECOND YEAR	Fall Semester					
		CRMJ 150C	Criminology ¹	3	0	3
		CRMJ 205C	Police Operations ¹	3	0	3
		CRMJ 215C	Corrections Operations ¹	3	0	3
		MATH 120C	Quantitative Reasoning ²	4	0	4
		PSYC 205C	Crisis Intervention	3	0	3
						16
	Spring Semester					
		BIOL 120C	Human Biology			
		BIOL 159C	Personal Nutrition	3	2	4
		CRMJ 225C	Drug Abuse and the Law ¹	3	0	3
		CRMJ 230C	Justice and the Community ¹	3	0	3
		CRMJ 270C	Criminal Justice Internship ^{1,3} or	0	9	3
	CRMJ 275C	Senior Project ^{1,3}	3	0	3	
					13	
Total Credits					62	

¹Indicates major field course

²Students must complete MATH 120C to graduate. Depending on results of placement testing, students may be required to complete MATH 092C prior to MATH 120C (MATH 092C with a C or higher, or the high school equivalent with a C or higher, is the prerequisite for MATH 120C).

³CRMJ 270C/275C may be taken either Fall or Spring semester of senior year.

EARLY CARE AND EDUCATION FOR YOUNG CHILDREN WITH DISABILITIES

Associate in Science

This program prepares students to work in the growing profession of early intervention and early childhood special education. They learn how to improve learning outcomes and promote optimal development of young children who have or are at risk for developmental delays or disabilities. Our program provides learning opportunities that emphasize best practices in supporting children's access to and participation in inclusive settings and natural learning environments. Students are involved in immediate, hands-on training in a variety of settings in preschool special education and early intervention. They work beside highly trained early childhood teachers and professionals, practice the skills they learn in class, and complete assignments directly related to their studies.

Program Learning Outcomes

The Child and Family Studies program is hands-on, project-centered, and competency and evidence-based to facilitate the growth of future teachers and leaders preparing to work with children, families, and communities. Graduates are able to:

- Understand young children's characteristics and needs to create environments that are healthy, respectful, supportive, and challenging for each child.
- Understand and value the importance of creating respectful, reciprocal relationships to support and empower families in their communities.
- Responsibly observe, document, and assess children in a manner that supports children and families.
- Understand developmentally effective approaches that emphasize positive relationships and supportive interactions to influence outcomes for individual children.
- Design, implement, and evaluate learning experiences that promote a wide range of academic disciplines to build meaningful curriculum.
- Identify and connect themselves as members of the early childhood profession.
- Demonstrate a variety of early childhood field experiences.
- Demonstrate a basic understanding of relevant professional, legal, and regulatory guidelines for serving every child.
- Participate in early intervention and special needs interdisciplinary and transdisciplinary teams.
- Implement interventions for young children with ASD and children with disabilities across all developmental domains.

Career Information

Graduates are prepared for immediate entry as competent professionals to work in a variety of early childhood settings, including family-centered early supports and services in public schools, licensed child care centers, and home-based, community-based, and private settings. Some roles in these settings could include intake coordinator, autism educational assistant, home visitor, lead teacher in childcare, and 1-1 support aide/paraprofessional.

Students wishing to pursue other opportunities in early intervention or early childhood special education may further their education at a four-year college/university. This degree meets the training and education requirements for the State of N.H. Early Childhood Professional Development System credential of NH Early Childhood Teacher, Level 5.

Program-Specific Requirements

- Students will spend designated hours each week with infants, toddlers, preschoolers, or kindergarteners while taking early childhood courses. These hours will be considered a component of class participation. NHTI has an onsite lab school to meet the needs of these required lab hours. All students are expected to use the onsite lab school unless they work full-time in a licensed child care center or are 100% online and live at a distance from the NHTI campus that prohibits in-person attendance.
- Upon acceptance into the program, students must complete the following paperwork:
 - A complete set of electronic fingerprints completed by the Department of Safety
 - Submission of a criminal record check that comes back clear or non-disqualifying; the cost associated with the fingerprinting and criminal record check is the responsibility of the student.

- Completion of the licensing child care personnel health form by a licensed health provider indicating the student is in good physical health and has no mental or emotional disturbances that would prohibit him/her from caring for children in a group setting
- Signed confidentiality form
- Other related documents distributed by the department chair
- Out-of-state students who are taking classes 100% online will need to complete their state's fingerprinting and background check, child health care form, and any other paperwork required by that state.
- Students must have transportation to and from NHTI approved practicum sites in their senior year.
- Students must have a flexible schedule that allows them to spend weekday mornings and/or afternoons at their practicum site while taking classes. Students should be prepared to plan work hours around their course schedule knowing that these hours will change each semester.
- All students must have access to a digital camera and video-capturing device to complete assignments. Online students will record themselves during practicum to share with their practicum teachers online.

Scholarship Program

CCSNH partners with Granite State College to offer tuition assistance to child care providers who are entering or are currently working in the field of early care and education. Eligible individuals must be working at least 20 hours per week. For more information, contact Diana Menard, department chair of Child and Family Studies, at 603-271-6484 x4281 or dmenard@ccsnh.edu. For additional information, [visit the CCSNH page on early childhood education tuition assistance here](#).

There is also a scholarship available for this program through T.E.A.C.H. NH. The T.E.A.C.H. NH Scholarship Program supports the cost of tuition and books, offers paid release time from work for scholarship recipients, and has a bonus upon completing 9-12 credits within a 12-month period. To be eligible, applicants must live in N.H. and work at least 30 hours a week in a licensed childcare program.

Early Care and Education for Young Children with Disabilities Associate of Science Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR	
	Fall Semester					
	ECE 101C	Growth and Development of the Young Child ^{1,2,3}	3	0	3	
	ECE 155C	Using Children's Literature to Support Children's Language, Literacy Development ^{1,3}	3	0	3	
	ENGL 101C	English Composition	4	0	4	
	MATH 120C	Quantitative Reasoning	4	0	4	
					14	
Spring Semester						
	ASL 104C	American Sign Language for Beginners	3	0	3	
	ECE143C	Teaching and Learning STEAM ^{1,3}	3	0	3	
	ECE 167C	Positive Behavior Guidance and Supporting Children with Challenging Behaviors ^{1,3}	3	0	3	
	ECE 270C	Teaching Young Children with Exceptionalities ¹	3	0	3	
	PSYC 105C	Introduction to Psychology	3	0	3	
					15	
SECOND YEAR	Fall Semester					
		ECE 225C	Autism Spectrum Disorder ¹	3	0	3
		ECE 282C	Preschool Special Education Practicum ¹	2	7	4
		ENGL 120C/COMM 120C	Communication or			
		ENGL xxxC	Literature elective	3	0	3
		XX xxxC	General elective (EDU 201C or EDU 204C suggested)	3	0	3
		XX xxxC	Social Science elective ⁴	3	0	3
						16
	Spring Semester					
		ECE 215C	Infant/Toddler Development and Programming ^{1,3}	3	0	3
		ECE 242C	Child, Family and Community ¹	3	0	3
		ECE 283C	Early Intervention Practicum ^{1,2}	2	7	4
	ECE 290C	Early Childhood Leadership Seminar ¹	1	0	1	
	XX xxxC	Lab Science elective ⁵	4	0	4	
					15	
Total Credits					60	

¹Indicates major field course

²The two practica can be offered in the Fall and Spring semesters. Course sequence will change depending on the semester in which students take each practicum. Students will work closely with their advisor to assure appropriate course sequence for each practicum.

³All students taking ECE 101C, ECE 143C, ECE 155C, ECE 167C, and ECE 215C will be charged a \$25 NHTI ECE Lab fee for each class.

⁴Any course with a prefix of ANTH, ECON, HIST, POLS, PSYC, or SOCI (except HIST 104C and HIST 105C)

⁵BIOL 100C, CHEM 100C, and PHYS 100C do not meet this requirement.

NOTE: Students whose placement test scores suggest difficulty with lengthy and complex assignments are strongly advised to complete the program in 3 or more years.

EARLY CHILDHOOD EDUCATION

Associate in Science

This program prepares students to be active researchers of children and how they learn. They learn to support families as each child's first educator, make connections between theory and practice, and discover why this profession is the "backbone" of our workforce. Students are involved in immediate, hands-on training and provided opportunities to work beside highly trained early childhood teachers, practice the skills they are learning, and complete assignments directly related to their studies.

This program offers a sequence of stackable certificates. The entry-level certificate enables students to enter the early childhood profession in as few as three courses with the opportunity to build on their knowledge and skills and advance their career while building credits toward the associate degree.

All early childhood courses, except ECE 290C, require a weekly child care lab component where students actively engage with young children to make connections between theory and practice, carry out class assignments, and learn through observation and active play. Students taking concurrent courses can use the same lab time for all courses. Students completing practicum may use their practicum site as their lab hours for other courses taken concurrent with practicum.

Program Learning Outcomes

The Child and Family Studies program is hands-on, project-centered, and competency and evidence-based to facilitate the growth of future teachers and leaders preparing to work with children, families, and communities. Graduates are able to:

- Understand young children's characteristics and needs to create environments that are healthy, respectful, supportive, and challenging for each child.
- Demonstrate that they know about, understand, and value the importance of creating respectful, reciprocal relationships to support and empower families in their communities.
- Responsibly observe, document, and assess children in a manner that supports young children and families.
- Understand developmentally effective approaches which emphasize positive relationships and supportive interactions to influence outcomes for individual children.
- Design, implement, and evaluate learning experiences that promote a wide range of academic disciplines to build meaningful curriculum.
- Identify and connect themselves as members of the early childhood profession.
- Demonstrate a variety of early childhood field experiences.

Program Outcome Measures

Academic year	Number of program completers	% attending full-time at the time of completion	% attending part-time at the time of completion
2017	16	13%	88%
2018	18	17%	83%
2019	13	8%	92%

Academic year in which fall cohort of full-time candidates enrolled	% of candidates who completed program within 150% of published time	% of candidates who completed program within 100%, 200%, or 300% of published time
Fall 2014	(by Spring '17) 42%	(by Spring '18) 47%
Fall 2015	(by Spring '18) 38%	(by Spring '19) 50%
Fall 2016	(by Spring '19) 56%	(by Spring '20) 56%

Academic Year	% of part-time candidates enrolled in the program (% of total enrollment)	Retention rate among part-time candidates	% of full-time candidates enrolled in the program (% of total enrollment)	Retention rate among full-time candidates
Fall16 to Fall17	(39 of 56) 70%	(22 of 39) 56%	(17 of 56) 30%	(11 of 17) 65%
Fall17 to Fall18	(37 of 66) 56%	(17 of 37) 46%	(29 of 66) 44%	(19 of 29) 66%
Fall18 to Fall 19	(29 of 53) 55%	(16 of 29) 55%	(24 of 53) 45%	(15 of 24) 63%

Career Information

Graduates are prepared for immediate entry into the field of early childhood education as teachers in N.H.-licensed or NAEYC-accredited child care centers, Head Start or Early Head Start programs, family child care, and elementary schools as para-educators. Graduates may further their education at a four-year college for pre-K–grade 3 teacher certification or in other areas of the early childhood field. This degree meets the training and education requirements for the [State of N.H. Early Childhood Teacher Credential, Level 5](#).

Accreditation

The Associate of Science degree in Early Childhood Education is accredited by the Commission on the Accreditation of Early Childhood Higher Education Programs of the National Association for the Education of Young Children, www.naeyc.org. The accreditation term runs from July 2019 through September 2026.

Program-Specific Requirements

- Students will spend designated hours each week with infants, toddlers, preschoolers, or kindergarteners while taking early childhood courses. These hours will be considered a component of class participation. NHTI has an onsite lab school to meet the needs of these required lab hours. All students are expected to use the onsite lab school unless they work full-time in a licensed child care center or are 100% online and live at a distance from the NHTI campus that prohibits in-person attendance.
- Upon acceptance into the program, students must complete the following paperwork:
 - A complete set of electronic fingerprints completed by the Department of Safety
 - Submission of a criminal record check that comes back clear or non-disqualifying; the cost associated with the fingerprinting and criminal record check is the responsibility of the student.
 - Completion of the licensing child care personnel health form by a licensed health provider indicating the student is in good physical health and has no mental or emotional disturbances that would prohibit him/her from caring for children in a group setting
 - Signed confidentiality form
 - Other related documents distributed by the department chair
- Out-of-state students who are taking classes 100% online will need to complete their state's fingerprinting and background check, child health care form, and any other paperwork required by that state.
- Students must have transportation to and from NHTI approved practicum sites in their senior year.
- Students must have a flexible schedule that allows them to spend weekday mornings and/or afternoons at their practicum site while taking classes. Students should be prepared to plan work hours around their course schedule knowing that these hours will change each semester.
- All students must have access to a digital camera and video-capturing device to complete assignments. Online students will record themselves during practicum to share with their practicum teachers online.

Scholarship Program

CCSNH partners with Granite State College to offer tuition assistance to child care providers who are entering or are currently working in the field of early care and education. Eligible individuals must be working at least 20 hours per week. For more information, contact Diana Menard, department chair of Child and Family Studies, at 603-271-6484 x4281 or dmenard@ccsnh.edu.

There is also a scholarship available for this program through [T.E.A.C.H. NH \(click here for flyer\)](#). The T.E.A.C.H. NH Scholarship Program supports the cost of tuition and books, offers paid release time from work for scholarship recipients, and has a bonus upon completing 9-12 credits within a 12-month period. To be eligible, applicants must live in N.H. and work at least 30 hours a week in a licensed childcare program. Information and applications are available on the [N.H. Connections site](#).

Early Childhood Education Associate of Science Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR	
	Fall Semester					
	ECE 101C	Growth and Development of the Young Child ^{1,2}	3	0	3	
	ECE 188C	Health, Safety, and Nutrition in Early Childhood Education ^{1,2}	3	0	3	
	ENGL 101C	English Composition	4	0	4	
	MATH 120C	Quantitative Reasoning	4	0	4	
					14	
Spring Semester						
	ECE 143C	Teaching and Learning – STEAM ^{1,2}	3	0	3	
	ECE 167C	Positive Behavior Guidance, Supporting Young Children w/ Challenging Behaviors ^{1,2}	3	0	3	
	ECE 215C	Infant/Toddler Development and Programming ^{1,2}	3	0	3	
	ENGL 120MC/COMM 120MC	Communication: Mindful or				
	ENGL xxxC	English Literature Elective	3	0	3	
	PSYC 105C	Introduction to Psychology	3	0	3	
					15	
SECOND YEAR	Fall Semester					
	ECE 155C	Using Children’s Literature to Support Language, Literacy Development ^{1,2}	3	0	3	
	ECE 275C	Practicum 1 – Observation, Interpretation, Assessment, and Portfolio Documentation ¹	2	7	4	
	XX xxxC	Humanities/Fine Arts/Language elective	3	0	3	
	XX xxxC	Lab Science elective ³	3	2	4	
	XX xxxC	Social Science elective ^{3,4}	3	0	3	
						17
	Spring Semester					
	ECE 242C	Child, Family, and Community ¹	3	0	3	
	ECE 270C	Teaching Young Children with Exceptionalities ¹	3	0	3	
	ECE 276C	Practicum II – Exploring Teaching: Implementing Responsive Emergent Curriculum ¹	2	7	4	
	ECE 290C	Early Childhood Leadership Seminar ¹	1	0	1	
XX xxxC	General elective	3	0	3		
					14	
Total Credits					60	

¹Indicates major field course

²Students taking ECE 101C, ECE 143C, ECE 155C, ECE 167C, ECE 188C and ECE 215C will be charged a \$25 NHTI ECE Lab fee for each class.

³BIOL 100C, CHEM 100C, and PHYS 100C do not meet this requirement.

⁴Any course with a prefix of ANTH, ECON, HIST, POLS, PSYC or SOCI (except HIST 104C and HIST 105C)

NOTE: Students whose placement test scores suggest difficulty with lengthy and complex assignments are strongly advised to complete the program in 3 or more years.

EDUCATION

Associate in Science

This program is designed for students to gain a broad-based teacher education preparation with varied hands-on practical experiences in the field. Students are expected to achieve a minimum passing score stipulated by the N.H. Department of Education on the PRAXIS™ Core Academic Skills for Educators tests. Those who intend to transfer to a college in the University System of N.H. must achieve a minimum GPA of 2.7 in addition to passing the PRAXIS Core Skills exam. NHTI also has transfer affiliations with Granite State College, New England College, Plymouth State University, River College, and Southern New Hampshire University.

Program Learning Outcomes

Upon completion of the program of study the NHTI education student will:

- Demonstrate knowledge in the area of learner development by demonstrating an understanding of how learners develop, recognizing that patterns of learning and development vary, and demonstrate the ability to facilitate developmentally appropriate and challenging learning experiences based on the unique needs of each learner.
- In the area of learning differences, demonstrate an understanding of individual differences and diverse cultures and communities and demonstrate the ability to create inclusive learning environments that allow each learner to reach his or her full potential and the ability to employ universal design principles and assistive technology.
- In the area of the learning environments, demonstrate the ability to work with learners to create and access learning environments that support self-directed individual and collaborative learning and demonstrate the use of learning environments not limited to the classroom but extended into the larger community and virtual experiences.
- In the area of content knowledge, demonstrate an understanding of the central concepts, tools of inquiry, and structure of his or her discipline(s) through demonstration of the creation of learning experiences that make the discipline(s) accessible and meaningful for learners and demonstrate innovative applications using differing perspectives to engage learners in critical and creative thinking and collaborative problem-solving related to authentic local and global issues.
- In the area of learning facilitation, use multiple methods of assessment to engage learners in their own growth, document learner progress, provide learner feedback, and inform the educator's ongoing planning and instructional practices.
- Plan for learning facilitation, as demonstrated by being an active member of a learning community, to draw upon knowledge of content area standards, cross-disciplinary skills, learners, the community, and pedagogy to plan learning experiences that support every learner in meeting rigorous learning goals.
- Demonstrate learning facilitation strategies, as demonstrated by an understanding and use of a variety of strategies and tools to encourage learners to develop deep understanding of content areas and their connections to other disciplines and an ability to build skills in accessing, applying, and communicating information.
- In the area of professional responsibility, demonstrate being a reflective practitioner and using evidence to continually evaluate his or her practice, particularly the effects of choices and actions on students, families, and other professionals in the learning community, the ability to adapt practice to meet the needs of each learner, and the ability to collaborate, as a member of the larger learning community with learners, families, colleagues, other professionals, and community members to leverage resources that contribute to student growth and development, learning, and well-being.

Career Information

The NHTI Education degree program prepares students to work in elementary, middle, or secondary schools. Students can pursue related field such as counseling, outdoor education, or community-based programs.

Health, Character, and Technical Requirements

Candidates are encouraged to explore health requirements associated with employment in a school setting.

Character Expectations

- The health and safety of children, adolescents, and other learners is of paramount concern. Applicants for teaching positions in public and private schools in N.H. should be aware that background checks through the N.H. Department of Safety must be completed by potential employers prior to employment.
- Applicants who have been in difficulty with the law, depending upon the nature of the problem, may not be employable or even eligible for practica. Applicants need to discuss these issues in an interview or meeting so future goals will not be compromised.

Technical Standards

These have been established to provide guidance to students about the skills and abilities required to function successfully in public and/or private school classroom as teachers. Applicants who think they may not be able to meet one or more of the technical standards should contact program faculty members. Department faculty will give serious consideration to all academically qualified candidates as long as technical standards can be met with reasonable accommodations. Students in the Education program must have sufficient strength, stamina, and motor coordination to perform the following:

- Hearing and visual acuity to ensure a safe environment and respond quickly in the event of emergency
- Verbal ability to express and exchange information and interpret important instructions
- Writing skills to record students' daily progress and milestones as well as a variety of reports
- Emotional health to work with frequent interruptions, respond appropriately to unexpected situations, and cope with extreme variations in workload and stress levels

Specific Admission Requirements

- Strong verbal and written English language skills
- Personal interview with department chair and/or faculty member
- Credit for experiential learning, workshops and/or college courses taken at other institutions is available; students interested in receiving credit must supply appropriate documentation and meet with the director of admissions and the department chair.
- A criminal record check is required of all students before all clinical experiences in the schools.

All associate degree programs at NHTI require successful completion of at least one semester of college-level mathematics. NHTI strongly recommends that all applicants successfully complete high school Algebra I with a C or higher prior to admission. Those students whose placement testing does not demonstrate readiness for college level mathematics may require more than two years to complete their degree.

Education Associate of Science Curriculum

	Course	Title	CL	LAB	CR
FIRST YEAR	Fall Semester				
	EDU 101C	Introduction to Exceptionalities ¹	3	0	3
	EDU 104C	Foundations of Education ¹	3	0	3
	ENGL 101C	English Composition	4	0	4
	MATH 120C	Quantitative Reasoning or			
	MATH 124C	College Algebra or higher level math ²	4	0	4
	PSYC 105C	Introduction to Psychology	3	0	3
					17
	Spring Semester				
	EDU 200C	Supporting Students with Challenging Behaviors ¹	3	0	3
	EDU 208C	Content Literacy ¹ or			
	EDU 211C	Reading and Language Development ¹	3	0	3
	PSYC 220C	Human Growth and Development: The Life Span	3	0	3
XX xxxC	General elective	3	0	3	
XX xxxC	Humanities/Fine Arts/ Language elective	3	0	3	
				15	
SECOND YEAR	Fall Semester				
	EDU 201C	Legal and Ethical Issues in Education ¹	3	0	3
	EDU 203C	Teaching Strategies for Diverse Learners ¹	3	0	3
	EDU 209C	Curriculum and Assessment ¹	4	0	4
	SOCI 105C	Introduction to Sociology	3	0	3
					13
	Spring Semester				
	EDU 204C	Instructional Technology ¹	3	0	3
	EDU 210C	Cross-Cultural Education Seminar ¹	2	0	2
	EDU 220C	Field Experience in Education ¹	1	6	3
	XX xxxC	Lab Science elective *	3	2	4
XX xxxC	General elective	3	0	3	
				15	
Total Credits					
				60	

¹Indicates major field course

²MATH 251C recommended

³Any lab science course with a prefix of BIOL, CHEM, ENVS, GEOL, PHYS or SCI except BIOL 100C, CHEM 100C and PHYS 100C

HUMAN SERVICE

Associate in Science

This program provides students the knowledge, skills, and abilities for a rewarding career as a helping professional and a stepping stone to further their education. Students acquire a broad understanding of human/social/community service, an interdisciplinary knowledgebase, and the skills required to be a best-practices helping professional (critical thinking, complex reasoning, communication, being a team member, engaging in human interaction, applying content knowledge, life-long learning, ongoing professional development, and personal growth).

This program provides students supervised, hands-on training in the form of two 15-week practica of 125 hours (~ 8 hours/week). Options include human services, mental health, and gerontology. Students practically apply classroom knowledge and theory while they refine their skills. At the same time, students gain confidence on their pathway to becoming a best practices helping professional. Students build a solid foundation and a competitive advantage for future success and employment. This foundation also includes the development of soft skills, which are essential for employability. The practicum experience may lead to full-time entry-level positions.

The Human Service degree includes three embedded certificates:

- A basic and advanced Human Service Certificate, each of which validates student knowledge of specific skills needed for entry-level positions as helping professionals
- Mindful Communications Certificate, which includes four courses that provide students with skills to improve focus, attention, and mood, and reduce stress

Program Learning Outcomes

- Demonstrate a knowledge of and the ability to practice and to engage in the competent, respectful, non-judgmental, supportive, and professional relationships required of the human service professional in their interactions with individuals in various situations: academically, one-on-one, groups, as team members, and at a practicum site with clients and staff.
- Understand the facts, concepts, theories, and principles taught and learned in program courses and how each informs the knowledge, skills, attitudes, capabilities, interest in life-long learning, professional development, and socially conscious behavior required of the competent, ethical, and multi-culturally aware human service professional.
- Identify, analyze, evaluate, and select the appropriate strategies, methods, and tools required for effective communication (verbally, non-verbally, in writing, on computers and electronic devices) with individuals in a variety of human service professional contexts and settings.
- Actively listen, process information, ask questions, seek answers, integrate knowledge, search for meaning, and develop ideas and concepts that result in relevant and consequential action.
- Demonstrate an understanding of the importance of developing healthy practices of self-care, self-reflection, increased self-awareness, and personal responsibility, all of which are critical to being a best-practices helping professional and a productive member of society.
- In addition to the above, the graduate will be able to:
 - Describe the obligations required of the helping professional with respect to adhering to best practices behavioral, ethical, and legal standards of conduct and confidentiality.
 - Establish therapeutic relationships and boundaries with diverse clients.
 - Demonstrate basic, entry level interviewing, counseling, and other skills needed to therapeutically interact with clients.
 - Demonstrate an understanding of effects of alcohol and other drugs on the body and brain.
 - Demonstrate knowledge of accepted principles of client documentation and record management.

Career Information

The Human Service Degree may serve as a stepping stone to a career as a helping professional and/or to a 4-year degree in Human Services, Psychology, Counseling, or related majors. Students who complete this program can enter into the following professions (not an inclusive list):

- Case worker
- Residential counselor
- Support worker
- Case management aide
- Client advocate, intake interviewer
- Social work assistant
- Mental health aide
- Behavioral management aide
- Family support worker

Specific Admission Requirements

Candidates may be required to have a personal interview with a department faculty member.

Health, Technical, and Character Standards

The college must ensure patients/clients are not placed in jeopardy by students during learning experiences. Therefore, students in practica, service learning, and clinical experiences must demonstrate sufficient emotional stability to withstand the stresses, uncertainties, and changing circumstances that characterize patient/client care responsibilities. The student is expected to have the emotional stability required to exercise sound judgment, accept direction and guidance from a supervisor or faculty member, and establish rapport and maintain sensitive interpersonal relationships with employees, customers, and/or patients/clients and their families.

Health Considerations

All Human Service majors will receive NHTI health forms, which must be completed with requested health physical exams, and TB testing prior to the start of classes. Each student is required to obtain NHTI liability insurance starting in each academic year. Students will be billed directly. Students are also eligible to purchase health insurance through NHTI for their own health needs.

Character Expectations

- Human Service and Addiction Counseling students work closely with individuals of all ages. Many of the practicum sites and potential employers will perform a background check through the N.H. Department of Safety, police, and potentially the FBI. A student's driving record will be examined and considered prior to acceptance into some practicum and employment opportunities. The student may be called on to pay for the background checks.
- Applicants who have been in difficulty with the law, depending upon the nature of the problem, may not be employable or even eligible for practica. Applicants need to discuss these issues in an interview or meeting so future goals will not be compromised.

Technical Standards

These have been established as guidance tools to inform program applicants of skills and standards necessary for successful completion of the Human Service programs. Any applicant who has concerns or questions regarding the technical standards is encouraged to contact the department chair. Students must be able to demonstrate the ability to:

- Communicate verbally in classes and as a professional in counseling situations.
- Use sufficient verbal skills and language to collaborate with a variety of helping professionals in clinical, societal, and professional areas; deliver accurate and required information; and search for information.
- Use sufficient writing ability to formulate written assessment, charting notes, reports, etc.
- Sustain cognitive integrity in areas of short- and long-term memory, written documentation, and follow-through of responsibilities
- Concentrate on the execution of treatment plans, assigned skills and tasks, and integration and communication for short and long periods of time.
- Work in settings that may lend themselves to frequent interruptions, immediate crisis response, and role responsibility exchange.
- Cope with a variety of stressors, including people-place occurrences, and demonstrate safe and required care for individuals and the workplace as a whole.
- Secure transportation to practicum sites and classes.
- Consistently attend and participate in classes.

- Demonstrate and maintain organizational skills, time management, and professional respect and conduct, either at a practicum site or in the community.
- Adhere to and practice the Human Service department's ethical guidelines.

Sobriety Statement

The Human Service department abides by the accepted national standard that recommends a minimum of two years of sobriety for any prospective trainee in the field of alcohol and other drug-use counseling.

Human Service Associate of Science Curriculum

	Course	Title	CL	LAB	CR
FIRST YEAR	Fall Semester				
	ENGL 120MC/COMM 120MC	Communications: Mindful	3	0	3
	HSV 111C	Introduction to Human Service ¹	3	0	3
	MHTH 187C	The Helping Relationship: Interpersonal Comm. Skills for Today's Professional ¹	4	0	4
	PSYC 105C	Introduction to Psychology	3	0	3
					13
	Spring Semester				
	BIOL 120C	Human Biology	3	2	4
	ENGL 101MC	English Composition: Mindful	4	0	4
	HSV 242C	Ethics and the Professional Helper ¹	3	0	3
PSYC 283C	Group Counseling ¹	3	0	3	
SOCI 250C	Conflict Resolution in Modern Society ¹	3	0	3	
				17	
SECOND YEAR	Human Service Option				
	Fall Semester				
	ADCL 120C	Survey of Addictive Behavior and Treatment ¹	3	0	3
	ENGL 102MC	Introduction to Literature: Mindful	3	0	3
	HSV 195C	Human Service Practicum I ^{1,2}	2	8	4
	MATH 120C	Quantitative Reasoning*	4	0	4
	PSYC 280C	Individual Counseling: Theory and Practice ¹	3	0	3
					17
	Spring Semester				
	ADCL 235C	Physiology and Pharmacology of Addiction ¹	3	0	3
	ENGL 294MC/COMM 294MC	Communicating Mindfully Capstone	1	0	1
	HSV 221C	Social and Professional Issues in Today's Society ¹	3	0	3
	HSV 298C	Human Service Practicum II ^{1,2}	2	8	4
	PSYC 220C	Human Growth and Development: The Life Span	3	0	3
				14	
Total Credits					
					61

¹Indicates major field course

²To enroll in HSV 195C and HSV 298C; MHTH 195C and MHTH 298C; GERN 195C and GERN 298C, a student must have achieved a C or higher in each practicum prerequisite, an overall GPA of 2.0, and permission of the Department Chair of Human Service. In addition, students must achieve a C or higher in HSV 195C to enroll in HSV 298C; MHTH 195C to enroll in MHTH 298C; and GERN 195C to enroll in GERN 298C.

SECOND YEAR	Mental Health Option				
	Fall Semester				
	ADCL 120C	Survey of Addictive Behavior and Treatment ¹	3	0	3
	ENGL 102MC	Introduction to Literature: Mindful	3	0	3
	MATH 120C	Quantitative Reasoning ²	4	0	4
	MHTH 195C	Mental Health Practicum I ^{1,3}	2	8	4
	PSYC 280C	Individual Counseling: Theory and Practice ¹	3	0	3
					17
	Spring Semester				
	ADCL 235C	Physiology and Pharmacology of Addiction ¹	3	0	3
ENGL 294MC/COMM 294MC	Communicating Mindfully Capstone	1	0	1	
HSV 221C	Social and Professional Issues in Today's Society ¹	3	0	3	
MHTH 298C	Mental Health Practicum II ^{1,3}	2	8	4	
PSYC 220C	Human Growth and Development: The Life Span	3	0	3	
				14	
Total Credits					61

SECOND YEAR	Gerontology Option				
	Fall Semester				
	ADCL 120C	Survey of Addictive Behavior and Treatment ¹	3	0	3
	ENGL 102MC	Introduction to Literature: Mindful	3	0	3
	GERN 195C	Gerontology Practicum I ^{1,3}	2	8	4
	MATH 120C	Quantitative Reasoning ²	4	0	4
	PSYC 280C	Individual Counseling: Theory and Practice ¹	3	0	3
					17
	Spring Semester				
	ADCL 235C	Physiology and Pharmacology of Addiction ¹	3	0	3
ENGL 294MC	Communicating Mindfully Capstone	1	0	1	
GERN 298C	Gerontology Practicum II ^{1,3}	2	8	4	
HSV 221C	Social and Professional Issues in Today's Society ¹	3	0	3	
PSYC 220C	Human Growth and Development: The Life Span	3	0	3	
				14	
Total Credits					61

¹Indicates major field course

²Students must complete MATH 120C to graduate. Depending on results of placement testing, students may be required to complete MATH 092C prior to MATH 120C (MATH 092C Introduction to Algebra with a C or higher, or high school equivalent with a C or higher, is the prerequisite for MATH 120C).

³To enroll in HSV 195C and HSV 298C; MHTH 195C and MHTH 298C; GERN 195C and GERN 298C, a student must have achieved a C or higher in each practicum prerequisite, an overall GPA of 2.0, and permission of the Department Chair of Human Service. In addition, students must achieve a C or higher in HSV 195C to enroll in HSV 298C; MHTH 195C to enroll in MHTH 298C; and GERN 195C to enroll in GERN 298C.

ADVANCED HUMAN SERVICE

Certificate

This certificate is designed to be completed in one year over two semesters. It provides the opportunity to explore and build on the foundational education acquired in the basic Human Service Certificate program. Students focus coursework on academic and career interests in human services, mental health, gerontology, substance abuse disorder treatment (SUD Tx), and/or the specific sector of the helping professions that interests them.

This certificate includes a semester-long internship in which students practically apply their classroom lessons. This minimum 125-hour supervised internship involves approximately 8-10 hours per week for 15 weeks at a site of the student's choosing.

Because this certificate combines classroom learning with field experience, students gain the basic knowledge, skills, and abilities to prepare them to ethically and competently fulfill the duties and responsibilities required for employment as a helping professional. This includes an understanding of and sensitivity to diverse populations. Students can matriculate in the Human Service Associate Degree program, which includes a second supervised internship experience. All courses are taught by instructors with practical experience as helping professionals. This program is financial aid-eligible.

Program Learning Outcomes

Learning outcomes for this advanced certificate include critical thinking, complex reasoning, communication, being a team member, engaging in human interaction, applying content knowledge, plus lifelong learning, ongoing professional development, and personal growth.

In addition, students are able to:

- Describe the obligations required of the helping professional with respect to adhering to best practices behavioral, ethical, and legal standards of conduct and confidentiality.
- Establish therapeutic relationships and boundaries with diverse clients.
- Demonstrate basic, entry-level interviewing, counseling, and other skills needed to therapeutically interact with clients.
- Demonstrate knowledge of accepted principles of client documentation and record management.

Students gain knowledge of human service delivery systems, case management techniques, ethics, and group facilitation skills. Learned communication skills include conflict resolution and the appropriate interpersonal and social skills to use in interactions with diverse populations using principles of equity, justice, and inclusion.

Graduates can also:

- Demonstrate a knowledge of and the ability to practice and to engage in the competent respectful, non-judgmental, supportive, and professional relationships required of the human service professional in their interactions with individuals in various situations: academically, one-on-one, groups, as team members, and at a practicum site with clients and staff.
- Understand the facts, concepts, theories, and principles taught and learned in program courses and how each informs the knowledge, skills, attitudes, capabilities, interest in life-long learning, professional development, and socially conscious behavior required of the competent, ethical, and multi-culturally aware human service professional.
- Identify, analyze, evaluate, and select the appropriate strategies, methods, and tools required for effective communication (verbally, non-verbally, in writing, on computers and electronic devices) with individuals in a variety of human service professional contexts and settings.
- Actively listen, process information, ask questions, seek answers, integrate knowledge, search for meaning, and develop ideas and concepts that result in relevant and consequential action.
- Understand the importance of developing healthy practices of self-care, self-reflection, increased self-awareness, and personal responsibility, all of which are critical to being a best-practices helping professional and a productive member of society.
- In addition to the above, graduates will be able to:
 - Describe the obligations required of the helping professional with respect to adhering to best practices behavioral, ethical, and legal standards of conduct and confidentiality.

- Establish therapeutic relationships and boundaries with diverse clients.
- Demonstrate basic, entry-level interviewing, counseling, and other skills needed to therapeutically interact with clients.
- Demonstrate knowledge of accepted principles of client documentation and record management.

Career Information

Students are provided a strong foundation for employment and participation in the rapidly changing workplace of the helping professional. Individuals already employed in entry-level helping professional positions will find this certificate useful to upgrade their existing knowledge base and advance in their careers.

Community-based organizations and agencies where students can seek employment include human services, mental health, gerontology, SUD Tx, social services, child and family services, crisis services, assistance programs, and senior centers. Students who complete this program can enter into the following professions: case manager, direct support worker, mental health worker, veterans' services worker, recovery support worker, behavioral management aid, group home worker, residential counselor, and social worker assistant.

Health, Technical, and Character Standards

The college must ensure patients/clients are not placed in jeopardy by students during learning experiences. Therefore, students in practica, service learning, and clinical experiences must demonstrate sufficient emotional stability to withstand the stresses, uncertainties, and changing circumstances that characterize patient/client care responsibilities. The student is expected to have the emotional stability required to exercise sound judgment, accept direction and guidance from a supervisor or faculty member, and establish rapport and maintain sensitive interpersonal relationships with employees, customers, and/or patients/clients and their families.

Health Considerations

All Human Service majors will receive NHTI health forms, which must be completed with requested health physical exams, and TB testing prior to the start of classes. Each student is required to obtain NHTI liability insurance starting in each academic year. Students will be billed directly. Students are also eligible to purchase health insurance through NHTI for their own health needs.

Character Expectations

- Human Service and Addiction Counseling students work closely with individuals of all ages. Many of the practicum sites and potential employers will perform a background check through the N.H. Department of Safety, police, and potentially the FBI. A student's driving record will be examined and considered prior to acceptance into some practicum and employment opportunities. The student may be called on to pay for the background checks.
- Applicants who have been in difficulty with the law, depending upon the nature of the problem, may not be employable or even eligible for practica. Applicants need to discuss these issues in an interview or meeting so future goals will not be compromised.

Technical Standards

These have been established as guidance tools to inform program applicants of skills and standards necessary for successful completion of the Human Service programs. Any applicant who has concerns or questions regarding the technical standards is encouraged to contact the department chair. Students must be able to demonstrate the ability to:

- Communicate verbally in classes and as a professional in counseling situations.
- Use sufficient verbal skills and language to collaborate with a variety of helping professionals in clinical, societal, and professional areas; deliver accurate and required information; and search for information.
- Use sufficient writing ability to formulate written assessment, charting notes, reports, etc.
- Sustain cognitive integrity in areas of short- and long-term memory, written documentation, and follow-through of responsibilities.
- Concentrate on the execution of treatment plans, assigned skills and tasks, and integration and communication for short and long periods of time.
- Work in settings that may lend themselves to frequent interruptions, immediate crisis response, and role responsibility exchange.

- Cope with a variety of stressors, including people-place occurrences, and demonstrate safe and required care for individuals and the workplace as a whole.
- Secure transportation to practicum sites and classes.
- Consistently attend and participate in classes.
- Demonstrate and maintain organizational skills, time management, and professional respect and conduct, either at a practicum site or in the community.
- Adhere to and practice the Human Service department’s ethical guidelines.

Sobriety Statement

The Human Service department abides by the accepted national standard that recommends a minimum of two years of sobriety for any prospective trainee in the field of alcohol and other drug-use counseling.

Specific Admission Requirements

Candidates are required to have a personal interview with the department chair of Human Services.

Advanced Human Service Certificate Curriculum

Course	Title	CL	LAB	CR
ADCL 120C	Survey of Addictive Behavior and Treatment	3	0	3
PSYC 280C	Individual Counseling: Theory and Practice	3	0	3
PSYC 220C	Human Growth and Development: The Life Span	3	0	3
ADCL 235C	Physiology and Pharmacology of Addiction	3	0	3
HSV 221C	Social and Professional Issues in Today’s Society	3	0	3
HSV 195C	Human Service Practicum I ¹	2	8	4
Total Credits				19

¹To enroll in HSV 195C a student must have achieved a Grade of “C” or higher in each practicum prerequisite, have an overall GPA of 2.0, plus Permission of the Department Chair of Human Service.

CAREER AND TECHNICAL EDUCATION ALTERNATIVE

Certification

This certification program is designed to offer students the knowledge and skills required by the N.H. Department of Education standards for career and technical educator certification. The program is designed to allow students to use credits toward an Associate of Science in Education and/or a bachelor's degree. Students in this program may have:

- A high school diploma or equivalent and significant experience and would like to earn a credential to teach and college credits toward an associate or bachelor's degree
- Some college courses or an associate degree and significant experience and would like to earn a credential to teach or college credits toward an associate or bachelor's degree
- A bachelor's degree and significant experience and would like to earn a credential to teach
- Evidence they may be eligible to receive credit for courses via aggregate educational experience and/or occupational experiences

This program is financial aid-eligible.

Program Learning Outcomes

Upon completion of the program of study the NHTI education student will:

- Demonstrate knowledge in the area of learner development by demonstrating an understanding of how learners develop, recognizing that patterns of learning and development vary, and demonstrate the ability to facilitate developmentally appropriate and challenging learning experiences based on the unique needs of each learner.
- In the area of learning differences, demonstrate an understanding of individual differences and diverse cultures and communities and demonstrate the ability to create inclusive learning environments that allow each learner to reach his or her full potential and the ability to employ universal design principles and assistive technology.
- In the area of the learning environments, demonstrate the ability to work with learners to create and access learning environments that support self-directed individual and collaborative learning and demonstrate the use of learning environments not limited to the classroom but extended into the larger community and virtual experiences.
- In the area of content knowledge, demonstrate an understanding of the central concepts, tools of inquiry, and structure of his or her discipline(s) through demonstration of the creation of learning experiences that make the discipline(s) accessible and meaningful for learners and demonstrate innovative applications using differing perspectives to engage learners in critical and creative thinking and collaborative problem-solving related to authentic local and global issues.
- In the area of learning facilitation, use multiple methods of assessment to engage learners in their own growth, document learner progress, provide learner feedback, and inform the educator's ongoing planning and instructional practices.
- Plan for learning facilitation, as demonstrated by being an active member of a learning community, to draw upon knowledge of content area standards, cross-disciplinary skills, learners, the community, and pedagogy to plan learning experiences that support every learner in meeting rigorous learning goals.
- Demonstrate learning facilitation strategies, as demonstrated by an understanding and use of a variety of strategies and tools to encourage learners to develop deep understanding of content areas and their connections to other disciplines and an ability to build skills in accessing, applying, and communicating information.
- In the area of professional responsibility, demonstrate being a reflective practitioner and using evidence to continually evaluate his or her practice, particularly the effects of choices and actions on students, families, and other professionals in the learning community, the ability to adapt practice to meet the needs of each learner, and the ability to collaborate, as a member of the larger learning community with learners, families, colleagues, other professionals, and community members to leverage resources that contribute to student growth and development, learning, and well-being.

Health, Character, and Technical Requirements

Candidates are encouraged to explore health requirements associated with employment in a school setting.

Character Expectations

- The health and safety of children, adolescents, and other learners is of paramount concern. Applicants for teaching positions in public and private schools in N.H. should be aware that background checks through the N.H. Department of Safety must be completed by potential employers prior to employment.
- Applicants who have been in difficulty with the law, depending upon the nature of the problem, may not be employable or even eligible for practica. Applicants need to discuss these issues in an interview or meeting so future goals will not be compromised.

Technical Standards

These have been established to provide guidance to students about the skills and abilities required to function successfully in public and/or private school classroom as teachers. Applicants who think they may not be able to meet one or more of the technical standards should contact program faculty members. Department faculty will give serious consideration to all academically qualified candidates as long as technical standards can be met with reasonable accommodations. Students in the Education program must have sufficient strength, stamina, and motor coordination to perform the following:

- Hearing and visual acuity to ensure a safe environment and respond quickly in the event of emergency
- Verbal ability to express and exchange information and interpret important instructions
- Writing skills to record students' daily progress and milestones as well as a variety of reports
- Emotional health to work with frequent interruptions, respond appropriately to unexpected situations, and cope with extreme variations in workload and stress levels

Career Information

Prospective career and technical educators will possess significant life/work experience or academic preparation in a career and technical content area. Career and technical center directors and school districts retain the authority to review the eligibility of all prospective career and technical educators and define any or all of the certificate component courses to be required for credentialing, on an individual basis. These individuals will then be referred to NHTI for course registration and completion.

Accreditation

This program has been developed using the N.H. competencies required for Ed 610.02 Professional Education and Ed 507.02 Teachers of Career and Technical Education.

Career and Technical Education Alternative Certificate Curriculum

Course	Title	CL	LAB	CR
EDU 104C	Foundations of Education	3	0	3
EDU 204C	Instructional Technology	3	0	3
EDU 209C	Curriculum and Assessment	4	0	4
EDU 220C	Field Experience in Education	1	5	3
EDU 230C	Essentials of Career and Technical Curriculum and Instruction	3	0	3
ENGL 101C	English Composition	4	0	4
PSYC 220C	Human Growth and Development: The Life Span	3	0	3
Total Credits				26

EARLY CHILDHOOD EDUCATION

Certificate

This certificate program helps students meet a lead teacher requirement, as outlined in N.H.'s Child Care Program Licensing Rules. Students take six courses that provides a solid foundation to work with young children and their families. This program is financial aid-eligible.

Program Learning Outcomes

Students who complete this certificate are able to:

- Demonstrate an understanding of young children's characteristics and needs to create environments that are healthy, respectful, supportive, and challenging for each child.
- Demonstrate that they know about, understand, and value the importance of creating respectful, reciprocal relationships to support and empower families in their communities.
- Demonstrate an understanding of developmentally effective approaches which emphasize positive relationships and supportive interactions to influence outcomes for individual children.
- Demonstrate their ability to design, implement, and evaluate learning experiences that promote a wide range of academic disciplines to build meaningful curriculum.

Career Information

This courses in this certificate meet the training and education requirements for the State of N.H. Early Childhood Teacher Credential, Level 4.

Program-Specific Requirements

- Students will spend designated hours each week with infants, toddlers, preschoolers, or kindergarteners while taking early childhood courses. These hours will be considered a component of class participation. NHTI has an onsite lab school to meet the needs of these required lab hours. All students are expected to use the onsite lab school unless they work full-time in a licensed child care center or are 100% online and live at a distance from the NHTI campus that prohibits in-person attendance.
- Upon acceptance into the program, students must complete the following paperwork:
 - A complete set of electronic fingerprints completed by the Department of Safety
 - Submission of a criminal record check that comes back clear or non-disqualifying; the cost associated with the fingerprinting and criminal record check is the responsibility of the student.
 - Completion of the licensing child care personnel health form by a licensed health provider indicating the student is in good physical health and has no mental or emotional disturbances that would prohibit him/her from caring for children in a group setting
 - Signed confidentiality form
 - Other related documents distributed by the department chair
- Out-of-state students who are taking classes 100% online will need to complete their state's fingerprinting and background check, child health care form, and any other paperwork required by that state.
- Students must have transportation to and from NHTI approved practicum sites in their senior year.
- Students must have a flexible schedule that allows them to spend weekday mornings and/or afternoons at their practicum site while taking classes. Students should be prepared to plan work hours around their course schedule knowing that these hours will change each semester.
- All students must have access to a digital camera and video-capturing device to complete assignments. Online students will record themselves during practicum to share with their practicum teachers online.

Scholarship Program

CCSNH partners with Granite State College to offer tuition assistance to child care providers who are entering or are currently working in the field of early care and education. Eligible individuals must be working at least 20 hours per week. For more information, contact Diana Menard, department chair of Child and Family Studies, at 603-271-6484 x4281 or dmenard@ccsnh.edu.

There is also a scholarship available for this program through T.E.A.C.H. NH. The T.E.A.C.H. NH Scholarship Program supports the cost of tuition and books, offers paid release time from work for scholarship recipients, and has a bonus upon completing 9-12 credits within a 12-month period. To be eligible, applicants must live in N.H. and work at least 30 hours a week in a licensed childcare program.

Early Childhood Education Certificate Curriculum

Course	Title	CL	LAB	CR
ECE 101C	Growth and Development of the Young Child ¹	3	0	3
ECE155C	Using Children’s Literature to Support Language and Literacy Development ¹	3	0	3
ECE 188C	Health, Safety and Nutrition in Early Childhood Education ¹	3	0	3
ECE 143C	Teaching and Learning STEAM ¹	3	0	3
ECE 167C	Positive Behavior Guidance and Supporting Children with Challenging Behaviors ¹	3	0	3
ECE 242C	Child, Family, and Community	3	0	3
Total Credits				19-21

EARLY CHILDHOOD EDUCATION ADVANCED

Certificate

This certificate is for students interested in furthering their knowledge in specialized topics such as children with disabilities, infant and toddler developments, and participating in a practicum experience. The Early Childhood Advanced Certificate program is available days and evenings. This program is financial aid-eligible.

Program Learning Outcomes

Students who complete the program will be able to:

- Understand young children's characteristics and needs to create environments that are healthy, respectful, supportive, and challenging for each child.
- Demonstrate that they know about, understand, and value the importance of creating respectful, reciprocal relationships to support and empower families in their communities.
- Understand developmentally effective approaches which emphasize positive relationships and supportive interactions to influence outcomes for individual children.
- Design, implement, and evaluate learning experiences that promote a wide range of academic disciplines to build meaningful curriculum.
- Responsibly observe, document, and assess children in a manner that supports children and families.
- Implement interventions for young children with ASD and/or disabilities across all developmental domains.
- Demonstrate a variety of early childhood field experiences.

Career Information

The courses in the Early Childhood Education Advanced Certificate meet the training and education requirements for the [State of NH Early Childhood Teacher Credential, Level 4](#).

Program-Specific Requirements

- Students will spend designated hours each week with infants, toddlers, preschoolers, or kindergarteners while taking early childhood courses. These hours will be considered a component of class participation. NHTI has an onsite lab school to meet the needs of these required lab hours. All students are expected to use the onsite lab school unless they work full-time in a licensed child care center or are 100% online and live at a distance from the NHTI campus that prohibits in-person attendance.
- Upon acceptance into the program, students must complete the following paperwork:
 - A complete set of electronic fingerprints completed by the Department of Safety
 - Submission of a criminal record check that comes back clear or non-disqualifying; the cost associated with the fingerprinting and criminal record check is the responsibility of the student.
 - Completion of the licensing child care personnel health form by a licensed health provider indicating the student is in good physical health and has no mental or emotional disturbances that would prohibit him/her from caring for children in a group setting
 - Signed confidentiality form
 - Other related documents distributed by the department chair
- Out-of-state students who are taking classes 100% online will need to complete their state's fingerprinting and background check, child health care form, and any other paperwork required by that state.
- Students must have transportation to and from NHTI approved practicum sites in their senior year.
- Students must have a flexible schedule that allows them to spend weekday mornings and/or afternoons at their practicum site while taking classes. Students should be prepared to plan work hours around their course schedule knowing that these hours will change each semester.
- All students must have access to a digital camera and video-capturing device to complete assignments. Online students will record themselves during practicum to share with their practicum teachers online.

Scholarship Program

CCSNH partners with Granite State College to offer tuition assistance to child care providers who are entering or are currently working in the field of early care and education. Eligible individuals must be working at least 20 hours per

week. For more information, contact Diana Menard, department chair of Child and Family Studies, at 603-271-6484 x4281 or dmenard@ccsnh.edu.

There is also a scholarship available for this program through T.E.A.C.H. NH. The T.E.A.C.H. NH Scholarship Program supports the cost of tuition and books, offers paid release time from work for scholarship recipients, and has a bonus upon completing 9-12 credits within a 12-month period. To be eligible, applicants must live in N.H. and work at least 30 hours a week in a licensed childcare program.

Early Childhood Education Advanced Certificate Curriculum

Course	Title	CL	LAB	CR
ECE 101C	Growth and Development of the Young Child ¹	3	0	3
ECE 155C	Using Children’s Literature to Support Language and Literacy Development ¹	3	0	3
ECE 188C	Health, Safety, and Nutrition in Early Childhood Education ¹	3	0	3
ECE 143C	Teaching and Learning STEAM ¹	3	0	3
ECE 167C	Positive Behavior Guidance and Supporting Children with Challenging Behaviors ¹	3	0	3
ECE 242C	Child, Family, and Community	3	0	3
ECE 225C	Autism Spectrum Disorder and	3	0	3
ECE 275C	Practicum I – Observation, Interpretation, Assessment, Portfolio Documentation or	2	7	4
ECE 215C	Infant/Toddler Development and Programming	3	0	3
ECE 270C	Teaching Young Children with Exceptionalities	3	0	3
Total Credits				24-25

¹Students taking ECE 101C, ECE 143C, ECE 155C, ECE 167C, and ECE 188C will be charged a \$25 NHTI ECE Lab fee per class.

EARLY CHILDHOOD EDUCATION ENTRY LEVEL

Certificate

This certificate qualifies a student to join a workplace as an associate teacher. This program is available 100% online.

Program Learning Outcomes

The Child and Family Studies program is hands-on, project-centered, and competency and evidence-based to facilitate the growth of future teachers and leaders preparing to work with children, families, and communities. Graduates are able to:

- Understand young children's characteristics and needs to create environments that are healthy, respectful, supportive, and challenging for each child.
- Understand developmentally effective approaches that emphasize positive relationships and supportive interactions to influence outcomes for individual children.
- Design, implement, and evaluate learning experiences that promote a wide range of academic disciplines to build meaningful curriculum.

Career Information

The courses in the Early Childhood Education Entry-Level Certificate meet the training and education requirements for the [State of NH Early Childhood Teacher Credential, Level 3](#).

Program-Specific Requirements

- Students will spend designated hours each week with infants, toddlers, preschoolers, or kindergarteners while taking early childhood courses. These hours will be considered a component of class participation. NHTI has an onsite lab school to meet the needs of these required lab hours. All students are expected to use the onsite lab school unless they work full-time in a licensed child care center or are 100% online and live at a distance from the NHTI campus that prohibits in-person attendance.
- Upon acceptance into the program, students must complete the following paperwork:
 - A complete set of electronic fingerprints completed by the Department of Safety
 - Submission of a criminal record check that comes back clear or non-disqualifying; the cost associated with the fingerprinting and criminal record check is the responsibility of the student.
 - Completion of the licensing child care personnel health form by a licensed health provider indicating the student is in good physical health and has no mental or emotional disturbances that would prohibit him/her from caring for children in a group setting
 - Signed confidentiality form
 - Other related documents distributed by the department chair
- Out-of-state students who are taking classes 100% online will need to complete their state's fingerprinting and background check, child health care form, and any other paperwork required by that state.
- Students must have transportation to and from NHTI approved practicum sites in their senior year.
- Students must have a flexible schedule that allows them to spend weekday mornings and/or afternoons at their practicum site while taking classes. Students should be prepared to plan work hours around their course schedule knowing that these hours will change each semester.
- All students must have access to a digital camera and video-capturing device to complete assignments. Online students will record themselves during practicum to share with their practicum teachers online.

Scholarship Program

CCSNH partners with Granite State College to offer tuition assistance to child care providers who are entering or are currently working in the field of early care and education. Eligible individuals must be working at least 20 hours per week. For more information, contact Diana Menard, department chair of Child and Family Studies, at 603-271-6484 x4281 or dmenard@ccsnh.edu.

There is also a scholarship available for this program through T.E.A.C.H. NH. The T.E.A.C.H. NH Scholarship Program supports the cost of tuition and books, offers paid release time from work for scholarship recipients, and has a bonus

upon completing 9-12 credits within a 12-month period. To be eligible, applicants must live in N.H. and work at least 30 hours a week in a licensed childcare program.

Early Childhood Education Entry Level Certificate Curriculum

Course	Title	CL	LAB	CR
ECE 101C	Growth and Development of the Young Child ¹	3	0	3
ECE 167C	Positive Behavior Guidance and Supporting Children with Challenging Behaviors ¹	3	0	3
ECE 143C	Teaching and Learning STEAM ¹ or			
ECE 155C	Using Children’s Literature to Support Language and Literacy Development ¹ or			
ECE 188C	Health, Safety, and Nutrition in Early Childhood Education ¹ or			
ECE 215C	Infant/Toddler Development and Programming	3	0	3
Total Credits				9

¹Students taking ECE 101C, ECE 143C, ECE 155C, ECE 167C, and ECE 188C will be charged a \$25 NHTI ECE Lab fee per class.

EDUCATION

Certificate

This program is designed for students planning to work with learners and students who are already working in a school under an alternative certificate path to receive a teaching license. Classes are offered day, evening, or 100% online and can transfer to an associate degree, bachelor's degree, or teacher certification certificate/license. This certificate is stackable into the Education Associate Degree program. This program is financial aid-eligible.

Program Learning Outcomes

Upon completion of the program of study the NHTI education student will:

- Demonstrate knowledge in the area of learner development by demonstrating an understanding of how learners develop, recognizing that patterns of learning and development vary, and demonstrate the ability to facilitate developmentally appropriate and challenging learning experiences based on the unique needs of each learner.
- In the area of learning differences, demonstrate an understanding of individual differences and diverse cultures and communities and demonstrate the ability to create inclusive learning environments that allow each learner to reach his or her full potential and the ability to employ universal design principles and assistive technology.
- In the area of the learning environments, demonstrate the ability to work with learners to create and access learning environments that support self-directed individual and collaborative learning and demonstrate the use of learning environments not limited to the classroom but extended into the larger community and virtual experiences.
- In the area of content knowledge, demonstrate an understanding of the central concepts, tools of inquiry, and structure of his or her discipline(s) through demonstration of the creation of learning experiences that make the discipline(s) accessible and meaningful for learners and demonstrate innovative applications using differing perspectives to engage learners in critical and creative thinking and collaborative problem-solving related to authentic local and global issues.
- In the area of learning facilitation, use multiple methods of assessment to engage learners in their own growth, document learner progress, provide learner feedback, and inform the educator's ongoing planning and instructional practices.
- Plan for learning facilitation, as demonstrated by being an active member of a learning community, to draw upon knowledge of content area standards, cross-disciplinary skills, learners, the community, and pedagogy to plan learning experiences that support every learner in meeting rigorous learning goals.
- Demonstrate learning facilitation strategies, as demonstrated by an understanding and use of a variety of strategies and tools to encourage learners to develop deep understanding of content areas and their connections to other disciplines and an ability to build skills in accessing, applying, and communicating information.
- In the area of professional responsibility, demonstrate being a reflective practitioner and using evidence to continually evaluate his or her practice, particularly the effects of choices and actions on students, families, and other professionals in the learning community, the ability to adapt practice to meet the needs of each learner, and the ability to collaborate, as a member of the larger learning community with learners, families, colleagues, other professionals, and community members to leverage resources that contribute to student growth and development, learning, and well-being.

Health, Character, and Technical Requirements

Candidates are encouraged to explore health requirements associated with employment in a school setting.

Character Expectations

- The health and safety of children, adolescents, and other learners is of paramount concern. Applicants for teaching positions in public and private schools in N.H. should be aware that background checks through the N.H. Department of Safety must be completed by potential employers prior to employment.
- Applicants who have been in difficulty with the law, depending upon the nature of the problem, may not be employable or even eligible for practica. Applicants need to discuss these issues in an interview or meeting so future goals will not be compromised.

Technical Standards

These have been established to provide guidance to students about the skills and abilities required to function successfully in public and/or private school classroom as teachers. Applicants who think they may not be able to meet one or more of the technical standards should contact program faculty members. Department faculty will give serious consideration to all academically qualified candidates as long as technical standards can be met with reasonable accommodations. Students in the Education program must have sufficient strength, stamina, and motor coordination to perform the following:

- Hearing and visual acuity to ensure a safe environment and respond quickly in the event of emergency
- Verbal ability to express and exchange information and interpret important instructions
- Writing skills to record students' daily progress and milestones as well as a variety of reports
- Emotional health to work with frequent interruptions, respond appropriately to unexpected situations, and cope with extreme variations in workload and stress levels

Career Information

Students who complete this program can enter into the following professions (not an inclusive list):

- K-12 schools
- Community organizations specializing in working with learners

Education Certificate Curriculum

Course	Title	CL	LAB	CR
EDU 104C	Foundations of Education	3	0	3
EDU 200C	Supporting Students with Challenging Behaviors	3	0	3
EDU 204C	Instructional Technology	3	0	3
EDU 209C	Curriculum and Assessment	4	0	4
EDU 210C	Cross-Cultural Education Seminar	2	0	2
Total Credits				18

¹Students taking ECE 101C, ECE 143C, ECE 155C, ECE 167C, and ECE 188C will be charged a \$25 NHTI ECE Lab fee per class.

ESOL

Certificate

This certificate is jointly administered by the Office of Cross-Cultural Education and NHTI Education department and provides students with a strong introduction to ESOL teaching. This program is for:

- Those interested in working in programs that require experience working with ESOL learners
- Para-educators looking to enhance their skills and move toward a certification in ESOL
- Teachers seeking professional development skills related to working with ESOL learners
- People interested in broadening their knowledge, understanding, and appreciation of cultural and linguistic differences, language acquisition, literacy development, and reflective instructional practices
- People interested developing and using instructional and assessment strategies and materials that raise the achievement levels and increase the academic success of ESOL learners

This program is financial aid-eligible.

Program Learning Outcomes

- Broaden the student's knowledge, understanding, and appreciation of cultural and linguistic differences, language acquisition, literacy development, and reflective instructional practices within the ESOL setting.
- Enhance the student's abilities to develop and use instructional, and assessment strategies and materials that raise the achievement levels and increase the academic success of English language learners.

Career Information

This program will prepare students to work in the ESOL community. While the certificate program in ESOL does not directly lead to N.H. licensure in teaching ESOL, those students pursuing licensure may apply coursework toward the Teacher Education Conversion Program in ESOL.

Specific Admission Requirements

Interested applicants must hold a bachelor's degree and pass a criminal background check.

ESOL Certificate Curriculum

Course	Title	CL	LAB	CR
TECP 69C	Cross-Cultural Education Seminar	2	0	2
TECP 73C	Field Experience in Education	1	12	5
TECP 86C	Introduction to Linguistics	3	0	3
TECP 87C	Language, Reading, and Literacy in ESOL	3	0	3
TECP 88C	Curriculum and Design and Assessment in ESOL	4	0	4
Total Credits				17

HUMAN SERVICE

Certificate

This program is designed to be completed in one year over two semesters. Students gain knowledge, skills, and abilities to prepare them to fulfill the duties and responsibilities required for entry-level employment as a helping professional. After completing this certificate, students can matriculate into the Advanced Human Service Certificate or the Human Service Associate Degree. Both include supervised, real-world internship experiences. Courses are taught by instructors with practical experience as helping professionals. This program is financial aid-eligible.

Program Learning Outcomes

Learning outcomes for this certificate include critical thinking, complex reasoning, communication, being a team member, engaging in human interaction, applying content knowledge, plus lifelong learning, ongoing professional development, and personal growth. In addition, students are able to:

- Describe the obligations required of the helping professional with respect to adhering to best practices behavioral, ethical, and legal standards of conduct and confidentiality.
- Establish therapeutic relationships and boundaries with diverse clients.
- Demonstrate entry-level interviewing, counseling, and other skills to therapeutically interact with clients.
- Demonstrate knowledge of accepted principles of client documentation and record management.

Students gain knowledge of human service delivery systems, case management techniques, ethics, and group facilitation skills. Learned communication skills include conflict resolution and appropriate interpersonal and social skills for interactions with diverse populations using principles of equity, justice, and inclusion. Graduates can also:

- Demonstrate a knowledge of and the ability to practice and to engage in the competent respectful, non-judgmental, supportive, and professional relationships required of the human service professional in their interactions with individuals in various situations: academically, one-on-one, groups, as team members, and at a practicum site with clients and staff.
- Understand the facts, concepts, theories, and principles taught and learned in program courses and how each informs the knowledge, skills, attitudes, capabilities, interest in life-long learning, professional development, and socially conscious behavior required of the competent, ethical, and multi-culturally aware human service professional.
- Identify, analyze, evaluate, and select the appropriate strategies, methods, and tools required for effective communication (verbally, non-verbally, in writing, on computers and electronic devices) with individuals in a variety of human service professional contexts and settings.
- Actively listen, process information, ask questions, seek answers, integrate knowledge, search for meaning, and develop ideas and concepts that result in relevant and consequential action.
- Understand the importance of developing healthy practices of self-care, self-reflection, increased self-awareness, and personal responsibility, all of which are critical to being a best practices helping professional and a productive member of society.
- In addition to the above, graduates will be able to:
 - Describe the obligations required of the helping professional with respect to adhering to best practices behavioral, ethical, and legal standards of conduct and confidentiality.
 - Establish therapeutic relationships and boundaries with diverse clients.
 - Demonstrate basic, entry-level interviewing, counseling, and other skills needed to therapeutically interact with clients.
 - Demonstrate knowledge of accepted principles of client documentation and record management.

Click here for the full [PDF of learning outcomes](#).

Career Information

Potential community-based organizations and agencies where students seek employment include human services, mental health, gerontology, substance use disorder treatment, social services, child and family services, crisis services, assistance programs, and senior centers. Potential job titles include case manager, direct support worker, mental health worker, veterans services worker, recovery support worker, behavioral management aid, group home worker, residential counselor, and social worker assistant.

Specific Admission Requirements

Candidates are required to have a personal interview with the department chair of Human Services.

Health, Technical, and Character Standards

The college must ensure patients/clients are not placed in jeopardy by students during learning experiences. Therefore, students in practica, service learning, and clinical experiences must demonstrate sufficient emotional stability to withstand the stresses, uncertainties, and changing circumstances that characterize patient/client care responsibilities. The student is expected to have the emotional stability required to exercise sound judgment, accept direction and guidance from a supervisor or faculty member, and establish rapport and maintain sensitive interpersonal relationships with employees, customers, and/or patients/clients and their families.

Health Considerations

All Human Service majors will receive NHTI health forms, which must be completed with requested health physical exams, and TB testing prior to the start of classes. Each student is required to obtain NHTI liability insurance starting in each academic year. Students will be billed directly. Students are also eligible to purchase health insurance through NHTI for their own health needs.

Character Expectations

- Human Service and Addiction Counseling students work closely with individuals of all ages. Many of the practicum sites and potential employers will perform a background check through the N.H. Department of Safety, police, and potentially the FBI. A student's driving record will be considered prior to acceptance into some practicum and employment opportunities. The student may be called on to pay for the background checks.
- Applicants who have been in difficulty with the law, depending upon the nature of the problem, may not be employable or even eligible for practica. Applicants need to discuss these issues in an interview or meeting so future goals will not be compromised.

Technical Standards

These have been established as guidance tools to inform program applicants of skills and standards necessary for successful completion of the Human Service programs. Any applicant who has concerns or questions regarding the technical standards is encouraged to contact the department chair. Students must be able to demonstrate the ability to:

- Communicate verbally in classes and as a professional in counseling situations
- Use sufficient verbal skills and language to collaborate with a variety of helping professionals in clinical, societal, and professional areas; deliver accurate and required information; and search for information
- Use sufficient writing ability to formulate written assessment, charting notes, reports, etc.
- Sustain cognitive integrity in areas of short- and long-term memory, written documentation, and follow-through of responsibilities
- Concentrate on the execution of treatment plans, assigned skills and tasks, and integration and communication for short and long periods of time
- Work in settings that may lend themselves to frequent interruptions, immediate crisis response, and role responsibility exchange
- Cope with a variety of stressors, including people-place occurrences, and demonstrate safe and required care for individuals and the workplace as a whole
- Secure transportation to practicum sites and classes
- Consistently attend and participate in classes
- Demonstrate and maintain organizational skills, time management, and professional respect and conduct, either at a practicum site or in the community
- Adhere to and practice the Human Service department's ethical guidelines

Sobriety Statement

The Human Service department abides by the accepted national standard that recommends a minimum of two years of sobriety for any prospective trainee in the field of alcohol and other drug-use counseling.

Human Service Certificate Curriculum

Course	Title	CL	LAB	CR
HSV 111C	Introduction to Human Service	3	0	3
MHTH 187C	The Helping Relationship: Interpersonal Comm. Skills for Today's Professional	4	0	4
PSYC 105C	Introduction to Psychology	3	0	3
HSV 242C	Ethics and the Professional Helper	3	0	3
PSYC 283C	Group Counseling	3	0	3
SOCI 250C	Conflict Resolution in Modern Society	3	0	3
Total Credits				19

SPECIAL EDUCATION

Certificate

Students interested in this program may include those interested in exploring careers in special education, current paraeducators looking to enhance their skills and possibly earn a degree, and current teachers who want to develop skills related to working with children with special needs. This certificate in Special Education is stackable into the Education degree program. This program is financial aid-eligible and available 100% online.

Program Learning Outcomes

Upon completion of the program of study the NHTI education student will:

- Demonstrate knowledge in the area of learner development by demonstrating an understanding of how learners develop, recognizing that patterns of learning and development vary, and demonstrate the ability to facilitate developmentally appropriate and challenging learning experiences based on the unique needs of each learner.
- In the area of learning differences, demonstrate an understanding of individual differences and diverse cultures and communities and demonstrate the ability to create inclusive learning environments that allow each learner to reach his or her full potential and the ability to employ universal design principles and assistive technology.
- In the area of the learning environments, demonstrate the ability to work with learners to create and access learning environments that support self-directed individual and collaborative learning and demonstrate the use of learning environments not limited to the classroom but extended into the larger community and virtual experiences.
- In the area of content knowledge, demonstrate an understanding of the central concepts, tools of inquiry, and structure of his or her discipline(s) through demonstration of the creation of learning experiences that make the discipline(s) accessible and meaningful for learners and demonstrate innovative applications using differing perspectives to engage learners in critical and creative thinking and collaborative problem-solving related to authentic local and global issues.
- In the area of learning facilitation, use multiple methods of assessment to engage learners in their own growth, document learner progress, provide learner feedback, and inform the educator's ongoing planning and instructional practices.
- Plan for learning facilitation, as demonstrated by being an active member of a learning community, to draw upon knowledge of content area standards, cross-disciplinary skills, learners, the community, and pedagogy to plan learning experiences that support every learner in meeting rigorous learning goals.
- Demonstrate learning facilitation strategies, as demonstrated by an understanding and use of a variety of strategies and tools to encourage learners to develop deep understanding of content areas and their connections to other disciplines and an ability to build skills in accessing, applying, and communicating information.
- In the area of professional responsibility, demonstrate being a reflective practitioner and using evidence to continually evaluate his or her practice, particularly the effects of choices and actions on students, families, and other professionals in the learning community, the ability to adapt practice to meet the needs of each learner, and the ability to collaborate, as a member of the larger learning community with learners, families, colleagues, other professionals, and community members to leverage resources that contribute to student growth and development, learning, and well-being.

Health, Character, and Technical Requirements

Candidates are encouraged to explore health requirements associated with employment in a school setting.

Character Expectations

- The health and safety of children, adolescents, and other learners is of paramount concern. Applicants for teaching positions in public and private schools in N.H. should be aware that background checks through the N.H. Department of Safety must be completed by potential employers prior to employment.
- Applicants who have been in difficulty with the law, depending upon the nature of the problem, may not be employable or even eligible for practica. Applicants need to discuss these issues in an interview or meeting so future goals will not be compromised.

Technical Standards

These have been established to provide guidance to students about the skills and abilities required to function successfully in public and/or private school classroom as teachers. Applicants who think they may not be able to meet one or more of the technical standards should contact program faculty members. Department faculty will give serious consideration to all academically qualified candidates as long as technical standards can be met with reasonable accommodations. Students in the Education program must have sufficient strength, stamina, and motor coordination to perform the following:

- Hearing and visual acuity to ensure a safe environment and respond quickly in the event of emergency
- Verbal ability to express and exchange information and interpret important instructions
- Writing skills to record students' daily progress and milestones as well as a variety of reports
- Emotional health to work with frequent interruptions, respond appropriately to unexpected situations, and cope with extreme variations in workload and stress levels

Career Information

Students who complete this program can enter into the following professions (not an inclusive list):

- Paraprofessional work in schools
- Community agencies and organizations specializing in work with people with disabilities

Special Education Certificate Curriculum

Course	Title	CL	LAB	CR
EDU 101C	Introduction to Exceptionalities	3	0	3
EDU 203C	Teaching Strategies for Diverse Learners	3	0	3
ENGL 101C	English Composition	4	0	4
EDU 200C	Supporting Students with Challenging Behaviors	3	0	3
EDU 204C	Instructional Technology	3	0	3
EDU 210C	Cross-Cultural Education Seminar	2	0	2
MATH 120C	Quantitative Reasoning or			
MATH 124C	College Algebra	4	0	4
Total Credits				18

SUBSTANCE USE DISORDER TREATMENT

Certificate

This program is designed to be completed in one year over two semesters. Students learn the knowledge, skills, and abilities to prepare them to fulfill the duties and responsibilities required for entry-level employment in the SUD Tx profession. The courses are taught by instructors with practical experience as helping professionals.

Students who complete the certificate can matriculate into the Addiction Counseling Associate Degree program, which includes field/practicum experience. This program is financial aid-eligible.

Program Learning Outcomes

Students who complete the program are sensitive to diverse populations and have a strong foundation for a lifetime of engaged employment and participation in a profession that urgently needs qualified, trained, and employable individuals. They acquire a broad understanding of the SUD Tx profession, an interdisciplinary knowledgebase, and the skills required to be a best-practices helping professional (critical thinking, complex reasoning, communication, being a team member, engaging in human interaction, applying content knowledge, lifelong learning, ongoing professional development, and personal growth). In addition, graduates are able to:

- Demonstrate an understanding of the entry-level KSAs required to engage in the competent, respectful, non-judgmental, supportive, and professional relationships required of those working in the substance use disorder profession in their supervised interactions with individuals in various therapeutic, clinical, and support situations.
- Demonstrate an understanding of the facts, concepts, theories, and principles taught and learned in certificate courses, how each course informs the other, and how each is related to the basic KSAs required of an entry level SUD Tx professional and the importance of lifelong learning, ongoing integration of learning, professional development, self-care, and socially conscious behavior required of the entry-level SUD Tx professional.
- Demonstrate the basic ability to identify, analyze, evaluate, and select the appropriate strategies, methods, and tools required for effective communication (verbally, non-verbally, in writing, on computers and electronic devices) with individuals in entry-level SUD Tx professional contexts and settings.
- Demonstrate the ability to actively listen, process information, ask questions, seek answers, integrate knowledge, search for meaning, and develop ideas and concepts that result in relevant and consequential action when interacting with one's supervisor, co-workers, and clients.
- Demonstrate an understanding of the importance of developing healthy practices of self-care, self-reflection, increased self-awareness, and personal responsibility, all of which are critical to being a best practices SUD Tx professional and a productive member of society.

Career Information

This certificate includes training for the CRSW, ideal for individuals starting a career in the addiction profession. Students must contact the licensing board and meet additional requirements, which include 500 hours of paid or volunteer work and completion of an exam required by the IC&RC.

Substance Use Disorder Treatment Certificate Curriculum

Course	Title	CL	LAB	CR
ADCL 120C	Survey of Addictive Behavior and Treatment	3	0	3
HSV 111C	Introduction to Human Services	3	0	3
PSYC 105C	Introduction to Psychology	3	0	3
ADCL 230C	The Four Domains of the Certified Recovery Support Worker	3	0	3
MHTH 187C	The Helping Relationship	4	0	4
PSYC 220C	Human Growth and Development	3	0	3
Total Credits				18

TEACHER EDUCATION CONVERSION PROGRAMS

This program is for students that hold a bachelor's degree and want a license to teach mathematics, science, special education, or English Speakers of Other Languages (ESOL).

Program Learning Outcomes

The program goals include preparing the student with knowledge, skills, expertise, innovation, and enthusiasm necessary to succeed as a teacher; ensuring they are afforded opportunities for observation, exploration, and reflection in and out of the classroom; applying their content expertise and pedagogical principles in the teaching and assessment of learning.

Career Information

Students who complete the program are recommended to the N.H. State Department of Education – Bureau of Credentialing for licensure. NHTI also has transfer (articulation) agreements in place for students want to pursue a master's degree. The NHTI Teacher Education Conversion Programs offers certification in the following areas:

- Chemistry grades 7 – 12
- Computer Science grades K-12
- Earth/Space Science grades 7 – 12
- Life Science grades 7 – 12
- Mathematics grades 5 – 8, 7 – 12
- Middle-Level Science grades 5 – 8

Accreditation

The Teacher Education Conversion Programs hold N.H. State Board of Education Accreditation.

Additional Info

The Teacher Education Conversion Programs focus on areas of teaching that are in critical need in the state. Many candidates could already be teaching while still completing this program, and most could be hired as teachers upon completion.

Specific Admission Requirements

Application Process

Applicants must submit:

- A [TECP application](#) and current resume
- Official transcripts from all undergraduate and graduate programs attended; candidates must hold a Bachelor's and/or Master's degree
- Two letters of recommendation or [reference forms](#)
- Copy of teaching certification or N.H. Statement of Eligibility (if applicable)
- [PRAXIS™ Core Academic Skills for Educators Exam tests scores](#), if applicable (unless candidate holds a current teaching certification)

Once the application is complete, transcripts are reviewed by faculty to assess the candidate's fundamental knowledge of the N.H. content standards. Applicants are interviewed by faculty, and the TECP director will discuss the requirements for school districts with regard to former Highly Qualified Teacher and current Every Student Succeeds Act as it applies to ESOL and special education teachers, and will discuss the transcript review results. Determination is then made regarding acceptance, and the applicant is notified of the decision.

Program Requirements

Candidates must maintain a cumulative grade point average of at least a 2.75 to remain in the program. A criminal record check will be required. To be recommended for the N.H. teaching license a candidate must:

- Pass Praxis II in Content before student teaching/practicum.
- Successfully complete all required coursework.
- Successfully complete a supervised student teaching or practicum experience.
- Earn a passing score on the N.H. Teacher Candidate Assessment of Performance where applicable.
- Successfully complete an electronic portfolio approved by the Education faculty.

TEACHER EDUCATION CONVERSION PROGRAM – ENGLISH SPEAKERS OF OTHER LANGUAGES

Certificate

This program is for students that hold a bachelor's degree and want a license to teach English Speakers of Other Languages (ESOL).

Program Learning Outcomes

The goals of this program are to:

- Prepare the student to bring into K-12 classrooms the knowledge, skills, expertise, innovation, and enthusiasm necessary to succeed as a teacher.
- Ensure the student is afforded opportunities for observation, exploration, and reflection in and out of the classroom.
- Apply their content expertise and pedagogical principles in the assessment of learning in a practicum or student-teaching experience working with English language learners.

Career Information

Students who complete this program can enter into the following professions (not an inclusive list):

- ESOL teaching in K-12 schools
- ESOL teaching in community agencies specializing in supporting New American learners

Teacher Education Conversion Program – English Speakers of Other Languages Certificate Curriculum

Course	Title	CL	LAB	CR
TECP 50C	Introduction to Exceptionalities ¹			
TECP 51C	Foundations of Education ¹			
TECP 60C	Supporting Students with Challenging Behaviors ¹			
TECP 61C	Legal and Ethical Issues in Education			
TECP 63C	Instructional Technology			
TECP 69C	Cross-Cultural Education Seminar			
TECP 86C	Introduction to Linguistics			
TECP 87C	Language, Reading, and Literacy in ESOL ¹			
TECP 88C	Curriculum Design and Assessment in ESOL ¹			
TECP 90C	Supervised Student Teaching, Practice, and Methods/Materials in ESOL Education or			
TECP 91C	Practicum, Methods/Materials, and Culture in ESOL Education			
TECP 92C	The Teaching Portfolio ²			
Total Credits				34-39

¹A \$25 fee will be assessed for all students taking TECP 50C, TECP 51C, TECP 87C and TECP 88C to cover the cost of clinical practice.

²If candidates do not complete the portfolio by the end of the student teaching semester, they will enroll in TECP 92C: The Teaching Portfolio (1 credit seminar) to complete the portfolio.

TEACHER EDUCATION CONVERSION PROGRAM – GENERAL EDUCATION (WITH CERTIFICATION)

Certificate

This program is for students that hold a bachelor's degree and want a license to teach and hold a teaching certification.

Program Learning Outcomes

Upon completion of the program of study the NHTI education student will:

- Demonstrate knowledge in the area of learner development by demonstrating an understanding of how learners develop, recognizing that patterns of learning and development vary, and demonstrate the ability to facilitate developmentally appropriate and challenging learning experiences based on the needs of each learner.
- In the area of learning differences, demonstrate an understanding of individual differences and diverse cultures and communities and demonstrate the ability to create inclusive learning environments that allow each learner to reach his or her full potential and the ability to employ universal design principles and assistive technology.
- In the area of the learning environments, demonstrate the ability to work with learners to create and access learning environments that support self-directed individual and collaborative learning and demonstrate the use of learning environments not limited to the classroom but extended into the larger community and virtual experiences.
- In the area of content knowledge, demonstrate an understanding of the central concepts, tools of inquiry, and structure of his or her discipline(s) through demonstration of the creation of learning experiences that make the discipline(s) accessible and meaningful for learners and demonstrate innovative applications using differing perspectives to engage learners in critical and creative thinking and collaborative problem-solving related to authentic local and global issues.
- In the area of learning facilitation, use multiple methods of assessment to engage learners in their own growth, document learner progress, provide learner feedback, and inform the educator's ongoing planning and instructional practices.
- Plan for learning facilitation, as demonstrated by being an active member of a learning community, to draw upon knowledge of content area standards, cross-disciplinary skills, learners, the community, and pedagogy to plan learning experiences that support every learner in meeting rigorous learning goals.
- Demonstrate learning facilitation strategies, as demonstrated by an understanding and use of a variety of strategies and tools to encourage learners to develop deep understanding of content areas and their connections to other disciplines and an ability to build skills in accessing, applying, and communicating information.
- In the area of professional responsibility, demonstrate being a reflective practitioner and using evidence to continually evaluate his or her practice, particularly the effects of choices and actions on students, families, and other professionals in the learning community, the ability to adapt practice to meet the needs of each learner, and the ability to collaborate, as a member of the larger learning community with learners, families, colleagues, other professionals, and community members to leverage resources that contribute to student growth and development, learning, and well-being.

Health, Character, and Technical Requirements

Candidates are encouraged to explore health requirements associated with employment in a school setting.

Character Expectations

- The health and safety of children, adolescents, and other learners is of paramount concern. Applicants for teaching positions in public and private schools in N.H. should be aware that background checks through the N.H. Department of Safety must be completed by potential employers prior to employment.
- Applicants who have been in difficulty with the law, depending upon the nature of the problem, may not be employable or even eligible for practica. Applicants need to discuss these issues in an interview or meeting so future goals will not be compromised.

Technical Standards

These have been established to provide guidance to students about the skills and abilities required to function successfully in public and/or private school classroom as teachers. Applicants who think they may not be able to meet one or more of the technical standards should contact program faculty members. Department faculty will give serious consideration to all academically qualified candidates as long as technical standards can be met with reasonable accommodations. Students must have sufficient strength, stamina, and motor coordination to perform the following:

- Hearing and visual acuity to ensure a safe environment and respond quickly in the event of emergency
- Verbal ability to express and exchange information and interpret important instructions
- Writing skills to record students' daily progress and milestones as well as a variety of reports
- Emotional health to work with frequent interruptions, respond appropriately to unexpected situations, and cope with extreme variations in workload and stress levels

Career Information

Students who complete this program can enter into the following professions (not an inclusive list):

- Special education teaching in K-12 schools
- Teaching or leadership positions in community agencies specializing in work with children with disabilities

The following N.H. state certifications are earned:

- License for special education teaching K-12

Teacher Education Conversion Program for General Education (with certification) Curriculum

Course	Title	CL	LAB	CR
TECP 50C	Introduction to Exceptionalities ¹			
TECP 60C	Supporting Students with Challenging Behaviors ¹			
TECP 62C	Teaching Strategies for Diverse Learners ¹			
TECP 63C	Instructional Technology			
TECP 67C	Reading and Language Development			
TECP 69C	Cross-Cultural Education Seminar			
TECP 70C	Special Education Assessment			
TECP 71C	Consultation/Collaboration and Individual Education Plans			
TECP 82C	Methods and Practicum in General Special Education			
TECP 92C	The Teaching Portfolio ²			
Total Credits				30

¹A \$25 fee will be assessed for all students taking TECP 50C, TECP 51C, TECP 87C and TECP 88C to cover the cost of clinical practice.

²If candidates do not complete the portfolio by the end of the student teaching semester, they will enroll in TECP 92C: The Teaching Portfolio (1 credit seminar) to complete the portfolio.

TEACHER EDUCATION CONVERSION PROGRAM – GENERAL EDUCATION (WITHOUT CERTIFICATION)

Certificate

This program is for students that hold a bachelor's degree and want a license to teach and hold a teaching certification.

Program Learning Outcomes

Upon completion of the program of study the NHTI education student will:

- Demonstrate knowledge in the area of learner development by demonstrating an understanding of how learners develop, recognizing that patterns of learning and development vary, and demonstrate the ability to facilitate developmentally appropriate and challenging learning experiences based on the needs of each learner.
- In the area of learning differences, demonstrate an understanding of individual differences and diverse cultures and communities and demonstrate the ability to create inclusive learning environments that allow each learner to reach his or her full potential and the ability to employ universal design principles and assistive technology.
- In the area of the learning environments, demonstrate the ability to work with learners to create and access learning environments that support self-directed individual and collaborative learning and demonstrate the use of learning environments not limited to the classroom but extended into the larger community and virtual experiences.
- In the area of content knowledge, demonstrate an understanding of the central concepts, tools of inquiry, and structure of his or her discipline(s) through demonstration of the creation of learning experiences that make the discipline(s) accessible and meaningful for learners and demonstrate innovative applications using differing perspectives to engage learners in critical and creative thinking and collaborative problem-solving related to authentic local and global issues.
- In the area of learning facilitation, use multiple methods of assessment to engage learners in their own growth, document learner progress, provide learner feedback, and inform the educator's ongoing planning and instructional practices.
- Plan for learning facilitation, as demonstrated by being an active member of a learning community, to draw upon knowledge of content area standards, cross-disciplinary skills, learners, the community, and pedagogy to plan learning experiences that support every learner in meeting rigorous learning goals.
- Demonstrate learning facilitation strategies, as demonstrated by an understanding and use of a variety of strategies and tools to encourage learners to develop deep understanding of content areas and their connections to other disciplines and an ability to build skills in accessing, applying, and communicating information.
- In the area of professional responsibility, demonstrate being a reflective practitioner and using evidence to continually evaluate his or her practice, particularly the effects of choices and actions on students, families, and other professionals in the learning community, the ability to adapt practice to meet the needs of each learner, and the ability to collaborate, as a member of the larger learning community with learners, families, colleagues, other professionals, and community members to leverage resources that contribute to student growth and development, learning, and well-being.

Health, Character, and Technical Requirements

Candidates are encouraged to explore health requirements associated with employment in a school setting.

Character Expectations

- The health and safety of children, adolescents, and other learners is of paramount concern. Applicants for teaching positions in public and private schools in N.H. should be aware that background checks through the N.H. Department of Safety must be completed by potential employers prior to employment.
- Applicants who have been in difficulty with the law, depending upon the nature of the problem, may not be employable or even eligible for practica. Applicants need to discuss these issues in an interview or meeting so future goals will not be compromised.

Technical Standards

These have been established to provide guidance to students about the skills and abilities required to function successfully in public and/or private school classroom as teachers. Applicants who think they may not be able to meet one or more of the technical standards should contact program faculty members. Department faculty will give serious consideration to all academically qualified candidates as long as technical standards can be met with reasonable accommodations. Students must have sufficient strength, stamina, and motor coordination to perform the following:

- Hearing and visual acuity to ensure a safe environment and respond quickly in the event of emergency
- Verbal ability to express and exchange information and interpret important instructions
- Writing skills to record students' daily progress and milestones as well as a variety of reports
- Emotional health to work with frequent interruptions, respond appropriately to unexpected situations, and cope with extreme variations in workload and stress levels

Career Information

Students who complete this program can enter into the following professions (not an inclusive list):

- Special education teaching in K-12 schools
- Teaching or leadership positions in community agencies specializing in work with children with disabilities

The following N.H. state certifications are earned:

- License for special education teaching K-12

Teacher Education Conversion Program for General Education (without certification) Curriculum

Course	Title	CL	LAB	CR
TECP 50C	Introduction to Exceptionalities ¹			
TECP 60C	Supporting Students with Challenging Behaviors ¹			
TECP 61C	Legal and Ethical Issues in Education			
TECP 62C	Teaching Strategies for Diverse Learners ¹			
TECP 63C	Instructional Technology			
TECP 66C	Curriculum and Assessment ¹			
TECP 67C	Reading and Language Development			
TECP 69C	Cross-Cultural Education Seminar			
TECP 70C	Special Education Assessment			
TECP 71C	Consultation/Collaboration and Individual Education Plans			
TECP 83C	Methods and Student Teaching in General Special Education			
TECP 92C	The Teaching Portfolio ²			
Total Credits				42

¹A \$25 fee will be assessed for all students taking TECP 50C, TECP 51C, TECP 87C and TECP 88C to cover the cost of clinical practice.

²If candidates do not complete the portfolio by the end of the student teaching semester, they will enroll in TECP 92C: The Teaching Portfolio (1 credit seminar) to complete the portfolio.

TEACHER EDUCATION CONVERSION PROGRAM – MATHEMATICS OR SCIENCE

Certificate

This program is for students that hold a bachelor’s degree and want a license to teach mathematics or science.

Teacher Education Conversion Program for Mathematics or Science Certificate Curriculum

Course	Title	CL	LAB	CR
TECP 50C	Introduction to Exceptionalities ¹			
TECP 51C	Foundations of Education ¹			
TECP 60C	Supporting Students with Challenging Behaviors ¹			
TECP 61C	Legal and Ethical Issues in Education			
TECP 63C	Instructional Technology			
TECP 66C	Curriculum and Assessment ¹			
TECP 68C	Content Literacy			
TECP 69C	Cross-Cultural Education Seminar			
TECP 92C	The Teaching Portfolio ²			
Choose one of the following options:				
Option One	Option One			
TECP 80C	Methods/Student Teaching for Middle/Secondary School Mathematics			
or both of the following	or both of the following			
TECP 95C	Internship Clinical Practice I			
TECP 96C	Internship Clinical Practice II			
Option Two	Option Two			
TECP 81C	Methods/Student Teaching for Middle/Secondary School Science			
or both of the following	or both of the following			
TECP 93C	Internship Clinical Practice I			
TECP 94C	Internship Clinical Practice II			
Option Three	Option Three			
TECP 97C	Methods/Student Teaching for Computer Science K-12			
Total Credits				36-38

YOUNG CHILDREN WITH AUTISM AND EXCEPTIONALITIES

Certificate

This program is for students interested in working with young children with autism spectrum disorder and other special needs and/or with children who may be at risk for developmental delays. Students learn about developing young children, how to work as part of trans-disciplinary teams, and how to provide early supports and services to young children in natural environments such as the home or child care program. All courses can be applied to the Early Care and Education for Young Children with Disabilities Associate Degree. This program is financial aid-eligible.

Program Learning Outcomes

Students who complete the program will be able to:

- Demonstrate an understanding of young children’s characteristics and needs to create environments that are healthy, respectful, supportive, and challenging for each child.
- Implement various interventions for young children with ASD and children with disabilities across all developmental domains.
- Demonstrate an understanding of developmentally effective approaches which emphasize positive relationships and supportive interactions to influence outcomes for individual children.
- Demonstrate an understanding of professional, legal, and regulatory guidelines for serving every child.
- Demonstrate that they know about, understand, and value the importance of creating respectful, reciprocal relationships to support and empower families in their communities.
- Participate in early intervention and special needs interdisciplinary and transdisciplinary teams.
- Demonstrate a variety of early childhood field experiences.

Career Information

The courses in the Early Childhood Education Entry-Level Certificate meet the training and education requirements for the [State of N.H. Early Childhood Teacher Credential, Level 4](#).

Program-Specific Requirements

- Students will spend designated hours each week with infants, toddlers, preschoolers, or kindergarteners while taking early childhood courses. These hours will be considered a component of class participation. NHTI has an onsite lab school to meet the needs of these required lab hours. All students are expected to use the onsite lab school unless they work full-time in a licensed child care center or are 100% online and live at a distance from the NHTI campus that prohibits in-person attendance.
- Upon acceptance into the program, students must complete the following paperwork:
 - A complete set of electronic fingerprints completed by the Department of Safety
 - Submission of a criminal record check that comes back clear or non-disqualifying; the cost associated with the fingerprinting and criminal record check is the responsibility of the student.
 - Completion of the licensing child care personnel health form by a licensed health provider indicating the student is in good physical health and has no mental or emotional disturbances that would prohibit him/her from caring for children in a group setting
 - Signed confidentiality form
 - Other related documents distributed by the department chair
- Out-of-state students who are taking classes 100% online will need to complete their state’s fingerprinting and background check, child health care form, and any other paperwork required by that state.
- Students must have transportation to and from NHTI approved practicum sites in their senior year.
- Students must have a flexible schedule that allows them to spend weekday mornings and/or afternoons at their practicum site while taking classes. Students should be prepared to plan work hours around their course schedule knowing that these hours will change each semester.

- All students must have access to a digital camera and video-capturing device to complete assignments. Online students will record themselves during practicum to share with their practicum teachers online.

Scholarship Program

CCSNH partners with Granite State College to offer tuition assistance to child care providers who are entering or are currently working in the field of early care and education. Eligible individuals must be working at least 20 hours per week. For more information, contact Diana Menard, department chair of Child and Family Studies, at 603-271-6484 x4281 or dmenard@ccsnh.edu. For additional information, [visit the CCSNH page on early childhood education tuition assistance here](#).

There is also a scholarship available for this program through T.E.A.C.H. NH. The T.E.A.C.H. NH Scholarship Program supports the cost of tuition and books, offers paid release time from work for scholarship recipients, and has a bonus upon completing 9-12 credits within a 12-month period. To be eligible, applicants must live in N.H. and work at least 30 hours a week in a licensed childcare program.

Young Children with Autism and Exceptionalities Certificate Curriculum

Course	Title	CL	LAB	CR
ECE 101C	Growth and Development of the Young Child ¹	3	0	3
ECE 225C	Autism Spectrum Disorder	3	0	3
ECE 167C	Positive Behavior Guidance and Supporting Children with Challenging Behaviors ¹	3	0	3
ECE 270C	Teaching Young Children with Exceptionalities	3	0	3
ECE 282C	Preschool Special Education Practicum and	2	7	4
EDU 201C	Legal Issues in Education or	3	0	3
ECE 242C	Child, Family, and Community and	3	0	3
ECE 283C	Early Intervention Practicum	2	7	4
Total Credits				22

¹All students taking the following courses ECE 101C and ECE 167C will be charged a \$25 NHTI ECE Lab fee for each class.

STEM AND ADVANCED MANUFACTURING

Associate of Science

- [Animation and Graphic Game Programming](#)
- [Architectural Engineering Technology](#)
- [Biology](#)
- [Civil Engineering Technology](#)
- [Computer Engineering Technology](#)
- [Electronic Engineering Technology](#)
- [Environmental Sciences](#)
- [Industrial Design Technology](#)
- [Information Technology – Networking](#)
- [Information Technology – Software Development](#)
- [Landscape and Environmental Design](#)
- [Manufacturing Engineering Technology – Automation](#)
- [Manufacturing Engineering Technology – Machining](#)
- [Mathematics](#)
- [Mechanical Engineering Technology](#)
- [Robotics and Automation Engineering Technology](#)
- [Sustainable Agriculture](#)

Certificate

- [Advanced Manufacturing Processes](#)
- [Advanced Software Development](#)
- [Applied Career Fundamentals for Advanced Manufacturing](#)
- [Automation](#)
- [Building Inspector and Plans Examiner](#)
- [Computer-Aided Design – Architectural Concentration](#)
- [Computer Technology Programming \(Advanced\)](#)
- [Electronic Technology](#)
- [Entry-Level Software Development](#)
- [Game Development Programming](#)
- [Information Technology – Hardware and Software](#)
- [Information Technology – Microsoft Services](#)
- [Information Technology – Network Associate](#)
- [Information Technology – Networking](#)
- [Information Technology – Security](#)
- [Information Technology – Software Development](#)
- [Information Technology – Tech Support](#)
- [Information Technology – VoIP](#)
- [Landscape Design](#)
- [Linux](#)
- [Sustainable Agriculture Technology](#)

Internship Considerations

NHTI has developed excellent practicum opportunities to foster hands-on learning while simultaneously receiving credit. The college's first priority must be to ensure that patients/clients/children/families are not placed in jeopardy by students during learning experiences. Students in internship, externship, practicum, service learning, and clinical experiences must demonstrate sufficient emotional stability to withstand the stresses, uncertainties, and changing circumstances of patient/client/child/family responsibilities. The student is expected to have the emotional stability to exercise sound judgment, accept direction and guidance from a supervisor or faculty member, and establish rapport and maintain interpersonal relationships and confidentiality with employees, customers, and/or patients/clients/children and their families.

Curriculum Abbreviations

- CL – Number of lecture/classroom hours per week for the course
- LAB – Number of simulation laboratory, laboratory or clinical hours per week for the course
- CR – Number of credit hours for the course

ANIMATION AND GRAPHIC GAME PROGRAMMING

Associate in Science

This program (known as AGGP) is a mix of computer science, software engineering, game development technology, and project management. Students use the latest technology and tools, including Unreal and Unity, in academic labs with machines and tech including VR/AR/XR technology. The AGGP degree program is managed, maintained, and updated by an industry professional with Batman and Marvel on his resume. Students develop an online portfolio displaying their talents and skills. The portfolio is used to obtain a job and for entrance into schools.

Program Learning Outcomes

Upon completion, graduates of the AGGP degree program are able to:

- Program in multiple programming languages and environments using object-oriented and procedural programming techniques to create and debug sophisticated software applications using different operating systems, device platforms, application frameworks, or game engines.
- Analyze problems including proposed features and technical issues, decompose them into sub-problems, and develop appropriate solutions.
- Demonstrate initiative to prototype and develop solutions using documentation and research.
- Apply math and physics to develop solutions for proposed features or technical issues.
- Demonstrate discipline-specific project management and teamwork skills.
- Apply theoretical and practical knowledge to analyze and solve complex problems.
- Gain proficiency in the technology and methods used in professional game development.
- Communicate effectively with an expected level of effectiveness.

Students learn:

- Programming tools used in the industry, such as Microsoft's Visual Studio
- Multiple programming languages, including C++ and C#
- Applications and asset pipelines for art and design content
- Development for multiple platforms, including PC, Linux, mobile, consoles, VR/AR/XR, and the web
- Software engineering for complex and robust applications
- Project management tools and techniques, including Source Control and SCRUM
- Database development and networking programming
- Math and physics for games
- Opportunities for game publication in the web marketplace

Career Information

AGGP graduates are strong programmers prepared for an entry-level programming job in the game industry, a related field, or programming.

Specific Admissions Requirements

Applicants are required to have one of the following:

- At least three years of college preparatory mathematics (Algebra I, Algebra II, and Geometry) with minimum grades C or higher
- College board Math SAT or other formalized testing with a score that places applicant into Math 124C/XC or higher-level course
- Completion of one or both AGGP Math electives with a C or higher

Animation and Graphic Game Programming Associate of Science Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR
	Fall Semester				
	AGGP 101C	Introduction to Game Design and Creation with Programming ¹	2	3	3
	AGGP 103C	Introduction to Content Development ¹	2	2	3
	CPET 107C	Introduction to Programming with C++ ¹	2	3	3
	ENGL 101C	English Composition	4	0	4
	MATH xxxC	Math elective ²	4	0	4
					17
Spring Semester					
	AGGP 131C	Introduction to 2-D and 3-D Game Development ¹	2	3	3
	AGGP 140C	Digital Art Modeling and Animation ¹	2	3	3
	CPET 125C	Data Structures ¹	2	3	3
	ENGL xxxC	Communications elective	3	0	3
	MATH xxxC	Math elective ²	4	0	4
	XX xxxC	Science elective ⁴	3-4	0-2	3-4
					19-20
SECOND YEAR	Fall Semester				
	AGGP 225C	3-D Game Engine Application Development ¹	2	3	3
	AGGP 231C	Application Development and Software Prototyping ¹	2	3	3
	AGGP 291C	Project Definition and Portfolio Specifications ¹	1	3	2
	CPET 240C	Programming for Windows Operating Systems ¹	3	3	4
	VRTS 101C	Introduction to Drawing	2	4	4
	XX xxxC	Social Science elective	3	0	3
					19
Spring Semester					
	AGGP 247C	Math and Physics for Game Programmers ¹	2	3	3
	AGGP 292C	Portfolio Development ¹	2	3	3
	AGGP 294C	Animation and Graphic Game Programming Capstone Project ¹	2	5	4
	CPET 252C	Networking and Internet Technologies ¹	3	3	4
	XX xxxC	Humanities/Fine Arts/Language elective ³	3	0	3-4
					17-18
Total Credits					72-74

¹Indicates major field course

²Students are required to complete two math courses; MATH 120C does not meet this requirement.

³VRTS 101C and VRTS 193c do not meet this requirement.

⁴BIOL 100C, CHEM 100C, and PHYS 100C do not meet this requirement.

Students planning to pursue 4-year degrees should consider taking calculus-based physics and discuss this option with their academic advisors. In order to meet the corequisite and prerequisite requirements for calculus-based physics, some students may need to alter their course sequence shown above; please see your academic advisor for assistance.

To fulfill the program degree requirements and to meet the prerequisite requirement of subsequent major field courses, students are required to earn a grade of C- or higher in each major field course and in each math and physics course.

There is a three-year path for the above two-year curriculum for those who need it. Contact Professor Walek at gwalek@ccsnh.edu for details.

ARCHITECTURAL ENGINEERING TECHNOLOGY

Associate in Science

This program (known as ARET) combines architecture and engineering theory with applied hands-on activities in NHTI labs. Students study architectural design and engineering processes and develop skills in design, sketching, engineering, and computer-aided design (CAD) and visualization. Students learn from dedicated and experienced faculty and acquire know-ledge about industry practices and culture through a unique guest speaker program. The ARET program offers students:

- A strong reputation for excellence
- Lecture and lab hands-on experience
- Exciting job opportunities at graduation
- First two years of a four-year education
- Day and evening classes

Program Learning Outcomes

ETAC of ABET General Criterion 3 Student Outcomes:

- An ability to apply the knowledge, techniques, skills, and modern tools of the discipline to narrowly defined engineering technology activities
- An ability to apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require limited application of principles but extensive practical knowledge
- An ability to conduct standard tests and measurements, and to conduct, analyze, and interpret experiments
- An ability to apply written, oral, and graphical communication in both technical and nontechnical environments and an ability to identify and use appropriate technical literature
- An understanding of and a commitment to address professional and ethical responsibilities, including a respect for diversity and a commitment to quality, timeliness, and continuous improvement

ETAC of ABET Program Criteria for Architectural Engineering Technology and Similarly Named Programs Outcomes:

- Employ concepts of architectural theory and design in a design environment
- Utilize instruments, methods, software, and techniques that are appropriate to produce A/E documents and presentations
- Utilize measuring methods that are appropriate for field, office, or laboratory
- Apply fundamental computational methods and elementary analytical techniques in sub disciplines related to architectural engineering

Program Educational Objectives (PEOs): The ARET PEOs are broad statements that support the mission of the ARET program and NHTI. The ARET department's mission reflects on the following PEOs. Graduates are able to:

- Be effective life-long learners and demonstrate continuing professional development.
- Demonstrate the ability to solve problems and participate in a team based environment.
- Demonstrate effective communication and interpersonal skills.
- Exhibit an active and effective civic life with respect for diversity and local and global issues.

Career Information

Graduates work in architectural firms, engineering firms, and construction companies; some choose to work for architects, engineers, contractors, or government agencies. They can also pursue educational and career advancements while working full time in the industry. ARET students are eligible to take the Fundamentals of Engineering exam, open to anyone who has a degree in engineering or a related field or is currently enrolled in the last year of an ETAC of ABET -accredited engineering degree program.

Accreditation

This program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org.

Specific Admissions Requirements

Students need at least three years of college preparatory math (Algebra I, Algebra II, and Geometry) with minimum grades of C. It is strongly recommended applicants have completed high school courses in Chemistry and Physics.

Architectural Engineering Technology Associate of Science Curriculum

	Course	Title	CL	LAB	CR
FIRST YEAR	Fall Semester				
	ARET 103C	Architectural Graphics and Sketching	2	2	3
	ARET 120C	Materials and Methods of Construction	4	0	4
	MATH 124C	College Algebra	4	0	4
	PHYS 133C	Physics I (Algebra-Based)	3	2	4
					15
	Spring Semester				
	ARET 104C	Architectural Design Studio I	2	2	3
	ARET 150C	Statics and Strength of Materials	3	2	4
	ARET 192C	Revit Architecture	3	0	3
ENGL 101C	English Composition	4	0	4	
MATH 140C	Pre-Calculus	4	0	4	
				18	
SECOND YEAR	Fall Semester				
	ARET 202C	Architectural Design Studio II	2	2	3
	CVET 220C	Surveying	2	3	3
	CVET 240C	Timber and Steel Design	3	2	4
	COMM 125C	Communication and the Literature of Science and Technology	3	0	3
	PHYS 135C	Physics II (Algebra-Based)	3	2	4
	XX xxxC	Humanities/Fine Arts/Language elective	3-4	0	3-4
					20-21
	Spring Semester				
	ARET 250C	Environmental Systems	3	0	3
ARET 270C	Construction Management	3	0	3	
ARET 297C	Architectural Design Studio III	2	2	3	
CVET 235C	Reinforced Concrete Design	2	3	3	
XX xxxC	Social Science elective*	3-4	0	3-4	
				15-16	
Total Credits					
				68-70	

Second Year: Civil Focus					
Fall Semester					
CVET 201C	Civil CAD	2	2	3	
CVET 220C	Surveying	2	3	3	
CVET 240C	Timber and Steel Design	3	2	4	
COMM 125C	Communication and the Literature of Science and Technology	3	0	3	
PHYS 135C	Physics II (Algebra-Based)	3	2	4	
XX xxxC	Humanities/Fine Arts/Language elective	3-4	0	3-4	
				20-21	
Spring Semester					
ARET 270C	Construction Management	3	0	3	
CVET 235C	Reinforced Concrete Design	2	3	3	
CVET 297C	Highway Design	3	2	4	
MATH 205C	Calculus I	4	0	4	
XX xxxC	Social Science elective*	3	0	3-4	
				17-18	
Total Credits				68-70	

BIOLOGY

Associate in Science

This degree program is intended for students who plan to continue their education beyond the associate degree; it provides an excellent foundation for studies in pre-medicine, pre-dentistry, and pre-veterinary medicine. A major in the biological sciences is recommended for students interested in pursuing further study in biology, botany, zoology, ecology, microbiology, agriculture, forestry, molecular biology, cell biology, genetics, and marine biology.

Biology provides a broad-based curriculum in the biological sciences and helps students meet the requirements for other degree programs. If students choose to pursue a four-year degree, the core courses in this program provide the basic competencies, knowledge, and skills. It prepares students for careers in biological science; provides the skills, methods, and knowledge needed for further study; and promotes an appreciation of the sciences.

Program Learning Outcomes

- Students will communicate effectively.
 - Students will employ vocabulary pertinent to biological sciences.
 - Students will complete research and use peer-reviewed sources of literature.
- Students will use critical thinking.
 - Students will apply the scientific method.
 - Students will connect principles of natural sciences to biological issues.
- Students will demonstrate the application of scientific technology.
 - Students will practice lab and field safety procedures.
 - Students will utilize current technology to collect, analyze, and present data.
- Students will express quantitative and qualitative scientific knowledge.
 - Students will explain the significance of research results.
 - Students will analyze theoretical principles across a range of sub-disciplines in biological sciences.

Career Information

Students who complete this program can enter into the following professions (not an inclusive list): biological technician, forest or conservation technician, and medical or clinical laboratory technician. Other possible positions include veterinary technician, medical assistant, plant science technician, and sales associate for medical equipment, pharmaceuticals, and biological materials. Students who graduate from this program have the skills necessary to work in the field as a biological science technician.

Specific Admissions Requirements

- High school Biology with a lab with a C or higher
- High school Chemistry with a lab with a C or higher
- Algebra I or higher with a C or higher

Biology Associate of Science Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR
	Fall Semester				
	BIOL 111C	General Biology I ¹	3	2	4
	CHEM 103C	General Chemistry I	3	2	4
	ENGL 101C	English Composition	4	0	4
	INDL 101C	STEM in the First Year Experience ²	3	0	3
	MATH 124C	College Algebra or higher-level math ³	4	0	4
					19
Spring Semester					
	BIOL 112C	General Biology II ¹	3	2	4
	CHEM 104C	General Chemistry II	3	2	4
	COMM 125C	Communication and the Literature of Science and Technology or			
	ENGL xxxC	English elective	3	0	3
	PHIL 242C	Contemporary Ethical Issues ⁴	3	0	3
	PHYS 133C	Physics I (Algebra-based)	3	2	4
					18
SECOND YEAR	Fall Semester				
	BIOL 202C	Microbiology ¹	3	3	4
	BIOL xxxC	Biology elective ¹	3-4	0-2	3-4
	MATH 251C	Statistics	4	0	4
	PHYS 135C	Physics II (Algebra-based)	3	2	4
					15
Spring Semester					
	BIOL 211C	Genetics ¹	3	2	4
	BIOL 260C	Cell Biology ¹	3	3	4
	BIOL 290C	Senior Capstone Project and Seminar ¹	3	2	4
	BIOL xxxC	Biology elective ¹	3-4	0-2	3-4
					13-14
Total Credits					61-62

¹Indicates major field courses

²Meets Social Science requirement

³Excluding MATH 129C

⁴Meets Humanities/Language/Fine Arts requirement

CIVIL ENGINEERING TECHNOLOGY

Associate in Science

This program (known as CVET) combines civil engineering and technology theory with a solid foundation in math and science. Students learn the fundamentals of CVET, teamwork, and presentations through hands-on activities in NHTI labs. They solve design and engineering problems and learn about the industry practices and culture through our unique guest speakers program. Students learn skills that include how to produce engineering documents using CAD software, perform standard field and laboratory tests on materials typically used in civil engineering technology, and estimate material quantities for technical projects

Program Learning Outcomes

Students receive an associate in science in CVET upon successful completion of this program.

ETAC of ABET Requirements

- An ability to apply knowledge, techniques, skills, and modern tools of mathematics, science, engineering, and technology to solve well-defined engineering problems appropriate to the discipline
- An ability to design solutions for well-defined technical problems and assist with the engineering design of systems, components, or processes appropriate to the discipline
- An ability to apply written, oral, and graphical communication in well-defined technical and non-technical environments and an ability to identify and use appropriate technical literature
- An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results
- An ability to function effectively as a member of a technical team

Program Educational Outcomes: The CVET program educational objectives (PEOs) are broad statements that support the mission of the program and NHTI. The program's mission reflects on the following PEOs. Graduates:

- Are effective life-long learners and demonstrate continuing professional development.
- Demonstrate the ability to solve problems and participate in a team-based environment.
- Demonstrate effective communication and interpersonal skills.
- Exhibit an active and effective civic life with respect for diversity and local and global issues.

ETAC of ABET's Program Criteria for Civil Engineering Technology and Similarly Named Programs a-d.

- Utilization of principles, hardware, and software that are appropriate to produce drawings, reports, quantity estimates, and other documents related to civil engineering
- Performance of standardized field and laboratory tests related to civil engineering
- Utilization of surveying methods appropriate for land measurement and/or construction layout
- Application of fundamental computational methods and elementary analytical techniques in subdisciplines related to civil engineering

Career Information

Major specialties within civil engineering are structural, water resources, environmental, construction (including construction management), transportation, and geotechnical engineering. Graduates interested in management or upper-level engineering careers in the field can pursue bachelor's degrees in civil engineering, CVET, construction engineering, surveying and mapping, or construction management. Students who complete this program can enter into the following professions (not an inclusive list): civil engineering technologists/ technicians, cartographer, land surveyors, and CAD operators.

Specific Admissions Requirements

Applicants require at least three years of college preparatory math (Algebra I, Algebra II, and Geometry) with minimum grades of C. It is recommended that applicants have satisfactorily completed high school courses in Chemistry and Physics.

Civil Engineering Technology Associate of Science Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR	
	Fall Semester					
	ARET 103C	Architectural Graphics and Sketching ¹	2	2	3	
	ARET 120C	Materials and Methods of Construction ¹	4	0	4	
	CHEM 105C	Chemistry	3	2	4	
	MATH 124C	College Algebra	4	0	4	
	PHYS 133C	Physics I (Algebra-based)	3	2	4	
					19	
Spring Semester						
	ARET 104C	Architectural Design Studio I ¹	2	2	3	
	ARET 150C	Statics and Strength of Materials ¹	3	2	4	
	ARET 192C	Revit Architecture ¹	3	0	3	
	ENGL 101C	English Composition	4	0	4	
	MATH 140C	Pre-Calculus	4	0	4	
					18	
SECOND YEAR	Fall Semester					
		CVET 201C	Civil CAD ¹	2	2	3
		CVET 220C	Surveying ¹	2	3	3
		CVET 240C	Timber and Steel Design ¹	3	2	4
		COMM 125C	Communication and the Literature of Science and Technology	3	0	3
		MATH 205C	Calculus I	4	0	4
		XX xxxC	Humanities/Fine Arts/Language elective	3	0	3
						20
	Spring Semester					
		CVET 202C	Soil Mechanics and Foundation Design ¹	2	2	3
		CVET 235C	Reinforced Concrete Design ¹	2	3	3
		CVET 245C	Hydrology/Drainage Design ¹	3	0	3
	CVET 297C	Highway Design ¹	3	2	4	
	XX xxxC	Social Science elective ²	3	0	3	
					16	
Total Credits					73	

¹Indicates major field courses

²Any course with a prefix of ANTH, ECON, HIST, POLS, PSYC, or SOCI (except HIST 104C and HIST 105C)

COMPUTER ENGINEERING TECHNOLOGY

Associate in Science

This program offers a combination of computer science, engineering theory, and hands-on skills in labs with state-of-the-art equipment. Class and lab size are kept small to foster student interaction with faculty. The majority of program courses are taught by full-time faculty with advanced degrees as well as significant and relevant industry experience.

Program Learning Outcomes

Graduates are able to:

- Demonstrate proficiency in multiple programming environments and multiple programming languages using object-oriented and procedural programming techniques to create and debug sophisticated software applications for different operating systems and runtime frameworks.
- Apply practical knowledge of math and physics to electric circuits and data communications.
- Read a schematic, set up and use measurement equipment, accurately measure a waveform, and compare measured results of a waveform with theoretical results calculated from a schematic.
- Demonstrate discipline-specific project management and teamwork skills.
- Critically analyze problem statements, decompose a problem into subproblems, and develop solutions.
- Demonstrate initiative in developing solutions to computer engineering problems using documentation and research.
- Gain knowledge of social, technical, and professional ethics required in a professional environment, including a respect for diversity.
- Participate in a professional work environment to produce work that meets industry standard specifications and learning skills necessary to complete assignments.

Career Information

Graduates are prepared for careers in software development and computer engineering and can choose to pursue a bachelor's degree in either computer science or computer engineering. Graduates can enter the following professions:

- Software developer
- Full-stack developer
- .NET developer
- IoT developer
- Cloud computing engineer
- Software control system engineer
- Bios/driver developer
- Mobile application designer or developer

Accreditation

This program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org.

Capstone Project

Students in this program complete a capstone project during their final semester. A variety of industry partners provide students with a real-world project on site at the company's facility. Students work with industry professionals as they take their project from the definition phase into development and through to completion. This hands-on experience strengthens their ability to apply engineering theory to the development of practical solutions to real-world software development and engineering problems. Prospective employers see this as a distinguishing feature of NHTI's computer engineering technology program.

Specific Admissions Requirements

Applicants require at least three years of college preparatory math (Algebra I, Algebra II, and Geometry) with minimum grades of C or higher. It is also recommended applicants have satisfactorily completed high school courses in Chemistry and Physics.

Computer Engineering Technology Associate of Science Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR	
	Fall Semester					
	CPET 107C	Introduction to Programming with C++ ¹	2	3	3	
	ELET 101C	Electric Circuits ¹	3	3	4	
	ELET 115C	Digital Fundamentals ¹	2	3	3	
	ENGL 101C	English Composition	4	0	4	
	MATH 124C	College Algebra	4	0	4	
					18	
Spring Semester						
	CPET 125C	Data Structures ¹	2	3	3	
	ELET 144C	Embedded Microsystems ¹	3	3	4	
	ENGL 120C/COMM 120C	Communication or				
	COMM 125C	Communication and the Literature of Science and Technology	3	0	3	
	MATH 140C	Pre-Calculus	4	0	4	
	PHYS 133C	Physics I (Algebra-based) ² or	3	2	4	
	PHYS 231C	Physics I (Calculus-based) ²	3	3	4	
					18	
SECOND YEAR	Fall Semester					
		CPET 240C	Programming for Windows Operating Systems ¹	3	3	4
		CPET 260C	Computer Real Time Interfacing ¹	3	3	4
		CPET 301C	Computer Project Definition ¹	1	0	1
		MATH 205C	Calculus I ³	4	0	4
		PHYS 135C	Physics II (Algebra-Based) ² or	3	2	4
		PHYS 232C	Physics II (Calculus-Based) ²	3	3	4
		XX xxxC	Social Science elective*	3-4	0	3-4
						20-21
	Spring Semester					
		CPET 215C	Integrated Circuits and Interfacing	3	3	4
		CPET 222C	Data Communications and Internetworking	3	3	4
		CPET 252C	Networking and Internet Technologies	3	3	4
	CPET 303C	Computer Project	1	4	3	
	XX xxxC	Humanities/Fine Arts/Language elective	3	0	3	
					18	
Total Credits					74-75	

¹Indicates major field courses

²Students planning to pursue 4-year degrees should consider taking Calculus-based Physics and discuss this option with their academic advisors. To meet the requirements, students may need to alter their course sequence; contact your academic advisor for assistance.

³Students are required to complete at least one of the following math courses: MATH 205C, MATH 206C, MATH 208C, or MATH 210C. MATH 206C is strongly recommended for students that plan to pursue a bachelor's degree.

To fulfill the program degree requirements and to meet the prerequisite requirement of subsequent major field courses, students are required to earn a grade of C- or higher in each major field course and in each math and physics course.

For students with a need for a reduced course load, a 3-year version of this program is available. Contact the department chair for details.

ELECTRONIC ENGINEERING TECHNOLOGY

Associate in Science

This program (known as EET) offers a combination of engineering theory and hands-on skills using state-of-the-art equipment. Class and lab size are kept small, giving students ample opportunity to interact with instructors. The majority of program courses are taught by full-time faculty with advanced degrees and significant, relevant industry experience. Graduates can continue their education by transferring to at a 4-year engineering program, and students are dual admitted to UNH's EET bachelor's degree program.

Program Learning Outcomes

- Proficiency in the use of commercial laboratory test equipment, standard mathematical techniques, and circuit simulation methods to accomplish analysis, design, and construction of analog and digital circuits
- The ability to apply practical knowledge of math (at the level of algebra and trigonometry) and physics to electrical and electronic circuits
- The ability to read a schematic, set up and use measurement equipment, accurately measure waveforms, and compare measured results with theoretical results calculated from a schematic
- Demonstration of discipline-specific project management and teamwork skills
- The ability to critically analyze problem statements, decompose a problem into subproblems, and develop appropriate solutions
- The ability to produce written documents and deliver professional presentations
- Demonstration of initiative in developing solutions to EET problems using documentation and research
- Knowledge of social, technical, and professional ethics required in a professional environment

Program Educational Objectives

- Apply theoretical and practical knowledge and skills to analyze and solve complex problems.
- Gain proficiency in digital and analog circuit analyses, circuit design, and lab techniques.
- Communicate effectively in oral, written, and graphical modes in interpersonal and group situations.
- Perform ethically and professionally in business and society.
- Attain gainful employment in the field of EET and/or pursue an advanced degree.

Career Information

Students who complete this program can enter into the following professions (not an inclusive list):

- Electronic circuit designer
- IoT developer
- Microprocessor/embedded system developer
- Computer hardware designer

Accreditation

This program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org.

Specific Admissions Requirements

Applicants require at least three years of college preparatory math (Algebra I, Algebra II, and Geometry) with minimum grades of C or higher. It is also recommended applicants have high school courses in Chemistry and Physics.

Capstone Project

Students complete a capstone project over two consecutive semesters. This hands-on experience strengthens their ability to apply engineering theory to the development of practical solutions to real-world engineering problems. A fully equipped project lab and mentoring by faculty with extensive industry experience/expertise provide a unique learning environment. Prospective employers see this as a distinguishing feature of NHTI's EET program.

Electronic Engineering Technology Associate of Science Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR	
	Fall Semester					
	CPET 107C	Introduction to Programming with C++ ¹	2	3	3	
	ELET 101C	Electric Circuits ¹	3	3	4	
	ELET 115C	Digital Fundamentals ¹	2	3	3	
	ENGL 101C	English Composition	4	0	4	
	MATH 124C	College Algebra	4	0	4	
					18	
Spring Semester						
	ELET 102C	Circuit Analysis ¹	3	3	4	
	ELET 110C	Electronics I ¹	3	3	4	
	ENGL 120C/COMM 120C	Communication or				
	COMM 125C	Communication and the Literature of Science and Technology	3	0	3	
	MATH 140C	Pre-Calculus	4	0	4	
	PHYS 133C	Physics I (Algebra-based) ² or	3	2	4	
	PHYS 231C	Physics I (Calculus-based) ²	3	3	4	
					18	
SECOND YEAR	Fall Semester					
	ELET 144C	Embedded Microsystems ¹	3	3	4	
	ELET 210C	Electronics II ¹	3	3	4	
	ELET 305C	Design Project Preparation ¹	1	5	3	
	MATH 205C	Calculus I	4	0	4	
	PHYS 135C	Physics II (Algebra-based) ² or	3	2	4	
	PHYS 232C	Physics II (Calculus-based) ²	3	3	4	
						19
	Spring Semester					
	ELET 215C	Advanced Digital Electronics ¹	3	3	4	
	ELET 251C	Advanced Topics in Electronics and/or ¹	3	3	4	
	MATH 206C	Calculus II ³	4	0	4	
	ELET 306C	Senior Design Project ¹	2	5	4	
XX xxxC	Humanities/Fine Arts/Language elective*	3	0	3		
XX xxxC	Social Science elective*	3-4	0	3-4		
					18-23	

¹Indicates major field courses

²Students planning to pursue 4-year degrees should consider taking Calculus-based Physics and discuss this option with their academic advisors. To meet the requirements, students may need to alter their course sequence; contact your academic advisor for assistance.

³Students are required to complete a minimum of 1 math course from Math List A. If ELET 251C is substituted for MATH 206C, students are required to complete a minimum of 1 math course from Math List B:

Math List A: MATH 206C, MATH 208C, MATH 210C

Math List B: MATH 205C, MATH 208C, MATH 210C

It is recommended students who plan to pursue a bachelor's degree in engineering take both MATH 206C and MATH 210C.

To fulfill the program degree requirements and to meet the prerequisite requirement of subsequent major field courses, students are required to earn a grade of C- or higher in each major field course and in each math and physics course.

For students with a need for a reduced course load, a 3-year version of this program is available. Contact the department chair for details.

ENVIRONMENTAL SCIENCES

Associate in Science

This program provides an interdisciplinary approach to studying the social, ethical, and ecological interactions between the natural world and society. It provides the first two years of courses necessary for a four-year bachelor's degree in environmental science for students interested in transferring.

Program Learning Outcomes

- Students will communicate effectively.
 - Students will employ vocabulary pertinent to environmental science.
 - Students will complete research and use peer-reviewed sources of literature.
- Students will use critical thinking.
 - Students will apply the scientific method.
 - Students will connect principles of ecology and other natural sciences to environmental issues.
- Students will demonstrate the application of scientific technology.
 - Students will practice lab and field safety procedures.
 - Students will utilize current technology to collect, analyze, and present data.
- Students will express quantitative and qualitative scientific knowledge.
 - Students will demonstrate competence in chemistry, biology and other foundational courses that support scientific understanding.
 - Students will describe connections between the environment and human societies and how each affects the other.

Career Information

Graduates of associate and bachelor's degree programs have more employment opportunities. Graduates can find employment as city planning aides, economic research assistants, grazing examiners, soil testers, meteorological aids, and tree wardens. With a bachelor's degree, graduates can find employment as biotechnologists, wildlife technicians, and specimen technicians.

Specific Admissions Requirements

- High school Biology with a lab with a C or higher
- High school Chemistry with a lab with a C or higher
- Algebra I or higher with a C or higher

Environmental Associate of Science Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR
	General Education Requirements				
	ENGL 101C	English Composition	4	0	4
	ECON 101C	Macroeconomics	3	0	3
	GEOL 101C	Essentials of Geology	3	2	4
	MATH 124C	College Algebra or higher-level math (excluding MATH 129C)	4	0	4
	MATH 251C	Statistics	4	0	4
	SOCI 180C	Environment and Society	3	0	3
	XX xxxC	Humanities/Fine Arts/Language elective	3	0	3
					25
Major Requirements					
	ARET 160C	Introduction to Geographic Information Systems	2	2	3
	BIOL 111C	General Biology I	3	2	4
	BIOL 112C	General Biology II	3	2	4
	BIOL 212C	Ecology	3	2	4
	BIOL 215C	Fresh Water Ecology	3	2	4
	CHEM 103C	General Chemistry I	3	2	4
	CHEM 104C	General Chemistry II	3	2	4
	ENVS 101C	Fundamentals of Environmental Science	3	2	4
	ENVS 290C	Senior Capstone Project and Seminar	3	2	4
					18
Elective Requirements (choose 2)					
	ARET 101C	AutoCAD 2D	3	0	3
	BIOL 116C	Field Ornithology	3	2	4
	BIOL 117C	Introduction to Plant Biology	3	2	4
	BIOL 202C	Microbiology	3	3	4
	ENVS 220C	Introduction to Soil Science	3	2	4
	ENVS 250C	Agroecology	3	2	4
	MATH 125C	Finite Mathematics	4	0	4
	MATH 140C	Precalculus	4	0	4
	MATH 205C	Calculus I	4	0	4
	PHYS 133C	Physics (Algebra-based)	3	2	4
	PHYS 135C	Physics II (Algebra-based)	3	2	4
	PHYS 231C	Physics I (Calculus-based)	3	3	4
	PHYS 232C	Physics II (Calculus-based)	3	3	4
	SCI 107C	Introduction to Meteorology	3	2	4
	SCI 110C	Alternative Energy Fundamentals	3	2	4
					7-8
Total Credits					67-68

Degree with Career Option					
General Education Requirements					
ENGL 101C	English Composition	4	0	4	
ECON 101C	Macroeconomics	3	0	3	
GEOL 101C	Essentials of Geology	3	2	4	
MATH 124C	College Algebra or higher-level math (excluding MATH 129C)	4	0	4	
MATH 251C	Statistics	4	0	4	
SOCI 180C	Environment and Society	3	0	3	
XX xxxC	Humanities/Fine Arts/Language elective	3	0	3	
					25
Major Requirements					
ARET 101C	AutoCAD 2D	3	0	3	
ARET 160C	Introduction to Geographic Information Systems	2	2	3	
BIOL 111C	General Biology I	3	2	4	
BIOL 112C	General Biology II	3	2	4	
BIOL 212C	Ecology	3	2	4	
BIOL 215C	Fresh Water Ecology	3	2	4	
CHEM 103C	General Chemistry I	3	2	4	
CHEM 104C	General Chemistry II	3	2	4	
ENVS 101C	Fundamentals of Environmental Science	3	2	4	
ENVS 290C	Senior Capstone Project and Seminar	3	2	4	
					38
Elective Requirements (choose 2)					
BIOL 116C	Field Ornithology	3	2	4	
BIOL 117C	Introduction to Plant Biology	3	2	4	
BIOL 202C	Microbiology	3	3	4	
ENVS 220C	Introduction to Soil Science	3	2	4	
ENVS 250C	Agroecology	3	2	4	
PHYS 133C	Physics (Algebra-Based)	3	2	4	
PHYS 135C	Physics II (Algebra-Based)	3	2	4	
PHYS 231C	Physics I (Calculus-Based)	3	3	4	
PHYS 232C	Physics II (Calculus-Based)	3	3	4	
SCI 107C	Introduction to Meteorology	3	2	4	
SCI 110C	Alternative Energy Fundamentals	3	2	4	
					4
Total Credits	Total Credits				67

INDUSTRIAL DESIGN TECHNOLOGY

Associate in Science

This program prepares students for entry-level positions in industrial design. Students master design fundamentals with courses in drawing, 2D design, 3D design, engineering design, and manufacturing principles. Emphasis is placed on math and physical sciences, and English and social sciences broaden and improve communication skills. Graduates have the foundation to pursue a bachelor's degree or opportunities for life-long learning or professional development.

Program Learning Outcomes

Graduates are able to:

- Employ design research that contributes to the definition and solution of design problems.
- Apply principles of engineering, basic science, math, and psychology to formulate creative design solutions for a given problem, creating rough and finished concept sketches assessing those concepts and selecting the most appropriate final design.
- Demonstrate proficient skills in sketching and rendering with appropriate media, technical drawing, 3-D physical and computer modeling, and prototyping.

Career Information

Students who complete this program can enter into entry-level positions in the field of industrial design.

Industrial Design Technology Associate of Science Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR	
	Fall Semester					
	ARET 103C	Architectural Graphics and Sketching	2	2	3	
	ENGL 101C	English Composition	4	0	4	
	MCET 105C	Engineering Design	4	0	4	
	VRTS 101C	Introduction to Drawing	2	4	4	
					15	
Spring Semester						
	MATH 124C	College Algebra or higher-level math course	4	0	4	
	MCET 106C	Advanced CAD Modeling (SolidWorks)	2	2	3	
	VRTS 103C	Two-Dimensional Design	2	3	3	
	VRTS 104C	Three-Dimensional Design	2	3	3	
	XXX xxxC	Science elective	3	2	4	
					17	
SECOND YEAR	Fall Semester					
		INDS 110C	History of Industrial Design or			
		VRTS 111C	Survey of Western Art History or			
		VRTS 115C	History of Modern Art	3	0	3
		INDS 150C	Industrial Design Studio 1	3	3	4
		INDS 232C	Business of Design	3	0	3
		MFET 111C	Manufacturing and Materials Processing	3	3	4
		VRTS 193C	Introduction to Photoshop or			
		VRTS 195C	Introduction to Illustrator CC	3	0	3
						17
	Spring Semester					
		ENGL 120C/COMM 120C	Communication or			
		COMM 125C	Communication and the Literature of Science and Technology	3	0	3
		INDS 250C	Industrial Design Studio 2	3	3	4
		INDS 242C	Manufacturing Techniques	3	0	3
		PSYC 105C	Introduction to Psychology or			
	PSYC 209C	Educational Psychology or				
	PSYC 225C	Social Psychology	3	0	3	
					13	
Total Credits					62	

INFORMATION TECHNOLOGY — NETWORKING

Associate in Science

This program prepares students to obtain and succeed in well-paying jobs in one of the fastest growing fields in the world. Students complete hands-on training in the design and configuration of complex computer networks, VoIP installations, Windows Servers, and network security. NHTI's networking lab has 100+ Cisco routers and switches dedicated for student use.

Mindfulness and communication training creates opportunities for growth and leadership, flexibility, adaptability, and the confidence to handle challenges. At NHTI, learning about emotional intelligence, patience, and nonverbal communication cues are key parts of the IT curriculum. Employers expect new engineers and IT professionals to be good communicators and collaborators to help them be more effective on teams and in project work.

Program Learning Outcomes

Graduates are able to:

- Demonstrate sophisticated applications of computer technology on a professional level
- Demonstrate interpersonal skills needed to obtain and sustain a career in information technology
- Identify and resolve technical problems using research techniques and troubleshooting
- Create, install, and manage networks while adhering to industry standards
- Implement solutions that provide common business functions in a secure environment
- Evaluate best practices to maintain confidentiality, integrity, and availability of computer systems

Career Information

Managers value the high level of technical knowledge that NHTI's IT interns bring to their companies and place special emphasis on the communications and problem-solving skills they have developed. Many internships lead to full-time entry-level IT positions and provide a solid foundation for future success. Graduates can enter into the following professions (not an inclusive list):

- IT help desk technician
- Entry-level network technician
- Network technician
- Network administrator

IT students are prepared to test for nationally recognized IT certification exams such as:

- CompTIA A+ Certification
- Cisco Certified Network Associate
- CompTIA Security + Certification
- Microsoft Technology Associate

Accreditation

NHTI is an authorized academy for Cisco, CompTIA, and Microsoft. Classes are taught by industry-certified instructors.

Additional Info

Students are required to complete a senior internship in the area of their concentration and career goals. The internship provides real-life experience applying skills learned in the classroom. Employers work closely with the students and professors to ensure an environment that enhances their education, provides experience, and introduces them to the IT business environment.

Information Technology – Networking Associate of Science Curriculum

	Course	Title	CL	LAB	CR
FIRST YEAR	Fall Semester				
	ENGL 120MC/COMM 120MC	Communication: Mindful	3	0	3
	IST 103C	Programming with Raspberry Pi ¹	2	2	3
	IST 106C	IT Career Topics ¹	1	0	1
	IST 104C	PC/Mobile Hardware and Networking ¹	2	2	3
	PSYC 105C	Introduction to Psychology or			
	SOCI 105C	Introduction to Sociology	3	0	3
					13
	Spring Semester				
	IST 154C	Introduction to Networks ¹	2	2	3
	IST 109C	PC OS Security and Cloud Fundamentals ¹	2	2	3
	IST 170C	Introduction to Linux ¹	2	2	3
	MATH 120C	Quantitative Reasoning or higher-level math course	4	0	4
				17	
SECOND YEAR	Fall Semester				
	ENGL 102MC	Introduction to Literature: Mindful	3	0	3
	IST 254C	Switching, Routing, and Wireless Essentials ¹	2	2	3
	IST 180C	Cloud Services and Windows Server ¹	2	2	3
	IST 290C	IT Career Development ¹	2	0	2
	IST 291C	IT Internship Search and Approval ¹	0	2	1
	IST xxxC	IT elective ¹	2	2	3
					15
	Spring Semester				
	ENGL 294MC/COMM 294MC	Communicating Mindfully Capstone	1	0	1
	IST xxxC	IT elective ¹	2	2	3
	IST 256C	Enterprise, Networking, Security, and Automation ¹	2	2	3
	IST 265C	Information Security ¹	2	2	3
	IST 294C	Senior IT Internship ¹	0	8	2
	XX xxxC	Science elective ²	3	2	4
					16
Total Credits					
				61	

¹Indicates major field courses

²Science electives only BIOL 115, BIOL 120, BIOL 159, CHEM 115, CHEM 120, ENVS 101, GEOL 101

INFORMATION TECHNOLOGY – SOFTWARE DEVELOPMENT

Associate in Science

This program prepares students to obtain and succeed in well-paying jobs in one of the fastest growing fields in the world. Students complete hands-on training in the design and development of software applications for web, mobile, and desktop environments. NHTI's IT department offers a sequence of stackable certificates in software development and related technologies; each enables students to develop marketable skills and earn industry-recognized certifications in as few as four courses while building credits toward the associate degree.

Mindfulness and communication training creates opportunities for growth and leadership, flexibility, adaptability, and the confidence to handle challenges. At NHTI, learning about emotional intelligence, patience, and nonverbal communication cues are key parts of the IT curriculum. Employers expect new engineers and IT professionals to be good communicators and collaborators to help them be more effective on teams and in project work.

Program Learning Outcomes

Graduates are able to:

- Demonstrate sophisticated applications of computer technology to be competent on a professional level.
- Demonstrate interpersonal skills needed to obtain and sustain a career in information technology.
- Identify and resolve technical problems using research techniques and troubleshooting .
- Design, develop, and debug a software application.
- Configure devices, applications, and services to deploy and run software applications.
- Perform software development activities using industry-standard methodologies on different platforms.
- Design data management solutions for use by software applications.

Career Information

Graduates can enter into the following professions (not an inclusive list):

- IT help desk technician
- Entry-level software developer
- Junior-level software developer

The program also prepares students for the CompTIA A+ certification and the Microsoft Technology Associate certification exams.

Additional Info

Students are required to complete a senior internship in the area of their concentration and career goals. The internship provides real-life experience applying skills learned in the classroom. Employers work closely with the students and professors to ensure an environment that enhances their education, provides experience, and introduces them to the IT business environment.

Information Technology – Software Development Associate of Science Curriculum

	Course	Title	CL	LAB	CR
FIRST YEAR	Fall Semester				
	ENGL 120MC/COMM120MC	Communication: Mindful	3	0	3
	IST 103C	Programming with Raspberry Pi ¹	2	2	3
	IST 106C	IT Career Topics ¹	1	0	1
	IST 104C	PC/Mobile Hardware and Networking ¹	2	2	3
	PSYC 105C	Introduction to Psychology or			
	SOCI 105C	Introduction to Sociology	3	0	3
					13
	Spring Semester				
	ENGL 101MC	English Composition: Mindful	4	0	4
	IST 110C	Programming Fundamentals	2	2	3
	IST 180C	Cloud Services and Windows Server	2	2	3
	IST 140C	Database Design and Management	2	2	3
MATH 124C	College Algebra	4	0	4	
				17	
SECOND YEAR	Fall Semester				
	ENGL 102MC	Introduction to Literature: Mindful	3	0	3
	IST 210C	Object Oriented Programming ¹	2	2	3
	IST 218C	Mobile Application Development ¹	2	2	3
	IST 216C	Introduction to Web Programming ¹	2	2	3
	IST 290C	IT Career Development ¹	2	0	2
	IST 291C	IT Internship Search and Approval ¹	0	2	1
	MATH 125C	Finite Mathematics	4	0	4
					19
	Spring Semester				
	ENGL 294MC/COMM 294MC	Communicating Mindfully Capstone	1	0	1
	IST 215C	Advanced Windows Programming ¹	2	2	3
	IST 240C	Advanced Web Programming ¹	2	2	3
	IST 294C	Senior IT Internship ¹	0	8	2
	XX xxxC	Science elective ²	3	2	4
					16
Total Credits					
				61	

¹Indicates major field courses

²Science electives only BIOL 115, BIOL 120, BIOL 159, CHEM 115, CHEM 120, ENVS 101, GEOL 101

LANDSCAPE AND ENVIRONMENTAL DESIGN

Associate in Science

This program educates students to be future stewards of the natural environment. It combines coursework in natural science, technology, and design. Students learn to understand the natural environment and its relationship to the built environment with a core foundation of education and skills that lead to advanced study or entry-level careers in environmental industry. Instructors have work experience and in-depth knowledge of the opportunities available, playing an important role in advising, inspiring, and mentoring students. This is the only college-level, credit-bearing landscape design program in the Northeast.

Program Learning Outcomes

Graduates demonstrate:

- Working knowledge of landscape design principles and practices, including a portfolio of work samples completed during the internship/ senior thesis project
- Proficiency in written, oral, and graphic communication skills
- An understanding of the social, economic, and political climates in which this profession operates and the mutual impacts and influences of each on the industry and its practitioners
- Working knowledge of and appreciation for the natural physical environment
- Computer literacy in computer-aided design skills sufficient for successful entry-level employment
- Academic preparedness for transfer into a related bachelor's degree program
- Conduct/ behavior consistent with professional workplace standards

Career Information

This degree is preparation for further education and/or careers related to the natural environment such as forestry, landscape management and design, wetland science, landscape architecture, urban planning, environmental technology, and environmental conservation.

Specific Admissions Requirements

- High school Algebra I with a C or higher, or NHTI's MATH 092C with a C or higher
- High school Biology with lab with a C or higher

Landscape and Environmental Design Associate of Science Curriculum

	Course	Title	CL	LAB	CR
FIRST YEAR	Fall Semester				
	ENGL 101C	English Composition	4	0	4
	BIOL 117C	Introduction to Plant Biology ¹	3	2	4
	LAND 102C	Identification and Uses of Shrubs, Ground Covers, and Vines ¹	3	0	3
	LAND 115C	Landscape Design Theory ¹	3	0	3
	MATH 120C	Quantitative Reasoning or higher ²	4	0	4
					18
	Spring Semester				
	ARET 101C	AutoCAD 2D ¹ or			
	LAND 200C	Vector works Landmark 2D ¹	3	0	3
	LAND 101C	Identification and Uses of Trees ¹	3	0	3
	LAND 112C	Landscape Drawing and Presentation Techniques ¹	2	2	3
	XX xxxC	Landscape and Environmental Design elective	3-4	0	3-4
	SOCI xxxC	Social Science elective ³	3	0	3
				15-16	
SECOND YEAR	Fall Semester				
	COMM 125C	Communication and the Literature of Science and Technology or			
	ENGL xxxC	English elective	3	0	3
	LAND 220C	Planting Design ¹	3	0	3
	BIO 115C	Introduction to Ecology or			
	ENVS 101C	Fundamentals of Environmental Science	4	0	4
	XX xxxC	Humanities/Fine Arts/Language elective	3-4	0	3-4
					13-14
	Spring Semester				
	ARET 160C	Introduction to Geographic Information Systems ¹	2	2	3
	LAND 270C	Sustainable Landscape Principles and Practices ¹	3	2	4
	LAND 290C	Senior Project/Internship ¹	0	12	4
	XX xxxC	Landscape and Environmental Design elective ^{1,4}	3-4	0	3-4
					16
Total Credits					
				61	

¹Indicates major field courses

²Excluding MATH 129C; students should consult their academic advisors to ensure the appropriate math course is selected to correspond with individual academic goals.

³Any course with a prefix of ANTH, ECON, HIST, POLS, PSYC, or SOCO (except HIST 104C and HIST 105C)

⁴Any ARET, LAND, BUS, VRTS, GEOL, GEOG, ENVS, BIOL or other course approved by the department chair and VPAA

MANUFACTURING ENGINEERING TECHNOLOGY – AUTOMATION

Associate in Science

This program educates technicians in the manufacturing field, emphasizing mathematics and science courses to give students the knowledge to cope with changing technology. Course work incorporates the theory and practice of manufacturing from planning and layout through the operation and control phases. Extensive computer applications are part of the program, including computer-aided drawing/modeling and automation in manufacturing. English and social sciences are taught to broaden students' perspective and improve communication skills.

Program Learning Outcomes

Graduates are able to:

- Apply knowledge, techniques, skills, and modern tools of math, science, engineering, and technology to solve engineering problems.
- Design technical solutions and assist with the engineering design of systems, components, and processes.
- Apply written, oral, and graphical communication in technical and non-technical environments and identify and use appropriate technical literature.
- Conduct standard tests, measurements, and experiments and analyze and interpret the results.
- Function effectively as a member of a technical team.

Program Objectives

- Prepare graduates for professional entry-level positions with the engineering technical skills to meet the demands of industry in mechanical design, manufacturing, and industrial automation.
- Prepare graduates with the skills necessary to enter a four-year bachelor's degree program.
- Prepare graduates with skills to meet the technical needs of an ever-changing society.
- Prepare graduates to communicate in a diverse world with respect to social awareness and ethical issues.

Career Information

Graduates are employed in positions such as production planners, management assistants, material planners, and manufacturing engineering technicians.

Specific Admissions Requirements

- At least three years of college preparatory math (Algebra I, Algebra II, and Geometry) with a C or higher
- All engineering technology applicants should have satisfactorily completed high school-level courses in Chemistry and Physics.

Manufacturing Design Technology – Automation Associate of Science Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR	
	Fall Semester					
	ENGL 101C	English Composition	4	0	4	
	MCET 105C	Engineering Design ^{1,2} or	4	0	4	
	MFET 111C	Manufacturing and Materials Processing ^{1,2}	3	3	4	
	MATH 124C	College Algebra	4	0	4	
	PHYS 133C	Physics I (Algebra-based)	3	2	4	
					16	
Spring Semester						
	ENGL 120C/COMM 120C	Communication or				
	COMM 125C	Communication and the Literature of Science and Technology	3	0	3	
	MCET 105C	Engineering Design ^{1,2} or	4	0	4	
	MFET 111C	Manufacturing and Materials Processing ^{1,2}	3	3	4	
	MATH 140C	Pre-Calculus	4	0	4	
	PHYS 135C	Physics II (Algebra-Based)	3	2	4	
	CPET 107C	Intro to Programming with C++	3	0	3	
					18	
SECOND YEAR	Fall Semester					
		ARET 210C	Robotics and Automation I ¹	2	4	4
		MATH 251C	Statistics	4	0	4
		MFET 202C	Measurement and Control ¹	3	2	4
		MFET 210C	Lean Manufacturing ¹	3	0	3
		RAET 205C	PLC Programming ¹	3	0	3
						18
	Spring Semester					
		ARET 220C	Robotics and Automation II ¹	2	4	4
		XX xxxC	Social Science elective ³	3		3
	MFET 252C	Quality Control ¹	4	0	4	
	XX xxxC	Humanities/Fine Arts/Language elective	3-4	0	3-4	
					14-15	
	Total Credits				61	

¹Indicates major field courses

²All students taking these courses will be charged a \$50 materials fee.

³Any course with a prefix of ANTH, ECON, HIST, POLS, PSYC, or SOCI (except HIST 104C and HIST 105C)

MANUFACTURING ENGINEERING TECHNOLOGY – MACHINING

Associate in Science

This program educates technicians in the manufacturing field, emphasizing mathematics and science courses to give students the knowledge to cope with changing technology. Course work incorporates the theory and practice of manufacturing from planning and layout through the operation and control phases. Extensive computer applications are part of the program, including computer-aided drawing/modeling and automation in manufacturing. English and social sciences are taught to broaden students' perspective and improve communication skills.

Program Learning Outcomes

Graduates are able to:

- Apply knowledge, techniques, skills, and modern tools of math, science, engineering, and technology to solve engineering problems.
- Design technical solutions and assist with the engineering design of systems, components, and processes.
- Apply written, oral, and graphical communication in technical and non-technical environments and identify and use appropriate technical literature.
- Conduct standard tests, measurements, and experiments and analyze and interpret the results.
- Function effectively as a member of a technical team.

Program Objectives

- Prepare graduates for professional entry-level positions with the engineering technical skills to meet the demands of industry in mechanical design, manufacturing, and industrial automation.
- Prepare graduates with the skills necessary to enter a four-year bachelor's degree program.
- Prepare graduates with skills to meet the technical needs of an ever-changing society.
- Prepare graduates to communicate in a diverse world with respect to social awareness and ethical issues.

Career Information

Graduates are employed in positions such as production planners, management assistants, material planners, and manufacturing engineering technicians.

Specific Admissions Requirements

- At least three years of college preparatory math (Algebra I, Algebra II, and Geometry) with a C or higher
- All engineering technology applicants should have satisfactorily completed high school-level courses in Chemistry and Physics.

Manufacturing Design Technology – Machining Associate of Science Curriculum

FIRST YEAR	Course	Title	CL	LAB	CR	
	Fall Semester					
	ENGL 101C	English Composition	4	0	4	
	MCET 105C	Engineering Design ^{1,2} or	4	0	4	
	MFET 111C	Manufacturing and Materials Processing ^{1,2}	3	3	4	
	MATH 124C	College Algebra	4	0	4	
	PHYS 133C	Physics I (Algebra-based)	3	2	4	
					16	
Spring Semester						
	ENGL 120C/COMM 120C	Communication or				
	COMM 125C	Communication and the Literature of Science and Technology	3	0	3	
	MCET 105C	Engineering Design ^{1,2} or	4	0	4	
	MFET 111C	Manufacturing and Materials Processing ^{1,2}	3	3	4	
	MATH 140C	Pre-Calculus	4	0	4	
	PHYS 135C	Physics II (Algebra-Based)	3	2	4	
	XX xxxC	Social Science elective ³	3		3	
					18	
SECOND YEAR	Fall Semester					
		CHEM 105C	Chemistry	3	2	4
		MATH 251C	Statistics	4	0	4
		MFET 202C	Measurement and Control ¹	3	2	4
		MFET 210C	Lean Manufacturing ¹	3	0	3
		MFET 220C	Manufacturing Processes and Machine Tools ^{1,2}	3	3	4
						19
	Spring Semester					
		MCET 205C	Materials Science ¹	3	2	4
		MFET 241C	Computer Integrated Manufacturing (CIM) ¹	3	3	4
		MFET 252C	Quality Control ¹	4	0	4
		XX xxxC	Humanities/Fine Arts/Language elective	3-4	0	3-4
	XX xxxC	Technical elective	3-4	0	3-4	
					18-20	
Total Credits					61	

¹Indicates major field courses

²All students taking these courses will be charged a \$50 materials fee.

³Any course with a prefix of ANTH, ECON, HIST, POLS, PSYC, or SOCI (except HIST 104C and HIST 105C)

A 3-year version of this program is available. Contact the department chair for details.

MATHEMATICS

Associate in Science

This program offers students a rigorous and cost-effective education with small class sizes to form long-lasting connections with peers and professors. Students can gain hands-on experience as a tutor of math and physics in ACE, by competing with our Math Team, and through investigations in our well-equipped physics lab. In their final semester, students investigate a topic of their own interest in math in collaboration with a faculty member. In their senior project presentation, students share their newfound expertise with the academic community.

Program Learning Outcomes

Graduates demonstrate the ability to:

- Identify, discuss, and analyze mathematical and physical theories
- Show technical proficiency and effective problem-solving in completing mathematical processes
- Communicate math in both oral and written formats using appropriate language
- Use logical reasoning, understand mathematical proof, and justify results
- Apply math concepts to other disciplines including business, economics, and social sciences

Career Information

This degree program prepares students to transfer successfully into bachelor's degree programs in STEM fields such as mathematics, physics, statistics, engineering, computer science, and mathematics education. All of our graduates who obtained their A.S. in Mathematics have transferred to and enjoyed academic success at UNH.

Specific Admissions Requirements

- A grade of C or higher in high school Pre-Calculus and Physics with a lab

Mathematics Associate of Science Curriculum

	Course	Title	CL	LAB	CR
FIRST YEAR	Fall Semester				
	CPET 107C	Introduction to Programming with C++ ¹	2	3	3
	INDL 101C	STEM in the First Year Experience	3	0	3
	MATH 205C	Calculus I ¹	4	0	4
	PHYS 231C	Physics I (Calculus-based) ¹	3	3	4
					14
	Spring Semester				
	ENGL 101C	English Composition	4	0	4
	MATH 206C	Calculus II ¹	4	0	4
	MATH 2xxC	Math elective ¹	4	0	4
PHYS 232C	Physics II (Calculus-based) ¹	3	3	4	
				16	
SECOND YEAR	Fall Semester				
	COMM 125C	Communication and the Literature of Science and Technology	3	0	3
	MATH 208C	Multivariable Calculus ¹	4	0	4
	MATH 2xxxC	Math elective ¹	4	0	4
	PHYS 233C	Physics III (Calculus-based) or	3	3	4
	XX xxxC	Lab Science elective ²	3	2	4
	XX xxxC	Social Science elective	3	0	3
					18
	Spring Semester				
	MATH 210C	Differential Equations	4	0	4
	MATH 290C	Senior Project/Internship	0	12	4
	XX xxxC	Humanities/Fine Arts/Language elective	3	0	3
	XX xxxC	General education elective	3-4	0	3-4
				14-15	
Total Credits					
				61	

¹Indicates major field courses

²Any lab course with prefix SCI, BIOL CHEM, ENVS or GEOL except BIOL 100C and CHEM 100C

MECHANICAL ENGINEERING TECHNOLOGY

Associate in Science

This program is designed to educate technicians in the mechanical engineering field and includes courses in the areas of design, manufacturing, and controls. Math and physical sciences are emphasized to give students the basic knowledge to cope with changing technology. Course work incorporates theory and practice with extensive computer applications including computer-aided drawing/modeling and design.

Program Learning Outcomes

Graduates are able to:

- Apply knowledge, techniques, skills, and modern tools of math, science, engineering, and technology to solve engineering problems.
- Design solutions for technical problems and assist with the engineering design of systems, components, and processes.
- Apply written, oral, and graphical communication and identify and use appropriate technical literature.
- Conduct standard tests, measurements, and experiments, and analyze and interpret the results.
- Function effectively as a member of a technical team.

Program Educational Objectives

- Prepare graduates for professional entry-level positions to meet the demands of industry.
- Prepare graduates with the skills to enter a four-year degree program.
- Prepare graduates to be life-long learners to meet the technical needs of an ever-changing society.
- Prepare graduates to effectively communicate in a diverse world with respect to social and ethical issues.

Career Information

Students who complete this program can enter into the following professions (not an inclusive list): assistant engineer, machine designer, engineering sales representative, engineering laboratory technician, technical supervisor, and CAD operator.

Accreditation

This program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org.

Specific Admissions Requirements

- Three years of college preparatory math (Algebra I, Algebra II, and Geometry) with minimum grades of C
- It is recommended all applicants have satisfactorily completed high school-level Chemistry and Physics.

Mechanical Engineering Technology Associate of Science Curriculum

	Course	Title	CL	LAB	CR
FIRST YEAR	Fall Semester				
	ENGL 101C	English Composition	4	0	4
	MCET 105C	Engineering Design ^{1,2} or	4	0	4
	MFET 111C	Manufacturing and Materials Processing ^{1,2}	3	3	4
	MATH 124C	College Algebra	4	0	4
	PHYS 133C	Physics I (Algebra-based)	3	2	4
					16
	Spring Semester				
	ENGL 120C/COMM 120C	Communications or			
	COMM 125C	Communication and the Literature of Science and Technology	3	0	3
MCET 105C	Engineering Design ^{1,2} or	4	0	4	
MFET 111C	Manufacturing and Materials Processing ^{1,2}	3	3	4	
MCET 150C	Statics and Strength of Materials ¹	3	2	4	
MATH 140C	Pre-Calculus	4	0	4	
PHYS 135C	Physics II (Algebra-based)	3	2	4	
				19	
SECOND YEAR	Fall Semester				
	CHEM 105C	Chemistry	3	2	4
	MCET 250C	Dynamics and Mechanical Design I ¹	3	2	4
	MFET 202C	Measurement and Control ¹	3	2	4
	MATH 205C	Calculus I	4	0	4
	XX xxxC	Social Science elective ³	3-4	0	3-4
					19-20
	Spring Semester				
	MCET 205C	Material Science ¹	3	2	4
	MCET 229C	Thermodynamics and Heat Transfer ¹	3	0	3
MCET 260C	Mechanical Design II ¹	3	2	4	
XX xxxC	Humanities/Fine Arts/Language elective	3-4	0	3-4	
XX xxxC	Technical elective	3-4	0	3-4	
				17-19	
Total Credits					
				71-74	

¹Indicates major field courses

²All students taking the following courses will be charged the following materials fees: MFET 111C, \$20; and MCET 105C, \$10.

³Any course with a prefix of ANTH, ECON, HIST, POLS, PSYC ,or SOCI (except HIST 104C and HIST 105C)

ROBOTICS AND AUTOMATION ENGINEERING TECHNOLOGY

Associate in Science

This program prepares engineering technologists for employment in advanced manufacturing. Students master engineering fundamentals through engineering design, manufacturing processes, computer programming, circuit theory, and digital electronics courses. Emphasis is placed on math and physical science. In the second year, students take advanced/specialized courses that focus on the application and integration of technology to product design and product manufacture. Topics include robotics, machine vision, process automations, programmable logic controllers, motion control, and the use of computers for design and manufacture.

Career Information

Graduates will have the foundation necessary to pursue a bachelor's degree and to take advantage of opportunities for life-long learning and professional development. We also offer an articulation agreement with UNH-Manchester; see advisor for details. Students who complete this program can enter into the following professions (not an inclusive list): manufacturing engineering assistant, electronics technician, and automation technician.

Specific Admissions Requirements

- Three years of college preparatory math (Algebra I, Algebra II, and Geometry) with minimum grades of C
- It is recommended all applicants have satisfactorily completed high school-level Chemistry and Physics.

Robotics and Automation Engineering Technology Associate of Science Curriculum

	Course	Title	CL	LAB	CR
FIRST YEAR	Fall Semester				
	ELET 101C	Electric Circuits ¹	3	3	4
	ELET 115C	Digital Fundamentals ¹	2	3	3
	ENGL 120C/COMM 120C	Communication or			
	COMM 125C	Communication and the Literature of Science and Technology	3	0	3
	MATH 124C	College Algebra	4	0	4
	MCET 105C	Engineering Design ^{1,2}	4	0	4
					18
	Spring Semester				
	CPET 107C	Introduction to Programming with C++ ¹	2	3	3
	CPET 215C	Integrated Circuits and Interfacing ^{1,3}	3	3	4
	ENGL 101C	English Composition	4	0	4
	MATH 140C	Pre Calculus	4	0	4
	MFET 111C	Manufacturing and Materials Processing ^{1,2}	3	3	4
				15-19	
SECOND YEAR	Fall Semester				
	MATH 205C	Calculus I	4	0	4
	MFET 210C	Lean Manufacturing ⁴	3	0	3
	PHYS 133C	Physics	3	2	4
	RAET 205C	PLC Programming	2	3	3
	RAET 210C	Robotics and Automation I	3	3	4
	XX xxxC	Social Science elective ⁵	3	0	3
					18-21
	Spring Semester				
	ELET 102C	Circuit Analysis ³	3	3	4
	MFET 231C	Production Systems (Spring only) ⁴	3	0	3
	PHYS 135C	Physics II	3	2	4
	RAET 220C	Robotics and Automation II	3	3	4
	XX xxxC	Humanities/Fine Arts/Language elective	3	0	3
				11-18	
Total Credits					71-74

¹Indicates major field courses

²All students taking the following courses will be charged the following materials fees: MFET 111C, \$20; and MCET 105C, \$10.

³Students must take either CPET 215C in the Spring semester of their first year or ELET 102C in the Spring semester of their second year.

⁴Students must take either MFET 210 (offered in the second year Fall semester only) or MFET 231C (offered in the second year Spring semester only).

⁵Any course with a prefix of ANTH, EC&ON, HIST, POLS, PSYC or SOCI; PSYC 102C recommended.

SUSTAINABLE AGRICULTURE

Associate in Science

This program prepares future farmers for the business and science behind running a small profitable farm in Northern New England and gives students looking to earn a 4-year degree the courses needed for transfer. Students develop the skills to market their product through farmers markets, roadside stands, community-supported agriculture, and restaurants as part of the local food-to-table movement. As advocates for the production of environmentally friendly food in their community, students understand the holistic role of the agroecosystem and how to balance the economic, environmental, and social needs of the farmer. Students specialize based on their agricultural preference. This program is financial aid-eligible.

Program Learning Outcomes

- Students will communicate effectively.
 - Students will employ vocabulary pertinent to agriculture.
 - Students will complete research and use peer-reviewed sources of literature.
- Students will use critical thinking.
 - Students will apply the scientific method.
 - Students will assess agricultural trends and identify appropriate management strategies.
- Students will demonstrate the application of scientific technology.
 - Students will practice lab and field safety procedures.
 - Students will utilize current technology to collect, analyze, and present data.
- Students will express quantitative and qualitative scientific knowledge.
 - Students will demonstrate knowledge of sustainable agricultural practices.
 - Students will describe connections between the environment and human societies.

Career Information

Students develop the skills necessary and complete the classes needed to enter these careers (not an inclusive list):

- Farmer/farm manager
- Market gardener
- Farmers market manager
- Sustainable agriculture consultant
- Local food buyer for supermarket
- Organic/sustainable retail and support
- Agricultural fair worker
- Manager and marketer of agricultural operations
- Manager of working lands and landscapes
- Agriculture/food/nutrition/natural resources-related researcher
- Policymaker

Technical Standards

Students must have the strength, stamina, motor coordination, and sensory capabilities for the following actions:

- Standing for sustained periods of time; walking, running, bending, and sitting on the floor/ground
- Frequent lifting, moving, and transferring of equipment, plants, and/or livestock
- Sufficient visual and hearing acuity to ensure a safe environment and respond quickly to clients, colleagues, and partners in the event of an emergency
- Sufficient verbal ability to express and exchange information and ideas and to interpret instructions to clients, colleagues, and partners
- Ability to work with frequent interruptions, respond appropriately to unexpected situations, demonstrate safe care for colleagues and the workplace, and cope with variations in workload and stress levels
- Ability to consistently attend and participate in classes and lab
- Ability to demonstrate and maintain organizational skills and time management in classes and labs

NHTI reserves the right to amend its technical standards at any time and impose them on all current students.

Sustainable Agriculture Associate of Science Curriculum

Degree with Certificate Option				
Course	Title	CL	LAB	CR
General Education Requirements				
BIOL 111C	General Biology I	3	2	4
ENGL 101C	English Composition	4	0	4
MATH 124C	College Algebra or higher-level math (excluding MATH 129C)	4	0	4
SOCI 180C	Environment and Society (Fall only)	3	0	3
XX xxxC	Humanities/Fine Arts/Language elective	3	0	3
ENGL xxxC	Communications elective or			
ENGL xxxC	Literature elective			
MATH 251C	Statistics or	4	0	4
XX xxxC	Humanities/Fine Art/Language elective	3	0	3
				24-25
Major Requirements				
ACCT 101C	Accounting I ¹	3	0	3
AGRI 110C	Sustainable Agriculture I	3	2	4
AGRI 112C	Practical Applications for Sustainable Agriculture I ¹	1	3	2
AGRI 115C	Practical Applications for Sustainable Agriculture II ¹	1	3	2
BUS 170C	Principles of Marketing ¹	3	0	3
ENVS 220C	Introduction to Soil Science	3	2	4
ENVS 250C	Agroecology (Fall only)	3	2	4
BIOL 115C	Introduction to Ecology or			
BIOL 117C	Introduction to Plant Biology or			
ENVS 101C	Fundamentals of Environmental Science	3	2	4
				26
Elective Requirements (choose 2)				
ACCT 101C	Accounting II	3	0	3
ARET 160C	Introduction to Geographic Information Systems	2	2	3
BIOL 112C	General Biology II	3	2	4
BIOL 159C	Personal Nutrition	3	2	4
BIOL 202C	Microbiology	3	3	4
BIOL 211C	Genetics	3	2	4
BIOL 212C	Ecology	3	2	4
CHEM 103C	General Chemistry I	3	2	4
CHEM 104C	General Chemistry II	3	2	4
CHEM 105C	Chemistry	3	2	4
CHEM 115C	Brewing: The Science Behind Beer	3	2	4
GEOG 110C	Introduction to Cultural Geography	3	0	3
LAND 101C	Identification and Uses of Trees	3	0	3
LAND 102C	Identification and Uses of Shrubs, Groundcovers, and Vines	3	0	3
PHYS 133C	Physics (Algebra-based)	3	2	4
PHYS 134C	Physics II (Algebra-based)	3	2	4
PHYS 231C	Physics I (Calculus-based)	3	3	4
PHYS 232C	Physics II (Calculus-based)	3	3	4
				9-10
Total Credits				60

¹These courses count toward a certificate in Sustainable Agriculture Technology.

Degree with Transfer Option				
Course	Title	CL	LAB	CR
General Education Requirements				
BIOL 111C	General Biology I	3	2	4
ENGL 101C	English Composition	4	0	4
ENGL xxxC	Communication elective or	3	0	3
ENGL xxxC	Literature elective or			
MATH 124C	College Algebra or Higher Level Math (excluding MATH 129C) or	4	0	4
MATH 251C	Statistics or	4	0	4
SOCI 180C	Environment and Society (Fall only) or	3	0	3
XX xxxC	Humanities/Fine Art/Language elective	3	0	3
				25
Major Requirements				
AGRI 110C	Sustainable Agriculture I	3	2	4
CHEM 103C	General Chemistry I	3	2	4
ENVS 101C	Fundamentals of Environmental Science	3	2	4
ENVS 220C	Introduction to Soil Science	3	2	4
ENVS 250C	Agroecology (Fall only)	3	2	4
				20
Elective Requirements (choose 2)				
BIOL 117C	Intro to Ecology	3	0	3
ARET 160C	Introduction to Geographic Information Systems	2	2	3
BIOL 112C	General Biology II	3	2	4
BIOL 159C	Personal Nutrition	3	2	4
BIOL 202C	Microbiology	3	3	4
BIOL 211C	Genetics	3	2	4
BIOL 212C	Ecology	3	2	4
CHEM 104C	General Chemistry II	3	2	4
CHEM 105C	Chemistry	3	2	4
CHEM 115C	Brewing: The Science Behind Beer	3	2	4
GEOG 110C	Introduction to Cultural Geography	3	0	3
PHYS 133C	Physics (Algebra-based)	3	2	4
PHYS 134C	Physics II (Algebra-based)	3	2	4
PHYS 231C	Physics I (Calculus-based)	3	3	4
PHYS 232C	Physics II (Calculus-based)	3	3	4
				15
Total Credits				60

ADVANCED MANUFACTURING PROCESSES

Certificate

This certificate provides the entry-level manufacturing technician or CNC operator with basic knowledge of machining operations using traditional machine tools and basic CNC programming/machine operation. Courses include shop mathematics and engineering drawing interpretation. The lab component offers hands-on activities in the machine shop and the CNC lab. This program is financial aid-eligible.

Program Learning Outcomes

Successfully completing the certificate has the following outcomes in terms of skills:

- Basic shop math skills necessary to solve manufacturing-related technical problems
- The ability to read and interpret engineering drawings typically used in the manufacturing industry
- An understanding of machining operations and the various machines used to accomplish these processes
- CNC machine operation including tool offsets, work offsets, and G-code programming fundamentals
- A working knowledge of materials, including cutting tools and workpiece materials, and their interactions

Career Information

A recent study of N.H. employers identified a shortage of technician-level manufacturing production workers. As the aging workforce retires, there will be a skills gap NHTI students can fill to support the growth of advanced manufacturing in N.H. as well as the overall health of the state economy.

Over the past two decades, N.H.'s manufacturing economy has been moving from manual mill work toward automated, smart manufacturing. The technology infusion and high productivity demand a safe and sustainable manufacturing workforce. This requires individuals with professionalism, applied science, technology, math, and engineering skills, as well as knowledge of manufacturing principles – all of which students receive at NHTI.

Students who complete this program can enter into the following professions (not an inclusive list): CNC operator, CNC programmer, and manufacturing technician.

Advanced Manufacturing Processes Certificate Curriculum

Course	Title	CL	LAB	CR
MATH 120C	Quantitative Reasoning	4	0	4
MNFP 105C	Engineering Drawings	2	2	3
MFET 111C	Manufacturing and Materials Processing ¹	3	3	4
MFET 220C	Manufacturing Processes and Machine Tools	3	3	4
MFET 241C	Computer Integrated Manufacturing (CIM)	3	3	4
Total Credits				19

¹All students taking MFET 111C will be charged 2 \$20 materials fee.

ADVANCED SOFTWARE DEVELOPMENT

Certificate

This program provides students programming and systems design skills used in business and industry. Students will use different programming languages while designing databases and creating business front ends. The Entry-Level Software Development Certificate is a prerequisite for this program.

Career Information

Graduates are prepared for entry-level software development positions and/or to continue their education with programs such as NHTI's associate degree in Information Technology. Students can earn Microsoft certifications when taking this program.

Advanced Software Development Certificate Curriculum

Course	Title	CL	LAB	CR
IST 118C	Mobile Application Development	2	2	3
IST 215C	Advanced Windows Programming	2	2	3
IST 225C	C# Programming	2	2	3
Total Credits				9

Students are expected to possess a working knowledge of software applications including word processing, spreadsheets, and presentation software, or to have successfully completed NHTI's IST 102C (PC Applications) or comparable course. Students must maintain Internet access, including a professional working email address, throughout their participation in this program.

APPLIED CAREER FUNDAMENTALS FOR ADVANCED MANUFACTURING

Certificate

This program is for students who seek immediate employment and/or want to pursue a Manufacturing Associate Degree at NHTI. Courses/credit awarded in this program may count towards the degree program. Students are strongly encouraged to consult with an academic advisor to select the courses most appropriate to the student's academic and career goals. This program is financial aid-eligible.

Career Information

Graduates can enter the workforce in an entry-level position in the following professions (not an inclusive list): manufacturing technician and manufacturing associate.

Applied Career Fundamentals for Advanced Manufacturing Certificate Curriculum

Course	Title	CL	LAB	CR
BUS 101C	Introduction to Business	3	0	3
ENGL 101C	English Composition	4	0	4
ENGL 120C/COMM 120C	Communication	3	0	3
IST 102C	PC Applications or	3	0	3
CPET 107C	Introduction to Programming with C++	2	3	3
MATH 120C	Quantitative Reasoning or higher-level math course ¹	4	0	4
XX xxxC	Any college-level lab science, excluding BIOL 100C, CHEM 100C, PHYS 100C ²	3	2-3	4
XX xxxC	Any course with MNFP, MCET, MFET, or other approved designation ³	3-4	0-3	3-4
XX xxxC	Any course with an MNFP, MCET, MFET, or other approved designation ³	3-4	0-3	3-4
Total Credits				27-29

¹Students are expected to take placement testing. Those who do not achieve a score consistent with success in college-level math will be advised on remediation. Students should be counseled concerning their academic and career goals to make the most appropriate course selection. It is possible that courses from other CCSNH colleges will meet these requirements. MATH 129C does not fulfill this requirement.

²While any college-level lab science course meets this requirement, students should be counseled concerning their academic and career goals to make the most appropriate course selection. It is possible that courses from other CCSNH colleges will meet these requirements.

³Students should be counseled concerning their academic and career goals to make the most appropriate course selections. It is possible that courses from other CCSNH colleges will meet these requirements.

AUTOMATION

Certificate

This program prepares new, potential, and current employees for employment in advanced manufacturing. Students master fundamentals in engineering design, controls, computer programming, and robotics and automation.

Program Learning Outcomes

- Understand basic electric circuits, controls, and programmable logic controllers (PLCs).
- Apply basic principles of engineering to design and analyze processes, subsystems, and components.
- Design and develop the software to control automation equipment.
- Integrate automation equipment components such as motion control, vision systems, PLCs, and robotic arms.
- Apply knowledge, problem solving techniques, and hands-on skills in the design and application of manufacturing systems, automated manufacturing processes, process controls, and systems integration.

Career Information

Students who complete this program can enter into the following professions (not an inclusive list): automation technician, engineer, and automation maintenance mechanic.

Specific Admissions Requirements

It is strongly recommended engineering technology applicants have satisfactorily completed high school-level courses in Chemistry, Physics, and least three years of college preparatory math (Algebra I, Algebra II, and Geometry) with minimum grades of C.

Automation Certificate Curriculum

Course	Title	CL	LAB	CR
MATH 120C	Quantitative Reasoning	4	0	4
MFET 202C	Measurement and Control	3	2	4
CPET 107C	Introduction to Programming with C++	2	3	3
MCET 105C	Engineering Design	4	0	4
RAET 205C	PLC Programming	2	3	3
RAET 210C	Robotics and Automation I	3	3	4
RAET 220C	Robotics and Automation II	3	3	4
Total Credits				26

BUILDING INSPECTOR AND PLANS EXAMINER

Certificate

This program is not currently accepting new students.

This program prepares students to critically examine permit applications and plans for residential, commercial, and other building types and ensure the construction of buildings with permits is conducted in accordance with and within the provisions of relevant building codes. This program is available evenings and is financial aid-eligible.

Career Information

Building inspectors and plans examiners review and inspect various building types from permit applications through construction phases to ensure that they are safe and structurally sound.

Specific Admissions Requirements

- High school-level Algebra 1, Algebra II, and Geometry, each with a C or higher, or prior experience in architecture, engineering, construction, and materials manufacturing industries as evidenced by academic degrees, industry-accepted credentials, employment experience, etc.
- A one-page essay explaining reasons why the student wants to join this program

Building Inspector and Plans Examiner Certificate Curriculum

Course	Title	CL	LAB	CR
BIPE 101C	Introduction to the International Code Council (ICC) Codes	3	0	3
BIPE 105C	Construction Document Reading	3	0	3
BIPE 110C	Plan Review	3	0	3
BIPE 115C	State Construction Laws	3	0	3
BIPE 120C	Legal Aspects of Enforcement	3	0	3
BIPE 125C	Building Inspector Skills (Capstone)	3	0	3
Total Credits				18

¹All students taking MFET 111C will be charged 2 \$20 materials fee.

COMPUTER-AIDED DESIGN – ARCHITECTURAL CONCENTRATION

Certificate

This program teaches students to effectively create 2-D and 3-D drawings in computer-aided design (CAD) and to model and visualize 3-D objects for project presentations. It is available evenings and is financial aid-eligible.

Program Learning Outcomes

Graduates are able to:

- Understand drawing conventions.
- Use CAD software and other resources effectively in assignments and projects.
- Use CAD software to produce a coordinated set of A/E documents and presentations.
- Define and evaluate the needs of diverse projects.
- Develop work schedule to achieve assignments and project due dates.

Career Information

This program prepares students for CAD operator positions in the fields of architecture and engineering.

Computer-Aided Design – Architecture Concentration Certificate Curriculum

Course	Title	CL	LAB	CR
ARET 101C	AutoCAD 2D	3	0	3
IST 102C	PC Applications	3	0	3
ARET 102C	AutoCAD 3D	3	0	3
ARET 194C	Microstation	3	0	3
ARET 103C	Architectural Graphics and Sketching	2	2	3
ARET 192C	Revit Architecture	3	0	3
Total Credits				18

¹All students taking MFET 111C will be charged 2 \$20 materials fee.

COMPUTER TECHNOLOGY PROGRAMMING

Certificate

This certificate program is designed for individuals who want to increase and broaden their existing programming knowledge and skills to expand their career opportunities as a software professional. Credits are transferable to NHTI's Computer Engineering Technology Associate Degree.

Career Information

Students who complete this program can enter into the following professions (not an inclusive list):

- Software developer
- Full-stack developer
- .NET developer
- IoT developer
- Programmable logic controller engineer
- Mobile application designer or developer
- System verification engineer
- Software quality assurance

Specific Admissions Requirements

Students should be proficient in C++ programming or have successfully taken CPET 107C Introduction to Programming with C++. Students also need the ability to understand and use algebraic equations and have either completed college algebra or have taken MATH 124C College Algebra as a corequisite.

Computer Technology Programming Certificate Curriculum

Required Course	Title	CL	LAB	CR
CPET 125C	Data Structures	2	3	3
Three of the following:				
CPET 240C	Programming for Windows Operating Systems	3	3	4
CPET 222C	Data Communications	3	3	4
CPET 252C	Networking and Internet Technologies	3	3	4
CPET 260C	Computer Real-Time Interfacing	3	3	4
Total Credits				15

¹All students taking MFET 111C will be charged 2 \$20 materials fee.

ELECTRONIC TECHNOLOGY

Certificate

This certificate program is designed for individuals with technical backgrounds who are interested in learning electronics. Credits are transferable to NHTI's Electronic Engineering Technology Associate Degree Program. This program is financial aid-eligible.

Career Information

Graduates can enter into the following professions (not an inclusive list):

- Electronic circuit designer
- IoT developer
- System verification engineer
- Electrical/electronics engineering technicians
- Electro-mechanical technicians

Specific Admissions Requirements

- Math is the language of engineering, thus students should have the ability to understand and use algebraic equations and have either completed college algebra or take MATH 124C College Algebra as a prerequisite.
- Students should possess a working knowledge of digital electronics or take ELET 115C Digital Fundamentals as a co-requisite.

Electronic Technology Certificate Curriculum

Course	Title	CL	LAB	CR
ELET 101C	Electric Circuits	3	3	4
ELET 102C	Circuit Analysis	3	3	4
ELET 110C	Electronics I	3	3	4
ELET 210C	Electronics II	3	3	4
ELET 215C	Advanced Digital Electronics	3	3	4
Total Credits				20

ENTRY-LEVEL SOFTWARE DEVELOPMENT

Certificate

This program provides students with programming and systems design skills. Students use different programming languages while designing databases and creating business front ends. This certificate is a prerequisite for the Advanced Software Development Certificate.

Career Information

Graduates are prepared to enter the workforce in tech support and quality assurance roles, and/or to continue their education with programs such as NHTI's Advanced Software Development Certificate.

Entry-Level Software Development Certificate Curriculum

Course	Title	CL	LAB	CR
IST 110C	Programming Fundamentals	2	2	3
IST 140C	Database Design and Management	2	2	3
IST 210C	Object-Oriented Programming	2	2	3
Total Credits				9

GAME DEVELOPMENT PROGRAMMING

Certificate

This program teaches programming, design skills, and multiple programming languages using industry-proven game development technologies. Students create several game projects, including a team project. Courses in this program are offered days and evenings and can be completed in nine months. It is possible to complete this certificate's instruction and hands-on training in NHTI's computer labs. This program is financial aid-eligible.

Program Learning Outcomes

Graduates are able to:

- Know the syntax and usage of programming languages used in the game industry.
- Apply object-oriented programming design and techniques in software projects.
- Prototype content and game systems.
- Import custom content using content pipelines from one or more major game engines.
- Design and create games in a variety of genres using the systems from one or more major game engines.
- Identify and research topics about the game industry and game programming.
- Identify game mechanics and systems found within game genres and specific games.
- Be proficient in the use of one or more major source control systems.
- Understand and apply basic project management planning and techniques.

Career Information

Graduates will be able to enter an internship, apprenticeship, or on-the-job training program in game development; undertake preparation for entry-level game development certification exams; and/or continue in the Animation and Graphic Game Programming Associate Degree at NHTI.

Specific Admissions Requirements

Applicants are required to have one of the following:

- At least three years of college preparatory mathematics (Algebra I, Algebra II, and Geometry) with minimum grades C or higher
- College board Math SAT or other formalized testing with a score that places applicant into Math 124C/XC or higher-level course
- Completion of one or both AGGP Math electives with a C or higher

Game Development Programming Certificate Curriculum

Course	Title	CL	LAB	CR
AGGP 101C	Introduction to Game Design and Creation with Programming	2	3	3
AGGP 103C	Introduction to Content Development	2	2	3
AGGP 131C	Introduction to 2-D and 3-D Game Development	2	3	3
AGGP 140C	Digital Art Modeling and Animation	2	3	3
CPET 107C	Introduction to Programming with C++	2	3	3
CPET 125C	Data Structures	2	3	3
Total Credits				18

INFORMATION TECHNOLOGY – HARDWARE AND SOFTWARE

Certificate

This program teaches the common core of all IT curricula and provides a foundation for further IT study. Classes can be taken day or evening.

Program Learning Outcomes

Graduates are able to:

- Be eligible to test for industry-recognized certificates: CompTIA A+
- Use critical thinking, abstract conceptualization, and problem solving

Career Information

Graduates can enter into the PC/mobile repair and entry-level help desk technician professions and are eligible to test for the industry-recognized CompTIA A+ certification.

IT – Hardware and Software Certificate Curriculum

Course	Title	CL	LAB	CR
IST 104C	PC/Mobile Hardware and Networking	2	2	3
IST 109C	PC OS Security and Cloud Fundamentals	2	2	3
Total Credits				6

INFORMATION TECHNOLOGY – MICROSOFT SERVERS

Certificate

This program serves as an introduction to Microsoft Server operating systems.

Career Information

Graduates are eligible to test for the Microsoft Certified Professional Certificate and to continue their education with NHTI's Information Technology – Virtualization Certificate.

IT – Microsoft Servers Certificate Curriculum

Course	Title	CL	LAB	CR
IST 108C	Personal Computer Hardware and Software	2	2	3
IST 280C	Windows Server Operating Systems	2	2	3
IST 281C	Administering Windows Server	2	2	3
IST 284C	Advanced Windows Server Configuration	2	2	3
Total Credits				12

INFORMATION TECHNOLOGY – NETWORK ASSOCIATE

Certificate

This certificate is focused on networking, allowing students to develop a high level of expertise and to earn an industry-recognized network certification. The program can be taken day or evening.

Career Information

Upon successful testing, graduates are in demand for professional networking positions and can continue their education with NHTI's Information Technology – VoIP certificate. Graduates can enter into the following professions (not an inclusive list): entry-level help desk technician, help desk technician, entry-level network technician, and network technician. Students who complete these courses will be eligible to test for the worldwide industry-recognized certificate Cisco Certified Network Associate.

IT – Network Associate Certificate Curriculum

Course	Title	CL	LAB	CR
IST 154C	Introduction to Networks	2	2	3
IST 254C	Switching, Routing & Wireless Essentials	2	2	3
IST 256C	Enterprise, Networking, Security & Automation	2	2	3
Total Credits				9

INFORMATION TECHNOLOGY – NETWORKING

Certificate

This program teaches students a strong background in PC and Windows Server essentials. It is available days and evenings and is financial aid-eligible.

Program Learning Outcomes

Graduates are able to:

- Test for the worldwide industry- recognized certification, CCNA Routing and Switching
- Have strong, marketable skills related to networking
- Demonstrate professional behavior, critical thinking and problem solving, and the ability to work with and manage a group

Career Information

Graduates can enter into the following professions (not an inclusive list): entry-level help desk technician, help desk technician, entry-level network technician, and network technician. Students complete four semesters of the Cisco Academy and are prepared to take the Cisco Certified Network Associate certification and Microsoft Technology Associate exam.

IT – Networking Certificate Curriculum

Course	Title	CL	LAB	CR
IST 104C	PC/Mobile Hardware and Networking	2	2	3
IST 154C	Introduction to Networks	2	2	3
IST 180C	Cloud Services and Windows Server	2	2	3
IST 254C	Switching, Routing and Wireless Essentials	2	2	3
IST 256C	Enterprise, Networking, Security, and Automation	2	2	3
IST 263C	Network Security	2	2	3
IST xxxC	IT elective	2	2	3
Total Credits				21

INFORMATION TECHNOLOGY – SECURITY

Certificate

Students are taught the skills for jobs in network and computer systems administration and information security analysis and can continue their education in NHTI's Information Technology – Microsoft Servers Certificate Program.

Career Information

This certificate prepares students to earn certifications in CompTIA Security+ and Cisco CCNA Security.

Special Admissions Requirements

Students are required to have successfully completed IST 108C, IST 153C, and IST 280C, or gained permission of the department chair of Information Technology.

IT – Security Certificate Curriculum

Course	Title	CL	LAB	CR
IST 165C	Information Security	2	2	3
IST 263C	Network Security	2	2	3
IST 281C	Administering Windows Server	2	2	3
IST 284C	Advanced Windows Server Configuration	2	2	3
Total Credits				12

INFORMATION TECHNOLOGY – SOFTWARE DEVELOPMENT

Certificate

This program teaches students the programming and systems design skills used in business and industry. Students will use five different programming languages while designing databases and creating business front ends. Extensive hands-on training is provided in our computer labs with extensive instruction. This program is recommended for those who have achieved a level of expertise in their field or completed a college degree in a specialty area and need computer applications and programming courses to be more effective in using computer productivity tools for managerial decisions. This program is available days and evenings and is financial aid-eligible.

Career Information

Students who complete this program can enter into the following professions (not an inclusive list): entry-level software developer, junior-level software developer, entry-level web programmer, and junior-level web programmer. Students have a chance to earn Microsoft Technology Associate certifications.

IT – Software Development Certificate Curriculum

Course	Title	CL	LAB	CR
IST 110C	Programming Fundamentals	2	2	3
IST 216C	Introduction to Web Programming	2	2	3
IST 140C	Database Design and Management	2	2	3
IST 210C	Object-Oriented Programming	2	2	3
IST 215C	Advanced Windows Programming	2	2	3
IST 218C	Mobile Application Development	2	2	3
IST 240C	Advanced Web Programming	2	2	3
IST xxxC	IT elective	2	2	3
Total Credits				24

INFORMATION TECHNOLOGY – TECH SUPPORT

Certificate

This program provides students with core IT knowledge and technical support skills. Students take courses in hardware/software, networking, database, Linux, Cloud Services, and Windows Server and learn how to apply these skills in a tech support environment. Extensive hands-on training is provided in our computer and networking labs. This program is available days and evenings and is financial aid-eligible.

Career Information

The certificate culminates with students performing an internship, which can lead to employment. Graduates can enter into the following professions (not an inclusive list): entry-level help desk technician, entry-level network technician, junior-level help desk technician, and help desk technician. Students can earn the following national certifications: CompTIA A+ Certification and Microsoft Technology Associate.

IT – Tech Support Certificate Curriculum

Course	Title	CL	LAB	CR
IST 102C	PC Applications	3	0	3
IST 103C	Programming with Raspberry Pi	2	2	3
IST 104C	PC/Mobile Hardware and Networking	2	2	3
IST 109C	PC OS Security and Cloud Fundamentals	2	2	3
IST 140C	Database Design and Management	2	2	3
IST 154C	Introduction to Networks	2	2	3
IST 170C	Introduction to Linux	2	2	3
IST 180C	Cloud Services and Windows Server	2	2	3
IST 290C	IT Career Development	2	0	2
IST 291C	IT Internship Search and Approval	0	2	1
IST 294C	Senior IT Internship	0	9	3
XX xxxC	Elective approved by department chair	3	0	3
Total Credits				33

INFORMATION TECHNOLOGY – VoIP

Certificate

Voice over IP (VoIP) is a methodology and group of technologies for the delivery of voice communications and multimedia sessions over data networks. This certificate trains students in the configuration, delivery, and maintenance of VoIP services. Classes can be taken day, evening, or online.

Career Information

Students who complete this program can enter into the following professions (not an inclusive list):

- Entry-level VoIP technician
- Entry-level network technician

IT – VoIP Certificate Curriculum

Course	Title	CL	LAB	CR
IST 154C	Introduction to Networks	2	2	3
IST 267C	Cisco VoIP	2	2	3
IST 254C	Switching, Routing, and Wireless Essentials	2	2	3
Total Credits				9

LANDSCAPE DESIGN

Certificate

This program provides entry-level skills for those interested in pursuing a career in the landscape industry or continuing education for those working in landscape maintenance, design or construction, grounds management, horticulture and anyone interested in a broader range of knowledge in this field. This program is available evenings only and is financial aid-eligible.

Career Information

Students who complete this program can enter into the following professions (not an inclusive list):

- Landscape construction and maintenance
- Landscape design
- Plant nursery sales, support & management
- Grounds management
- Green industry product sale
- Conservation management

Specific Admissions Requirements

Applicants must submit an official copy of their high school transcript and/or GED with scores. Algebra I and Algebra II, with grades of C or higher, are recommended.

Landscape Design Certificate Curriculum

Course	Title	CL	LAB	CR
LAND 102C	Identification and Uses of Shrubs, Groundcovers, and Vines	3	0	3
LAND 115C	Landscape Design Theory	3	0	3
LAND 101C	Identification and Uses of Trees	3	0	3
LAND 112C	Landscape Drawing and Presentation Techniques	2	2	3
LAND 109C	Basic Site Grading and Surveying	2	2	3
LAND 220C	Planting Design	3	0	3
LAND 218C	Landscape Design Studio	3	0	3
LAND 225C	Landscape Construction Details and Methods	2	2	3
Total Credits				24

LINUX

Certificate

This certificate prepares students to earn Linux Professional Institute LPIC-1 Linux Server Professional certifications.

Program Learning Outcomes

Graduates are able to:

- Test for the industry-recognized CompTIA Linux+ certification. Upon earning this certification, students can obtain the Linux Professional Institute LPIC-1 Linux Server Professional and the SUSE Certified Linux Administrator certifications free of charge and without additional testing.
- Demonstrate professional behavior, critical thinking, problem solving, and the ability to work with and manage a group.

Career Information

This certificate prepares students to earn an industry-recognized Linux certification. Graduates have the skills for jobs in Linux/Unix administration, server administration, and network support.

Linux Certificate Curriculum

Course	Title	CL	LAB	CR
IST 103C	Programming with Raspberry Pi	2	2	3
IST 170C	Introduction to Linux	2	2	3
IST 270C	Advanced Linux	2	2	3
Total Credits				9

SUSTAINABLE AGRICULTURE TECHNOLOGY

Certificate

This program prepares future farmers for the business and science behind running a small profitable farm in Northern New England. This program focuses on sustainable alternatives to industrialized farming and how to be successful in the marketplace without competing with industrialized and specialized large-scale operations. Students learn the skills necessary to market their product. As advocates for the production of environmentally friendly food in their community, students understand the holistic role of the agroecosystem and how to balance the economic, environmental and social needs of the farmer and community. This program is financial aid-eligible.

Program Learning Outcomes

- Students will communicate effectively.
 - Students will employ vocabulary pertinent to agriculture.
 - Students will develop specialized portfolios of their proposed agriculture business.
- Students will use critical thinking.
 - Students will apply the scientific method.
 - Students will assess agricultural trends and identify appropriate management strategies.
- Students will demonstrate the application of scientific technology.
 - Students will practice lab and field safety procedures.
 - Students will utilize current technology to evaluate farm management methods.
- Students will express quantitative and qualitative scientific knowledge.
 - Students will demonstrate knowledge of sustainable agricultural practices.
 - Students will describe connections between the environment and human societies and how each affects the other.

Career Information

Students who complete this program can enter into the following professions (not an inclusive list): farmer, market gardener, farmers market manager, and local food buyer for supermarket.

Technical Standards

Students must have the strength, stamina, motor coordination, and sensory capabilities for the following actions:

- Standing for sustained periods of time; walking, running, bending, and sitting on the floor/ground
- Frequent lifting, moving, and transferring of equipment, plants, and/or livestock
- Sufficient visual and hearing acuity to ensure a safe environment and respond quickly to clients, colleagues, and partners in the event of an emergency
- Sufficient verbal ability to express and exchange information and ideas and to interpret instructions to clients, colleagues, and partners
- Ability to work with frequent interruptions, respond appropriately to unexpected situations, demonstrate safe care for colleagues and the workplace, and cope with variations in workload and stress levels
- Ability to consistently attend and participate in classes and lab
- Ability to demonstrate and maintain organizational skills and time management in classes and labs

NHTI reserves the right to amend its technical standards at any time and impose them on all current students.

Sustainable Agriculture Certificate Curriculum

Course	Title	CL	LAB	CR
ACCT 101C	Accounting I	3	0	3
BUS 170C	Principles of Marketing	3	0	3
AGRI 110C	Sustainable Agriculture I	3	2	4
AGRI 112C	Practical Applications for Sustainable Agriculture I (8 weeks)	1	3	2
AGRI 115C	Practical Applications for Sustainable Agriculture II (8 weeks)	1	3	2
BIOL 115C	Introduction to Ecology (Fall only)	3	2	4
BIOL 117C	Introduction to Plant Biology (Fall only)	3	2	4
ENVS 101C	Fundamentals of Environmental Science (Spring only)	3	2	4
Total Credits				33

COURSE LISTINGS

At NHTI we pride ourselves on offering you rigorous and dynamic classes that use innovative pedagogy with project learning initiatives and real-world scenarios to prepare you for your career and future educational goals. Our instructors offer industry experience and expert insights into lessons.

Defined below are terms, definitions, and categories with which you should be familiar:

Prerequisite

These are courses that must be passed prior to proceeding with a more advanced course; the minimum passing grade for a prerequisite course is a D- unless otherwise indicated.

Corequisite

These are courses that must be taken concurrently (at the same time) with another course; with departmental permission, a corequisite course may sometimes be taken in advance of the course for which it is a corequisite.

Course descriptions

These are presented by subject heading with the corresponding lettered course designator.

Courses numbered 100-199

These courses are typically introductory and/or freshman-level. Some may require assessment testing and/or completion of prerequisites prior to enrollment.

Courses numbered 200 or higher

Instruction in these courses assumes students have successfully completed one or more semesters of college-level study prior to enrollment. Additionally, some courses may require one or more specific prerequisites.

Accounting

ACCT 101C Accounting I

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

An introduction to accounting procedures and principles covering the accounting cycle, accounting for a merchandising business, special journals, control over cash, receivables, and inventories. A grade of C or higher must be achieved to continue with the next Accounting course.

Learning Outcomes:

- Analyze transactions and prepare journal entries, including adjusting journal entries.
- Complete the accounting cycle through the post-closing trial balance.
- Prepare and understand financial statements in a perpetual inventory environment.
- Understand the recording and posting of entries in a manual accounting system.
- Understand accounting issues related to the recognition and valuation of accounts and notes receivable.

ACCT 102C Accounting II

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

A continuation of the fundamentals of accounting concepts and procedures, including the following topics: depreciation, payroll, notes payable, bonds, partnerships and corporations. A grade of C or higher must be achieved to continue with the next accounting course. (Prerequisite: a grade of C or better in ACCT 101C)

Learning Outcomes:

- Measure the cost of a business' property, plant and equipment and calculate depreciation using the three most commonly used methods.
- Account for current liabilities and payrolls.
- Classify and accurately report long-term liabilities and investments on the balance sheet.
- Generate an accurate statement of cash flows.
- Perform a horizontal, vertical, and ratio analysis of a business using their financial statements.

ACCT 110C Managerial Accounting

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

A study of the analysis, reporting, and use of accounting data as a management tool for planning, control, and decision-making. Specific areas of study include break-even analysis, financial statement analysis, cost classification and allocation, standard costing and variance analysis, and budgeting. (Prerequisite: ACCT 102C)

Learning Outcomes:

- Define managerial accounting and understand how it is used in service and merchandising companies.
- Calculate job costs, cost of goods manufactured, and cost of goods sold for multiple company types and prepare production cost reports.
- Compute operating income using variable and absorption costing methods.
- Prepare financial and operating budgets for a merchandising company.
- Compute the payback, accounting rate of return, NPV, profitability index, and IRR capital-budgeting methods, and assess the viability and benefits of various capital-budgeting projects.
- Accurately use discounted cash flow methods to make capital investment decisions.

ACCT 205C Intermediate Accounting I

Lecture Hours: 4 Lab/Practicum/Clinical Hours: 0 Credit Hours: 4

Learning Outcomes:

- Review the overall accounting cycle and in-depth study of accounting concepts and FASB statements, dealing with topics to include balance sheets, income statements, receivables, inventories, and cash flows. (Prerequisite: ACCT 102C)
- Understand the meaning of generally accepted accounting principles and identify the major policy setting bodies and their role in the standards setting process.

- Have a complete knowledge of the accounting cycle.
- Possess the ability to develop and interpret all four financial statements with ease.
- Understand the accounting principles used in recognition, measurement, presentation, and disclosure.
- Identify and solve accounting topics where time value of money is relevant.
- Understand accounting issues related to the recognition and valuation of accounts and notes receivable.
- Comprehend the major cost flow assumptions used in accounting for inventories including dollar-value LIFO.
- Determine the value of ending inventory by applying the lower of cost or market rule, applying the gross profit method and the retail inventory method.

ACCT 206C Intermediate Accounting II

Lecture Hours: 4 Lab/Practicum/Clinical Hours: 0 Credit Hours: 4

A study of accounting principles dealing with asset acquisition and retirements, long-term investments, current and contingent liabilities, debt securities and equity securities, capital structure of corporations, revenue recognition, and leases. (Prerequisite: ACCT 205C)

Learning Outcomes:

- Understand the meaning of generally accepted accounting principles and identify the major policy setting bodies and their role in the standards setting process.
- Possess the ability to develop and interpret all four financial statements with ease.
- Understand accounting issues related to the recognition and valuation of accounts and notes receivable.
- Demonstrate how to identify and account for investments classified for reporting purposes as held-to-maturity, trading securities, and available-for sale securities.
- Identify and describe the operational, financial, and tax objectives that motivate leasing.
- Understanding accounting for income taxes, pensions, and other postretirement benefits, pensions, shareholders equity and statements of cash flows.

ACCT 230C Taxes

Lecture Hours: 4 Lab/Practicum/Clinical Hours: 0 Credit Hours: 4

A study of the Internal Revenue Tax Code as it relates to individuals and small businesses. This course will include an examination of income recognition, deductions for and from AGI, tax credits, depreciation calculations, and analysis of capital gains and losses. The student will apply this knowledge in preparation of income tax returns and related forms. (Prerequisite: ACCT 102C or permission of the department chair of Accounting)

Learning Outcomes:

- Recognition of tax issues and the process of arriving at answers to specific tax questions.
- Familiarity preparation of tax returns using tax preparation software.
- Utilize current tax developments and to be able to discuss specific tax issues.

ACCT 250C Cost Accounting

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Provides cost accounting fundamentals including manufacturing statements, job cost systems, process cost systems, standard costs, and cost analysis. (Prerequisite: ACCT 102C)

Learning Outcomes:

- Distinguish between direct costs and indirect costs.
- Determine the difference between variable costs and fixed costs.
- Determine the breakeven point and output level needed to achieve it.
- Distinguish job costing from process costing.
- Track the flow of costs in a job-costing system.
- Develop a flexible budget.
- Compute price variances and efficiency variances and prepare proper journal entries.
- Develop budgeted variable overhead cost rates and budgeted fixed overhead cost rates.
- Compute the variable overhead flexible-budget variance, the variable overhead efficiency variance, and the variable overhead spending variance.
- Compute standard costing and variance analysis so as to monitor and modify cost-containment strategies.

Addiction Counseling

ADCL 120C Survey of Addictive Behaviors and Treatment

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

A study of addictive behaviors and treatment from a multi-modal presentation of historical, sociological, political, and medical issues and their importance relative to the treatment of addictive behaviors in today's society.

Learning Outcomes:

- Discuss the relationship between alcohol and other drugs and their attending problems, and costs to individuals, families and society.
- Articulate a comprehensive and useful definition of substance use disorders.
- Employ evaluation methods and report the findings for treatment determination purposes.
- Familiarization with suicide evaluations, mental status exams, and alcohol/drug abuse intake and assessment procedures.
- Explain the effects of substance use on the body's systems.
- Demonstrate a fundamental understanding of the criteria implied in the diagnosis of substance use disorders.
- Identify the key characteristics of major treatment modalities.
- Relate to the history and success of the 12 steps in alcohol and other drug recovery, and their appropriate use in professional counseling settings. The importance of surrender and control will be understood.
- List and discuss the 12 core functions of several addiction counselor competencies.
- Understand the impact of addiction on family systems, communities, criminal justice, etc.

ADCL 205C Fundamentals of Dependency Counseling Skills

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

This course includes a comprehensive and detailed study of application both in documentation and treatment of the 12 core functions. Emphasis will be on preparation for onsite practice and for eventual state and national licensure and certification. (Prerequisite: ADCL 120C or permission of the department chair of Human Service)

Learning Outcomes:

- Understand and describe the 12 core functions and 46 global criteria of addiction counseling.
- Describe the application of the core functions and global criteria in clinical practice.
- Articulate ethical and confidentiality issues that confront the substance use counselor.
- Articulate the importance of culture and how to develop cultural competency.
- Define screening and assessment and common tools.
- Understand the diagnostic criteria for substance use disorders.
- Complete a comprehensive bio-psycho-social assessment for alcohol and other drugs by applying the diagnostic Statistical manual to determine if a client is appropriate for treatment.
- Develop a treatment plan (based on the assessment) that is appropriate to the client's needs, wants, strengths, and weaknesses.
- Discuss the principles of evidence-based addiction treatment.

ADCL 230C The Four Domains of the Certified Recovery Support Worker

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

This eight-week online course includes detailed and comprehensive information on the educational components required by the N.H. Licensing Board for Alcohol and Other Drug Use Professional as well as education in the Four Domains of the CRSW credential. This course meets the educational requirements for the CRSW. To receive the CRSW certification, students must contact the Licensing Board and meet additional requirements, which include 500 hours of paid or volunteer work, completion of the ICandRC exam, and any other conditions as required by the board. This credential is ideal for anyone seeking a career in the substance use disorder profession, specifically pertaining to the recovery of individuals suffering from the disease of addiction.

Learning Outcomes:

- Demonstrate the provisional skill of basic screening of persons with substance use and co-occurring mental health disorders.

- Differentiate between when referrals are necessary and how to make appropriate referrals.
- Learn the basic recognition of signs and symptoms of addiction, intoxication, and withdrawal.
- Implementation skills of structured interventions to ensure the immediate safety of clients.
- Comprehend the provision of recovery services including practical support, mentoring, and education about addiction, community peer support, role of medication, and co-occurring disorders in addiction.
- Understand ethical standards and practice for certified recovery support workers.
- Examine ways to establish appropriate boundaries and to develop a framework for evaluating and managing multiple relationships.
- Facilitate awareness of current professional issues.
- Understand professional identity and its associated responsibilities.
- Articulate the concept and meaning of cultural competence and acquire skills for practicing ethically with diverse populations.

ADCL 235C Physiology and Pharmacology of Addiction

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

An in-depth study of psychopharmacological aspects of drugs is covered including a study of brain and body drug metabolism, medical complications, and the treatment of psychiatric disorders as outlined in the most current edition of the DSM. (Prerequisite: ADCL 120C or permission of the program coordinator of Addiction Counseling or the department chair of Human Service)

Learning Outcomes:

- Discuss the biopsychosocial, medical, and metabolic effects of alcohol and other drugs on the human body and brain.
- Describe the evolving process by which the brain becomes addicted.
- Understand the reward pathway in the brain.
- Describe the DSM, its purpose, and usefulness in the treatment of substance use and other disorders.
- Provide an overview of drugs that may be prescribed for treating a specific disorder.
- Provide an overview of the specific action, effect, and psychopharmacological aspects of drugs upon a patient and their disorder to include precautions and considerations that may need to be taken when drugs are prescribed.
- Provide an overview of non-drug means of treating a DSM disorder.
- Provide an overview of harm reduction principles.
- Provide an overview of self-help and mutual support groups.

ADCL 296C Addiction Practicum I

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 8 Credit Hours: 4

The first internship experience offers 30 hours of classroom-based group clinical supervision in support of 125 hours of fieldwork in an approved clinical setting. The student learns to integrate into an agency atmosphere within which they may research, observe, role-play, and practice the fundamental skills of screening, intake, orientation, assessment, treatment planning, counseling, case management, crisis intervention, client education, referral, record keeping, and consultation. (Prerequisites: ADCL 120C, ADCL 205C, HSV 111C, MHTH 187C, PSYC 105C, PSYC 283C, and HSV 242C, each with a grade of C or higher; PSYC 220C and ADCL 235C may be taken as a prerequisite or a corequisite or by permission of the program coordinator of Addiction Counseling or the department chair of Human Service.)

The student will also complete an interview with the practicum coordinator the semester prior to the first scheduled practicum. Special requests regarding practicum entrance may be brought to the department chair by the student. Review of the requests will be made by the department faculty and special exemptions may be made for entrance into the practicum.

Learning Outcomes:

- Engage in supervision via online as is mirrored in the professional workplace.
- Practice and adhere to ethical and professional standards and guidelines and behavioral characteristics.
- Understand the purpose of clinical supervision.
- Appreciate and Understand a community learning environment and each member's roles in it.

ADCL 297C Addiction Practicum II

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 8 Credit Hours: 4

The second internship experience offers 30 hours of classroom-based group clinical supervision in support of 125 hours of fieldwork in an approved clinical setting. The student assumes increased responsibility culminating in substantial use of the fundamental skills of screening, intake, orientation, assessment, treatment planning, counseling, case management, crisis intervention, client education, referral, record keeping, and consultation in direct contact with clients/patients. A greater understanding of available treatment resources is accomplished via an inspection of the statewide continuum of care. (Prerequisites: AD 296 with a grade of C or higher and permission of the program coordinator of Addiction Counseling or the department chair of Human Service)

The student will also complete an interview with the practicum coordinator the semester prior to the first scheduled practicum. Special requests regarding practicum entrance may be brought to the department chair by the student. Review of the requests will be made by the department faculty and special exemptions may be made for entrance into the practicum.

Learning Outcomes:

- Engage in supervision via online as is mirrored in the professional workplace.
- Practice and adhere to ethical and professional standards and guidelines and behavioral characteristics.
- Understand the purpose of clinical supervision.
- Appreciate and Understand a community learning environment and each member's roles in it.

Agriculture

AGRI 110C Sustainable Agriculture I

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 2

Credit Hours: 4

Students will learn about agricultural disease and pest identification and management, ratios and proportions for mixing fertilizers and additives, soil and water chemistry, niche market identification, and agricultural adaptation to climate change in New England, as well as local and federal regulations and an introduction to resources for farmers. Lecture format will include formal lectures, guest speakers, and field trips. Labs will include in-lab research, experiments, and on- and off-campus fieldwork. Students will choose an area of specialization based on their market niche to begin the development of their portfolio.

Learning Outcomes:

- Identify sustainable management strategies for common crop pathogens and pests.
- Prepare soils for planting using sustainable methods.
- Calculate fertilizer use, additive use, and land area.
- Research and apply sustainable practices to all aspects of agricultural production and management on a small farm.
- Explain the potential impacts of climate change on agriculture world-wide and on the local scale.
- Describe the regulations controlling the student's niche market.

AGRI 112C Practical Applications for Sustainable Agriculture I

Lecture Hours: 1

Lab/Practicum/Clinical Hours: 3

Credit Hours: 2

This course will take place at a local farm using sustainable agriculture practices. Students will participate in all levels of farm operation from seed selection and ordering to pest, soil and water management, and transplanting crops. Focus areas will include soil analysis, financial and regulatory record keeping, greenhouse set up, chemical use and safety, and equipment selection and operation.

Learning Outcomes:

- Evaluate the appropriate plants for various growing conditions, size of operation, and likely pests.
- Plant seedlings in working greenhouse and fields.
- Create a farm portfolio and track planting records, soil test results, field applications, licenses and cost expenditures.
- Apply appropriate chemical safety techniques.
- Demonstrate proper care and operation of farm equipment.

AGRI 115C Practical Applications for Sustainable Agriculture II

Lecture Hours: 1

Lab/Practicum/Clinical Hours: 3

Credit Hours: 2

This course will take place at a local farm using sustainable agriculture practices. Students will be involved in harvesting, crop rotation and direct sowing, pest management, soil health and watering. Students will also gain practical knowledge about bringing a product to market, food safety and contamination, food and crop loss, health and safety regulations and documentation. Students will build a portfolio that can be adapted and used when they work in the field. The portfolio will contain all necessary licenses, certifications and financial documentation needed for all agricultural businesses.

Learning Outcomes:

- Identify the appropriate timing and methods of harvesting numerous crops.
- Research replanting, crop rotation, and end-of-season field dressing.
- Develop methods for extending the growing season and adding profit.
- Complete farm portfolio establishing total seasonal profit, planting dates, harvesting dates, and planning for the following season.

Allied Dental Education

A grade of C or higher is required in BIOL 195C, BIOL 196C, BIOL 202C, CHEM 125C, and in ADED courses (unless course syllabi state otherwise) to progress in the Dental Hygiene program. Courses with virtual/online labs are not accepted.

ADED 100C Dental Hygiene I

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 0

Credit Hours: 2

An introduction to the theories and principles of the delivery of dental hygiene care, including evaluation of the patient, professional and clinical services. Emphasis will be placed on current concepts in preventive dentistry.

Learning Outcomes:

- Dental Hygiene Practice CG3: Discuss the purpose of the ADHA Code of Ethics for Dental Hygienist. (PC1.2). Identify the major work-related risk factor in the development of cumulative trauma disorders in dental hygienists. (PC4.1)
- Infection Control under "Preparation for DH Practice" meeting the standard of care for the practice dental hygiene. CG3: Explain the general purpose of OSHA, CDC, OSAP and HIPAA. (PC 1.4). Explain basic infection control concepts. (PC 8.1).
- Dental Hygiene Process of Care CG1: Explain the "Dental Hygiene Process of Care. (PC 6). Describe the principles and behavioral foundation for the dental hygiene process of care. (PC 6). Explain the importance of comprehensive and accurate documentation (charting and record keeping). (PC 6.1,6.3,6.4,6.5)
- Patient assessment in the clinical practice of dental hygiene. CG2. Describe the normal structures of the head, neck, and oral cavity, and discuss abnormal findings. (PC 6.3). Discuss the role of the dental professional in preventing tobacco use and how to apply a tobacco cessation program for the patient. (PC4). List the significant factors involved in taking a medical history and vital signs. (PC 6.1, 6.2, 6.10, 6.13, 7.6). Describe the considerations involved and the techniques for examining the primary and permanent dentition. (PC 6.4). Describe both healthy and abnormal gingival conditions utilizing proper terminology. (PC 6.5, 8.9,8.10). Describe the effects of soft and hard deposits on tissues of the oral cavity. (PC 8.10).
- Instrumentation and clinical treatment. CG2. Explain steps and the indications for instrumentation. (PC 8.2). Describe the major parts of assessment instruments and treatment instruments. (PC 8.2). Summarize the characteristics of assessment and treatment instruments. (PC 8.2).
- Integrate considerations needed in treating the pedo patient. (PC 8.9).
- Describe composition of cleansing and polishing agents and present rationale for appropriate utilization of each. (PC 8.2)
- Describe composition of cleansing and polishing agents and present rational for appropriate utilization of each. (PC 8.2)
- Prevention in the clinical practice of dental hygiene. CG1, CG2: Critically analyze published reports of oral health and evaluate the safety and efficacy of oral health products and/or treatments. (PC 2.2, 2.3).

Demonstrate knowledge of oral physiotherapy techniques by describing specific oral conditions necessitating utilization each aid in oral home-care procedures. (PC 8.10). Explain the importance of client education and health promotion. (PC 4, 5.1). Compare and contrast fluoride supplements as they are used in dental hygiene practice. (PC8.5).

- Care planning in the clinical practice of dental hygiene. CG1, CG2: Effectively prepare a client centered care plan that follows the dental hygiene process of care and is based on the client's assessment findings and risk factors. (PC 2.4, 5.1, 6.1-6.5, 6.10,6.12-6.15, 7, 8.10). Explain the rationale for planning dental hygiene care for the periodontal patient. (PC7.4).

ADED 103C Dental Hygiene II

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 0 Credit Hours: 2

An introduction to common systemic diseases with emphasis on dental hygiene treatment planning, as well as the prevention and management of medical and dental emergencies. Topics discussed relate to substance abuse, stress, occupational and environmental hazards, and special-needs patients. (Prerequisite: BIOL 195C with a minimum grade of C, ADED 100C, ADED 113C, and ADED 134C)

Learning Outcomes:

- Define how physical examination, evaluation, and treatment modification can function in identifying and preventing potential life-threatening situations in the dental hygiene environment. (Program Competencies 6.1, 6.2, 6.10, 6.13, 6.15)
- Discuss the ethical and legal considerations of risk assessment and emergency management within the dental hygiene scope of practice. (Program Competencies 1.1, 1.4, 6.13, 8.7)
- Demonstrate the ability to utilize pertinent reference tools for identification and information regarding medical conditions and medications. (Program Competencies 2.5, 6.1, 6.15)
- Develop a dental hygiene care plan for patients with the following medically compromised conditions (Program Competencies 7): cardiovascular disease, pulmonary disease, kidney disease, liver disease, blood disorders, neurologic disorders.
- Develop a dental hygiene care plan for special needs patients during pregnancy, infancy, and adolescence. (Program Competencies 7)
- List the basic equipment and drugs for managing medical emergencies in the dental environment. (Program Competencies 3.5, 8.7)
- State protocol for the emergency management of (Program Competencies 8.7): acute myocardial infarction, airway obstruction, anaphylaxis, asthmatic episode, cerebrovascular accident, hyperventilation, hypoglycemia, seizures, vasodepressor syncope.

ADED 105C Dental Radiology for Dental Assisting

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 3 Credit Hours: 3

Lectures and demonstrations are coordinated with lab practice on mannequins to develop mastery of dental radiographic techniques to include digital radiography, processing, mounting, and evaluating films. Emphasis will be placed on client and operator protection, exposure and processing errors, asepsis protocol, radiographic techniques, and equipment function. Two clients will be scheduled near the end of the term when students exhibit acceptable and safe skills.

Learning Outcomes:

- Explain and utilize the principles of the bisecting and paralleling techniques to expose clinically diagnostic radiographic images.
- Recall factors involved in x-ray generation.
- Explain and apply the principles of radiation safety.

ADED 110C Dental Assisting Science I

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

A study of the anatomy of the head, emphasizing the osteological landmarks and the structures of the oral cavity. Both the permanent and primary dentitions are studied, including embryonic development and eruption patterns. In addition, an introduction to the structure and function of the human body systems in health and disease will be presented.

Learning Outcomes:

- List the classifications and function of each of the teeth.
- Provide the shorthand identification of each tooth using Palmer, FDI, and Universal.
- Identify the different tissues of the teeth and oral cavity.
- Label the parts of the gingival unit and attachment unit.
- Provide a timeline for the development of the head and neck from embryonic structures to full development of the oral cavity.
- Describe the dentitions using eruption and shedding dates.
- Recognize overbite, overjet, cross-bite, open bite, and occlusion variations.
- Label the noteworthy landmarks of the face and oral cavity.
- Identify the anatomical landmarks of the head and neck.
- List the major systems in the human body, their functions, and major parts of each system.

ADED 111C Dental Assisting Science II

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 0 Credit Hours: 2

An introductory study of drugs with specific consideration of those used in dentistry. Emphasis on drug origin, properties, dosages, and therapeutic effects. Studies in oral pathology will include signs and symptoms of the diseases common to the oral cavity to include neoplastic disease and the inflammatory response. (Prerequisite: ADED 110C)

Learning Outcomes:

- Describe the general principles of pharmacology including drug actions, side effects, indications, therapeutic effects and contraindications.
- Identify federal agencies and acts designed to regulate drugs.
- Identify the components of a prescription, the symbols and terminology used in prescription writing.
- Identify common drugs used in dentistry to treat dental-related infections and the influences that drugs taken for non-dental purposes may have on a proposed treatment.
- Describe the relationships among systemic diseases, medications, and oral health that impact overall patient care.
- Demonstrate a basic knowledge of the language of pathology and an understanding of the etiology, pathophysiology, structural and functional alterations that result from the disease processes.
- Explain the importance of patient demographics, etiology, clinical conditions, appropriate imaging and differential diagnoses for diagnoses and treatment planning with suspected lesions/diseases/conditions.
- Identify deviations from normal oral tissues based on clinical signs and symptoms, as well as dental imaging.

ADED 113C Clinical Dental Hygiene I

Lecture Hours: 1

Lab/Practicum/Clinical Hours: 8 Credit Hours: 3

A pre-clinical course for the development and application of information relating to preventive dental hygiene services. Includes topics on asepsis, infection control, gathering and evaluating patient medical and dental histories, legal and ethical considerations, body mechanics, intra and extra oral exams, and instrumentation. Use of adjunct dental hygiene aids is also taught. Skills will be practiced on student partners. A classroom seminar for learning activities and group discussion is included. All students enrolled in ADED 113C will be charged a \$500 per semester clinical surcharge. (Corequisites: ADED 100C and ADED 134C)

Learning Outcomes:

- Deliver dental hygiene care utilizing proper ethical, legal and professional behavior and dress. (1.1,1.2,1.4)
- Provide dental hygiene services while adhering to current concepts of infection control to prevent the transmission of disease. (1.4,8.1)
- Provide and perform assessment procedures to a student partner/patient following acceptable standards of care with respect to attainment of the following (6.1,6.3,6.4,6.5): Medical History and Vital Signs; Dental, Family, Social and Cultural History; Extraoral and Intraoral Exam; Dental Examination for Caries and Restorations; Evaluation of the periodontium; Detection of calculus; Detection of biofilm; Detection of intrinsic and extrinsic stain.
- Apply the principles of record management, paper and digital, for thorough, accurate, and legible documentation. (1.4,2.4,6.1,6.3,6.4,6.5)
- Implement dental hygiene interventions designed to improve the oral health of self. (4.1)

- Implement effective dental hygiene interventions designed to assist the patient in achieving and maintaining oral health. (4.2, 5.1, 8.9, 8.10)
- Apply basic principles of instrumentation on a typodont student partner/patient so that debridement and deposit removal may be performed with maximum effectiveness, safety and efficiency. (8.2)
- Demonstrate competent ergonomic principles while delivering dental hygiene services. (4.2)
- Manage medical emergencies in the patient care environment (8.8)

ADED 114C Clinical Dental Hygiene II

Lecture Hours: 1

Lab/Practicum/Clinical Hours: 8 Credit Hours: 3

A continuation of Clinical Dental Hygiene I. Students will apply techniques learned directly on clinical patients. Emphasis is placed on the introduction of additional dental hygiene instruments, as well as dental health education techniques. A classroom seminar for learning activities and group discussion is included. All students enrolled in ADED 114C will be charged a \$500 per semester clinical surcharge. (Prerequisites: ADED 100C, ADED 113C, and ADED 134C)

Learning Outcomes:

- Deliver dental hygiene care utilizing proper ethical, legal and professional behavior and dress. CG1
- Provide dental hygiene services while adhering to current concepts of infection control to prevent the transmission of disease. CG1, 2
- Perform assessment procedures to a student partner/patient following acceptable standards of care with respect to attainment of the following CG1, 2: Medical History and Vital Signs and smoking status; Dental, Family, Social and Cultural Background; Extraoral and Intraoral Exam; Dental Examination for Caries and Restorations; Evaluation of the periodontium; Detection of calculus; Occlusal Exam.
- Apply and integrate the principles of accurate patient documentation that is maintained through record management and clinical portfolio organization, for thorough, accurate, organized, legible and legal documentation. CG1, 2
- Implement effective dental hygiene interventions designed to assist the patient in achieving and maintaining oral health. CG 1
- Integrate theory to practice in maintaining sharp instruments in order to effectively and efficiently perform basic principles of instrumentation on a patient so that debridement and deposit removal without tissue trauma may be attained. CG1
- Perform and integrate basic principles of instrumentation on patients so that debridement and deposit removal may be performed with maximum effectiveness, safety and efficiency. CG1
- Apply and integrate basic principles of coronal polishing on a patient so that biofilm and stain removal is attained. CG1
- Integrate theory to practice in the application of topical fluoride to clinical patients. CG1
- Demonstrate competent ergonomic positioning while delivering dental services. CG2
- Evaluate the effectiveness of dental hygiene services and interventions designed to assist the patient in achieving and maintaining oral health. CG2
- Summarize and communicate a plan for successful dental hygiene intervention prior to implementation in patient care. CG2
- Utilize effective patient management skills throughout the dental appointment. CG1, 2
- Manage medical emergencies and utilize basic life support if needed as authorized by certification in CPR. CG2
- Demonstrate professional communication skills when advising completed patients of need for a continuing supportive care plan with a dental health care professional. CG1, 2
- Critically evaluate the effectiveness of implemented patient education, preventive, and therapeutic service and make modifications if necessary to provide patient-centered care. CG2

ADED 126C Nutrition

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 0 Credit Hours: 2

An introduction to the basic fundamentals of the science of nutrition for the dental hygienist. Essentials of adequate dietary intake and nutritional balances and imbalances including total body health and dental care are discussed. Topics include the role of nutrients in the development and maintenance of hard and soft oral tissues, nutritional needs throughout the life cycle, and nutritional issues that may impact oral health. Special emphasis is placed on the

application of dietary analysis and nutritional counseling as a preventive dental service. (Prerequisite: CHEM 125C with a minimum grade of C)

Learning Outcomes:

- Describe the basic concepts of nutritional science in relation to the general health and physiology of the human body.
- Compare their personal dietary intake and patterns to the Dietary Guidelines for Americans, utilizing Choose MyPlate and Diet and Wellness Plus software.
- Articulate the specific relationship between nutrition and dental health.
- Identify the function and food sources of nutrients essential to systemic and oral health.
- Explain the role of nutrition in the synthesis and maintenance of the hard and soft oral tissues.
- Describe the role of nutrition in the initiation and progression of dental caries and periodontal disease.
- Examine food factors and eating patterns that may contribute to the development of caries and/or impact healing of oral tissues.
- Analyze their personal carbohydrate intake.
- Assess the nutritional value of food in relation to purchasing and planning meals.
- Assess, analyze, and make recommendations to improve dietary patterns of individuals (including oneself) so improved nutritional intake may be attained and/or maintained.
- Assess and analyze the role of nutrition in your personal dental health status and develop a treatment plan.
- Appraise the nutrient content of their diet.
- Demonstrate foundational knowledge of nutritional needs throughout the life cycle.
- Examine the role of nutrition in the prevention and management of systemic & oral disease.
- Formulate dietary measures that may prevent or delay the onset of chronic disease, as well as oral diseases.
- Assess and analyze the medical, dental, social, and diet history of a dental patient and make recommendations to improve dietary patterns so improved dental health may be attained and/or maintained.
- Provide sound nutritional concepts relative to general health and the prevention of dental disease.
- Judge the validity of nutrition information on the Internet and in the media.

ADED 134C Oral Anatomy I

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 1

Credit Hours: 2

A detailed study of the anatomy of the deciduous and permanent dentitions. Also included is tooth eruption and basic dental terminology. This course includes lab sessions coordinated with lectures to provide practical applications of dental anatomy.

Learning Outcomes:

- Define and integrate terms associated with head and neck anatomy. (CG 1) (PC 5.1,6.2, 6.3, 6.4, 6.5,7)
- Determine the age of a patient based on a comprehensive understanding of the process of tooth eruption and exfoliation and list the dates of eruption for the deciduous and permanent teeth. (CG 2) (PC 6.2, 6.4)
- Specify how the physiologic tooth form protects the periodontium and identify the anatomic landmarks of the gingiva. (CG 1) (PC 6.2, 6.5)
- Identify the gingival unit and attachment apparatus from the perspective of anatomy. (CG 1) (PC 6.2, 6.5)
- Demonstrate the ability to identify form and function as it relates to the anatomical features of the dentitions. (CG 3) (PC 5.1,6.2, 6.4)
- Identify all anatomic structures and landmarks of the oral cavity. (CG 1) (PC 6.2, 6.5).
- Recognize variations of normal orofacial structures associated with the head, neck, and oral cavity. (CG 1) (PC 6.2, 6.5).
- Identify and categorize individual teeth according to morphologic traits associated with each tooth type in both the deciduous and permanent dentitions. (CG 3) (PC 6.2,6.4,6.5)
- Demonstrate the ability to connect morphologic differences in tooth anatomy with specific dental anomalies. (CG 3) (PC 6.2, 6.4).
- Identify systemic variables that are related to various tooth anomalies. (CG 3) (PC 6.2,6.4,6.5).
- Identify character traits, arrangements, and functions associated with the deciduous dentition. (CG 3) (PC 6.2,6.4,6.5)
- Classify a patient's occlusion using molar and canine relationship using Angle's Classification System and relate facial profiles to this system. (CG 3) (PC 6.2, 6.4).
- Develop a basic understanding of a spreadsheet layout, function, and development process. (CG 3)

- Identify personal learning style and relate it to specific course content. (CG 1) (PC 5.1, 6.4, 7)
- Utilize three specific tooth identification systems; Universal, ISO, and Palmer notation systems for both the deciduous and permanent dentition periods. (CG 1) (PC 6.2,7)

ADED 136C Oral Anatomy II

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 0

Credit Hours: 2

A detailed study of the embryonic development and anatomy of the hard and soft tissues of the face and oral cavity. Study of the anatomical structure of the head and neck with emphasis on the cranial nerves, muscles of mastication and facial expression, temporomandibular joint, vascular and lymphatic systems, tooth development, and histology of dental tissues and supporting structures. (Prerequisite: BIOL 195C with a minimum grade of C, ADED 113C, ADED 134C)

Learning Outcomes:

- Compare the primary embryonic layers (location and developmental structures) and summarized the importance in the development of an embryo, including the five histophysiology processes of initiation, proliferation, histodifferentiation, morphodifferentiation and apposition. CG 2
- Summarize the development of facial structures such as when development begins, the sources of development, the sequence of development, actual and apparent fusion, including identification of structures during prenatal development. CG 1, 2
- Summarize the three (3) stages of tooth development including the cells in the tooth germ during the cap, bell and apposition stage, in addition identify the structures each component of the tooth germ will produce in mature teeth. CG 2
- Analyze the structural pattern of dentin including the following terms: dentinal tubules, dentinal fibers (Tomes Fiber), odontoblasts, interglobular dentin, dentin matrix, Tomes granular layer, dead tract, sclerotic dentin and secondary dentin. CG 2
- Summarize the root development incorporating the role of each of the following terms: inner and outer dental epithelium, Hertwig's Root Sheath, Rests of Malassez, and epithelial rests of malassez. CG 2
- Summarize cementum formation using the terms Hertwig's Sheath, periodontal connective tissue cells, cementoblasts, and the location and function the periodontal ligament. CG 2
- Discriminate between the structures of enamel such as the ameloblast, enamel rod, rod sheath, interrod substance, bands of Hunter-Schreger, stripes of Retzius, enamel lamellae, enamel tufts, enamel spindles, apatite crystals, intercrystal spaces, perikymata, enamel spindles and enamel tufts. CG 2
- Assess the clinical significance of cementoid, hypercementosis, excementosis, cementum hyperplasia, cementicles, cementocytes, acellular and cellular cementum. CG 2
- Identify the four cellular zones within the developing pulp including fibroblasts, histiocytes, undifferentiated mesenchymal cells, odontoblasts, intercellular substance, Korff's fibers, blood vessels, nerves, denticles and diffuse calcifications. CG 2
- Compare and contrast the clinical difference in pulp shape between a newly erupted tooth and an aged tooth. CG 2
- Identify and describe the osseous structures and land marks of the skull with clinical significance and pathology in the practice of dentistry. CG 1
- Identify and discuss the bony prominences, bony depressions, bony openings and skeletal articulation of the following CG 1: Frontal bone, Occipital bone, Parietal bones, Temporal bones, Ethmoid bone, Sphenoid bone, Inferior nasal bones, Lacrimal bones, Mandible, Maxillae, Vomer bone, Zygomatic bones.
- Identify and discuss the origin, insertion, action, innervation, functions and pathology of the following CG 1: Muscles of facial expression, Muscles of mastication, Intrinsic and extrinsic tongue muscles, Muscles of the soft palate, Suprahyoid & infrahyoid muscles, Cervical muscles.
- Discuss the processes of mastication, speech, and swallowing in regard to the muscle of mastication. CG 1
- Identify the components, the movement and pathology of the TMJ within the skull. CG 1
- Discuss and integrate the TMJ pathology into patient care.
- Describe and discuss the components and division of the nervous system. CG 1
- Identify and trace the twelve (12) cranial nerves and paraphrase their functions. CG 1
- Identify, trace and summarize the location and innervations of the following CG 1: Trigeminal nerve – V1, V2 and V3, Facial nerve and branches, Glossopharyngeal nerve and branches, Hypoglossal nerve and branches,
- Discuss and integrate the pathology of the nervous system into the clinical practice of dental hygiene. CG 1
- Identify and trace the routes of the blood vessels of the head and neck region on the skull. CG 1

- Identify and discuss the arterial blood supply to the head and neck region including the structures supplied by the following CG 1: Internal carotid artery, External carotid artery, Anterior branches of the external carotid artery, Medical branches of the external carotid artery, Posterior branches of the external carotid artery, Terminal branches of the external carotid artery.

ADED 140C Dental Radiology for Dental Hygiene

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 3

Credit Hours: 3

Lectures and demonstrations are coordinated with laboratory practice on mannequins to develop mastery of digital dental radiographic techniques as well as processing, mounting, and evaluating films. Other topics include radiographic interpretation, radiographic landmarks, and localization techniques. Emphasis is placed on patient and operator protection and equipment function. Patients are scheduled near the end of term when students exhibit acceptable skills. (Prerequisites: ADED 100C and ADED 134C; corequisites: ADED 136C and ADED 114C)

Learning Outcomes:

- The dental hygiene student will be able to explain the principles of radiation as it relates to physics, biology, hygiene, and safety (CG1,4): Demonstrate and value the importance proper asepsis protocol. Describe the current federal and state guidelines regarding radiation safety and protection. List and describe the regulatory agencies involved with radiation. Value the importance of radiation safety for self and patient. Describe the production of x-rays. Describe the biological effects of radiation. Discuss the history of radiation. Identify and explain the function of the components of the x-ray unit.
- The dental hygiene student will be able to produce and interpret diagnostically acceptable radiographs utilizing various radiographic techniques and apply the principles of quality assurance and ethics in dental radiography (CG1, 3, 4): Expose radiographs using paralleling and bisecting techniques. Identify radiographic exposure and technique errors. Describe proper radiographic processing. Demonstrate correct radiographic film mounting technique. Discuss techniques for managing patients with variations of anatomy or special challenges, such as, strong gag reflex, tori, etc. Discuss the purpose and importance of a quality assurance program. Assess the need for radiographs based on patient's history and exam while using the ADA guidelines. Value the need to utilize radiographs in assessment, planning and implementation of the dental hygiene care plan. List the advantages and disadvantages of digital radiography. Describe the purpose and use of intraoral radiography, occlusal radiographs, extraoral projections, panoramic projections. Discuss the factors affecting radiographic image.
- The dental hygiene student will be able to describe the fundamentals of oral radiographic techniques and interpretation (CG2, 3): Describe the purpose and use of localization techniques. List the advantages and disadvantages of cone beam volume computed technology, computed assisted technology, and magnetic resonance imaging. Identify normal radiographic anatomy, common restorative materials, calculus, bone loss, caries, radiolucent pathology and radiopaque pathology on radiographs. Describe the ideal pre-radiation treatment, possible oral manifestations and treatment for patients with head and neck cancer.

ADED 155C Oral Hygiene Education/Nutrition

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 0

Credit Hours: 2

Methods of preventive oral hygiene education, including patient motivation, will be discussed. Lectures in nutrition will stress the importance of good eating habits in maintaining optimal general and dental health. Emphasis will be given to the essential role of the dental assistant in counseling the patient in these disciplines. (Prerequisite: ADED 110C)

Learning Outcomes:

- State the rationale of preventive dentistry and thoroughly describe the components.
- Research peer-reviewed literature to recommend home care products to patients.
- Describe acquired pellicle, plaque, and calculus and give their relevance to dental diseases.
- Demonstrate the major tooth brushing techniques and proper flossing technique.
- Discuss why patient motivation and communication is essential for control of dental diseases.
- Explain the negative health effects of tobacco use and apply appropriate intervention techniques.
- List the classes of nutrients and describe their major functions in the body.
- Discuss nutrient and energy needs with patients in the clinical setting.
- Identify dietary supplements that are contraindicated for dental treatment.

- Explain the different types of eating disorders and the signs you would see in the oral cavity and other physical signs.

ADED 161C Dental Materials-DA

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 3

Credit Hours: 3

Study of the composition and properties of materials used in dentistry. Lab sessions emphasize practice in manipulation of various materials.

Learning Outcomes:

- Determine considerations when selecting dental materials to be used in the mouth.
- Define the properties of dental materials for preventive measures or as direct restorative materials.
- Define the properties of the dental materials used as indirect restorative materials that aid in restoring the oral cavity to optimum health.
- Fabricate a study model demonstrating proper and accurate use of gypsum products.
- Demonstrate the correct procedure when using alginate material to take an impression.
- Compare and contrast alginate, agar hydrocolloid, rubber base impression material, impression compound, and zinc oxide eugenol impression material.
- Explain the various types of waxes and their uses in dentistry.
- Compare and contrast the various materials used as luting agents, liners, and bases.
- Explain the composition of periodontal dressings and demonstrate the manipulation and application of the material on a dentex model.
- Explain the composition, uses, and polymerization process of heat and cold cured resins.
- Describe the fabrication and care of a denture.
- Compare and contrast direct esthetic restorative materials including composite, glass ionomers, enamel adhesives, and dentin bonding agents.
- Describe the composition and uses of the restorative material amalgam.
- Demonstrate the correct procedure for fabricating athletic mouth guards and whitening trays.

ADED 162C Dental Materials-DH

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 3

Credit Hours: 3

An introduction to the composition and properties of dental materials with emphasis on materials currently utilized in dental and dental hygiene treatments. Lab sessions are coordinated with lectures to provide practice in manipulation of materials with emphasis on impression taking and preparation of study casts. (Prerequisite: CHEM 125C with a minimum grade of C, ADED 114C, ADED 136C, or permission of the department chair of Allied Dental Education)

Learning Outcomes:

- Determine considerations when selecting dental materials to be used in the mouth.
- Define the properties of dental materials for preventive measures or as direct restorative materials.
- Define the properties of the dental materials used as indirect restorative materials that aid in restoring the oral cavity to optimum health.
- Fabricate a study model demonstrating proper and accurate use of gypsum products.
- Demonstrate the correct procedure when using alginate material to take an impression.
- Compare and contrast alginate, agar hydrocolloid, rubber base impression material, impression compound, and zinc oxide eugenol impression material.
- Explain the various types of waxes and their uses in dentistry.
- Compare and contrast the various materials used as luting agents, liners, and bases.
- Explain the composition of periodontal dressings and demonstrate the manipulation and application of the material on a dentex model.
- Explain the composition, uses, and polymerization process of heat and cold cured resins.
- Describe the fabrication and care of a denture.
- Compare and contrast direct esthetic restorative materials including composite, glass ionomers, enamel adhesives, and dentin bonding agents.
- Describe the composition and uses of the restorative material amalgam.
- Demonstrate the correct procedure for fabricating athletic mouth guards and whitening trays.

ADED 175C Dental Assisting Theory I

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 0

Credit Hours: 2

Designed to teach the dental assisting student clinical techniques. Includes information on sterilization and disinfection techniques, charting, and the use of dental equipment and instruments. Students are introduced to four-handed chairside assisting as it pertains to all types of dental procedures including oral evacuation, instrument transfer, tray set-ups, and completing dental clinical records. Emphasis is placed on the dental health team concept.

Learning Outcomes:

- Assist the dentist during all phases of four-handed dentistry.
- Follow OSHA and Infection Control Guidelines in performing the proper disinfection and sterilization techniques in a dental office.
- Complete a clinical chart for a patient.
- Identify the different types of instruments used for different procedures in a dental office.
- Identify the different types of equipment used in a dental office.

ADED 182C Office Procedures and Management with Computer Applications

Lecture Hours: 1

Lab/Practicum/Clinical Hours: 0

Credit Hours: 1

Development of working knowledge of office procedures to include communication and telephone techniques, appointment scheduling, and document management including HIPAA regulations. Other topics include fundamentals of financial systems, dental insurance, inventory control, and job search preparation. Technology in the business office and the use of specialized office management software is highlighted. (Prerequisite: ADED 110C)

Learning Outcomes:

- Explain the concept of dentistry as a business and a healthcare provider.
- Recognize barriers to patient communication including verbal and non-verbal methods of communication and the importance in a dental office.
- Discuss the importance of staff management and conflict resolution.
- Explain the responsibilities of treating patients in the dental office following the accepted standard and proper professional behavior.
- Describe the application of digital technologies and how it impacts the dental office.
- Identify the three types of dental supplies and types of inventory ordering and storage.
- Understand guidelines for dental insurance claims and benefits.
- Create a professional resume and cover letter.
- Recognize the appropriate attire to wear to a dental job interview.

ADED 191C Dental Assisting Clinical Experience I

Lecture Hours: 0

Lab/Practicum/Clinical Hours: 4

Credit Hours: 1

Clinic sessions are coordinated with lectures in preclinical theory. Demonstration and practice of procedures in simulated clinical situations includes maintaining office asepsis, instrument sterilization, 4-handed chairside assisting, patient interaction and comfort, health history management, preliminary oral inspection, and taking alginate impressions. An introduction to recording patient information in Dentrix is included. All students enrolled in ADED 191C will be charged a clinical surcharge per semester.

Learning Outcomes:

- Demonstrate the preparation and breakdown of a dental unit as related to patient treatment.
- Describe the roles of each student responding to a simulated office emergency.
- Identify and state the function of common instruments and supplies used in general dentistry.
- Provide a dentist with the instruments needed to complete a specific dental procedure.
- Explain the role of the dental assistant as a member of a dental office team.
- Seat and position a patient for treatment in a specific area of the mouth.
- Record patient medical history and vital signs.
- Record and interpret the dentist's findings on a patient chart.
- Explain the importance of preventing dental issues for oral health.
- Identify and describe the important landmarks of the face and oral cavity.
- Initiate the set-up for an impression and follow through to the completed model.

ADED 196C Dental Assisting Clinical Experience II

Lecture Hours: 0

Lab/Practicum/Clinical Hours: 15

Credit Hours: 5

Experience in a dental office performing chairside, assisting, laboratory procedures, office procedures, and exposing, processing, and mounting radiographs. A classroom seminar for group discussion is included. All students enrolled in ADED 191C will be charged a clinical surcharge per semester. (Prerequisites: ADED 105C, ADED 110C, ADED 161C, ADED 175C, and ADED 191C)

- Learning Outcomes:
- Demonstrate the ability to perform the advanced skills that can be delegated to dental assistants graduating from CODA accredited programs.
- Identify and fulfill the duties of a graduate dental assistant in a general practice.
- Describe and participate in the duties of the front desk staff.
- Maintain the chain of asepsis critical to working as a dental professional.
- Maintain a professional demeanor on and off the job.

ADED 201C Dental Hygiene Theory III

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 1

Credit Hours: 2

A study of the etiology and pathogenesis of periodontal disease from a histological and clinical perspective. Emphasis will be placed on the dental hygiene practitioner's role in clinical assessment and recognition of the pathological periodontal changes and the response of the diseased tissues to therapy. Discussions are coordinated with experience in a laboratory and clinical setting. (Prerequisites: ADED 103C, ADED 114C, ADED 136C, and ADED 140C)

Learning Outcomes:

- Determine considerations when selecting dental materials to be used in the mouth.
- Define the properties of dental materials for preventive measures or as direct restorative materials.
- Define the properties of the dental materials used as indirect restorative materials that aid in restoring the oral cavity to optimum health.
- Fabricate a study model demonstrating proper and accurate use of gypsum products.
- Demonstrate the correct procedure when using alginate material to take an impression.
- Compare and contrast alginate, agar hydrocolloid, rubber base impression material, impression compound, and zinc oxide eugenol impression material.
- Explain the various types of waxes and their uses in dentistry.
- Compare and contrast the various materials used as luting agents, liners, and bases.
- Explain the composition of periodontal dressings and demonstrate the manipulation and application of the material on a dentex model.
- Explain the composition, uses, and polymerization process of heat and cold cured resins.
- Describe the fabrication and care of a denture.
- Compare and contrast direct esthetic restorative materials including composite, glass ionomers, enamel adhesives, and dentin bonding agents.
- Describe the composition and uses of the restorative material amalgam.
- Demonstrate the correct procedure for fabricating athletic mouth guards and whitening trays.

ADED 212C Clinical Dental Hygiene III

Lecture Hours: 1

Lab/Practicum/Clinical Hours: 12

Credit Hours: 4

Practical application of dental hygiene theories and techniques with emphasis on individual patients' oral health needs and the further development of oral prophylactic and radiographic techniques, including the preparation of diagnostic aids and patient education. Students will gain experience through work in their on-campus clinical assignments. All students enrolled in ADED 212C will be charged a \$500 per semester clinical surcharge. (Prerequisites: ADED 114C and ADED 201C)

Learning Outcomes:

- Demonstrate effective verbal and nonverbal communication techniques when providing dental hygiene care. (CG-1)
- Apply effective interview techniques to question a parent, child, women, and elders for information using open-ended questioning. (CG-1,2,3)

- Employ proper infection control protocol to prevent disease transmission before, during, and after the provision of dental hygiene services. (CG-1)
- Describe the necessary modifications to dental hygiene treatment based on a risk assessment of the patient's health history, special needs, ASA classification, psychological status, and medications. (CG-1,2)
- Describe and document significant findings in the patient record using precise, descriptive terms. (CG-1)
- Demonstrate total patient care scenario through ideal dental hygiene care planning, intervention, and evaluation of a periodontal case study that includes a comprehensive analysis of the patient's periodontium using medical history findings, assessment, and radiographic data. (CG 1,2 and 3)
- Recognize a patient's risk factors for oral disease that requires intervention and use of therapeutic topical agents for disease management that include fluoride, antimicrobial agents, and local delivery/controlled release agents. (CG 1,3)
- Demonstrate the correct use of the dental instrumentation for the detection of deposits, probe measurements, and removal of calculus deposits with the proper use of fulcrums and consideration of tooth irregularities without trauma to hard or soft tissues. (CG- 1,3)
- Apply the principles of appropriate instrument sharpening technique to maintain the original shape and effectiveness of the instrument in patient care. (CG-1)
- Demonstrate the effective removal of extrinsic stain with mechanical polishing techniques using the selective polishing theory of indications and contraindications of the use of mechanical polishing. (CG-1,2,3)
- Apply pain and anxiety management strategies that include the application of topical anesthetics and the administration of block and infiltration anesthesia that helps mitigate local and systemic complications due to the injection of local anesthetic solutions, including the causes, symptoms, treatment, and prevention. (CG- 1,2,3)
- Critically evaluate the effectiveness of clinical dental hygiene interventions that align with patient goals and self-care assessment based on clinical assessment findings during the process of follow-up patient care. (CG 2,3)
- Apply the principles of professional and ethical behavior when providing patient care to include comprehensive risk assessment, proper documentation, and patient confidentiality. (CG-1,2)
- Perform and evaluate effective dental auxiliary tasks that including; placement of pit and fissure sealants, alginate impressions; pouring, separating, and trimming of study models. (CG-1,2,3)
- Demonstrate competent radiographic techniques in understanding when there is a need to expose a patient and be able to: developing, evaluating, and interpret intraoral and extraoral films. (CG-1,2)
- Perform dietary counseling with an emphasis on oral health. (CG- 1,2,3)
- Demonstrate knowledge of the proper techniques in the care of osseointegrated dental implants and care of a dental prosthetic for patient populations that require this competency. (CG- 1,2,3)
- Demonstrate the accepted methods for the prevention of medical emergencies and value the dental hygiene role in implementing life support methods articulated by the American Heart Association standards in preventing and managing emergencies. (CG-1,3)

ADED 221C Clinical Dental Hygiene IV

Lecture Hours: 1

Lab/Practicum/Clinical Hours: 12

Credit Hours: 4

Practical application of dental hygiene theories and techniques with emphasis on individual patients' oral health needs and the further development of oral prophylactic and radiographic techniques, including the preparation of diagnostic aids and patient education. Students will gain experience through work in their on-campus clinical assignments. All students enrolled in ADED 221C will be charged a \$500 per semester clinical surcharge. (Prerequisite: ADED 212C)

Learning Outcomes:

- Demonstrate effective verbal and nonverbal communication techniques when providing dental hygiene care. (CG-1)
- Apply effective interview techniques to question a parent, child, women, and elders for information using open-ended questioning. (CG-1,2,3)
- Employ proper infection control protocol to prevent disease transmission before, during, and after the provision of dental hygiene services. (CG-1)
- Describe the necessary modifications to dental hygiene treatment based on a risk assessment of the patient's health history, special needs, ASA classification, psychological status, and medications. (CG-1,2)
- Describe and document significant findings in the patient record using precise, descriptive terms. (CG-1)

- Demonstrate total patient care scenario through ideal dental hygiene care planning, intervention, and evaluation of a periodontal case study that includes a comprehensive analysis of the patient's periodontium using medical history findings, assessment, and radiographic data. (CG 1,2 and 3)
- Recognize a patient's risk factors for oral disease that requires intervention and use of therapeutic topical agents for disease management that include fluoride, antimicrobial agents, and local delivery/controlled release agents. (CG 1,3)
- Demonstrate the correct use of the dental instrumentation for the detection of deposits, probe measurements, and removal of calculus deposits with the proper use of fulcrums and consideration of tooth irregularities without trauma to hard or soft tissues. (CG- 1,3)
- Apply the principles of appropriate instrument sharpening technique to maintain the original shape and effectiveness of the instrument in patient care. (CG-1)
- Demonstrate the effective removal of extrinsic stain with mechanical polishing techniques using the selective polishing theory of indications and contraindications of the use of mechanical polishing. (CG-1,2,3)
- Apply pain and anxiety management strategies that include the application of topical anesthetics and the administration of block and infiltration anesthesia that helps mitigate local and systemic complications due to the injection of local anesthetic solutions, including the causes, symptoms, treatment, and prevention. (CG- 1,2,3)
- Critically evaluate the effectiveness of clinical dental hygiene interventions that align with patient goals and self-care assessment based on clinical assessment findings during the process of follow-up patient care. (CG 2,3)
- Apply the principles of professional and ethical behavior when providing patient care to include comprehensive risk assessment, proper documentation, and patient confidentiality. (CG-1,2)
- Perform and evaluate effective dental auxiliary tasks that including; placement of pit and fissure sealants, alginate impressions; pouring, separating, and trimming of study models. (CG-1,2,3)
- Demonstrate competent radiographic techniques in understanding when there is a need to expose a patient and be able to: developing, evaluating, and interpret intraoral and extraoral films. (CG-1,2)
- Perform dietary counseling with an emphasis on oral health. (CG- 1,2,3)
- Demonstrate knowledge of the proper techniques in the care of osseointegrated dental implants and care of a dental prosthetic for patient populations that require this competency. (CG- 1,2,3)
- Demonstrate the accepted methods for the prevention of medical emergencies and value the dental hygiene role in implementing life support methods articulated by the American Heart Association standards in preventing and managing emergencies. (CG-1,3)

ADED 225C Dental Hygiene Community Clinic

Lecture Hours: 0

Lab/Practicum/Clinical Hours: 4

Credit Hours: 1

Practical application of dental hygiene theories and techniques with emphasis on the oral health needs of special patient populations. Students will gain experience in a variety of educational and public health settings. (Prerequisites: ADED 114C and ADED 201C)

Learning Outcomes:

- Prepare and present appropriate oral health presentation clinically, in the classroom, or in an alternative setting to a targeted population. (PC 1.1-1.4)
- Discern and manage the ethical issues facing dental hygiene practice in a rapidly changing environment. (PC 1.1 - 1.4)
- Contribute to improving the knowledge, skills, and values of the profession. (PC 3.2 – 3.4)
- Provide planned educational services using appropriate interpersonal communication skills, and educational strategies to promote optimal health. (PC 4.1 – 4.4)
- Initiate and assume responsibility for health promotion and disease prevention activities for diverse populations in a variety of settings. (PC 5.1 – 5.6)
- Systematically collect, correlate, critically analyze, and record data on the general, oral, and psychosocial health status of a variety of clients using methods consistent with medico-legal-ethical principles. (PC 6.1 – 6.5)
- Formulate a comprehensive dental hygiene care plan that is evidence-based and client centered. (PC 7.1 – 7.7)
- Provide specialized care which includes educational, preventive, and therapeutic services designed to assist the client in achieving and maintaining oral health goals. (PC 8.1 – 8.9)
- Critically evaluate the effectiveness of implemented educational preventive, and therapeutic service and make modifications if necessary. (PC 9.1 – 9.5)
- Provide dental hygiene care while maintaining a demeanor of professional and ethical behaviors. (PC 1.1, 1.2)

- Employ proper infection control protocol to prevent the transmission of disease.(8.1)
- Demonstrate effective verbal and nonverbal communication techniques when treating the target population. (5.9)
- Apply the principles of record management for thorough, accurate, and legible documentation. (9.1-9.5)
- Assess, plan, implement and evaluate effective dental hygiene strategies and interventions. (6.1-6.15)

ADED 227C Dental Ethics and Jurisprudence

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 0 Credit Hours: 1

A study of the ethical and legal issues involved in dental care delivery as well as office management procedures.

- Learning Outcomes:
- Prepare and present appropriate oral health presentation clinically, in the classroom, or in an alternative setting to a targeted population. (PC 1.1-1.4)
- Discern and manage the ethical issues facing dental hygiene practice in a rapidly changing environment. (PC 1.1 - 1.4)
- Contribute to improving the knowledge, skills, and values of the profession.(PC 3.2 – 3.4)
- Provide planned educational services using appropriate interpersonal communication skills, and educational strategies to promote optimal health. (PC 4.1 – 4.4)
- Initiate and assume responsibility for health promotion and disease prevention activities for diverse populations in a variety of settings. (PC 5.1 – 5.6)
- Systematically collect, correlate, critically analyze, and record data on the general, oral, and psychosocial health status of a variety of clients using methods consistent with medico-legal-ethical principles. (PC 6.1 – 6.5)
- Formulate a comprehensive dental hygiene care plan that is evidence-based and client centered. (PC 7.1 – 7.7)
- Provide specialized care which includes educational, preventive, and therapeutic services designed to assist the client in achieving and maintaining oral health goals. (PC 8.1 – 8.9)
- Critically evaluate the effectiveness of implemented educational preventive, and therapeutic service and make modifications if necessary. (PC 9.1 – 9.5)
- Provide dental hygiene care while maintaining a demeanor of professional and ethical behaviors. (PC 1.1, 1.2)
- Employ proper infection control protocol to prevent the transmission of disease.(8.1)
- Demonstrate effective verbal and nonverbal communication techniques when treating the target population. (5.9)
- Apply the principles of record management for thorough, accurate, and legible documentation. (9.1-9.5)
- Assess, plan, implement and evaluate effective dental hygiene strategies and interventions. (6.1-6.15)

ADED 239C Concepts of Risk Management

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 0 Credit Hours: 2

This course will orient the student to risk management of a medical condition/emergency and dental record documentation. Ethics and jurisprudence topics related to risk management are also included. (Prerequisite: ADED 110C)

Learning Outcomes:

- Describe major areas of risk management to include communication, accurate and complete documentation, informed consent as well as legal aspects of dental assisting to maintain high standards of clinical excellence.
- Identify prescribed medications that patients may be taking using the Lexicomp database.
- Perform treatment modifications for visually impaired, hearing impaired and/or wheelchair bound patients.
- Identify signs and symptoms of medical diseases and provide the proper treatment to patients in clinical practice.
- Identify a medical emergency based on the signs and symptoms exhibited by the patient and effectively manage the situation utilizing a team approach to provide appropriate emergency treatment and referral to the Emergency Medical Service.

ADED 242C Community Dental Health I

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 0 Credit Hours: 2

Students will gain information in dental public health. Emphasis is on planning, education, healthcare promotion, epidemiology, evidenced-based research, basic biostatistics, cultural competence, and healthcare financing. (Prerequisite: ADED 201C)

Learning Outcomes:

- Prepare and present appropriate oral health presentation clinically, in the classroom, or in an alternative setting to a targeted population. (PC 1.1-1.4)
- Discern and manage the ethical issues facing dental hygiene practice in a rapidly changing environment. (PC 1.1 - 1.4)
- Contribute to improving the knowledge, skills, and values of the profession.(PC 3.2 – 3.4)
- Provide planned educational services using appropriate interpersonal communication skills, and educational strategies to promote optimal health. (PC 4.1 – 4.4)
- Initiate and assume responsibility for health promotion and disease prevention activities for diverse populations in a variety of settings. (PC 5.1 – 5.6)
- Systematically collect, correlate, critically analyze, and record data on the general, oral, and psychosocial health status of a variety of clients using methods consistent with medico-legal-ethical principles. (PC 6.1 – 6.5)
- Formulate a comprehensive dental hygiene care plan that is evidence-based and client centered. (PC 7.1 – 7.7)
- Provide specialized care which includes educational, preventive, and therapeutic services designed to assist the client in achieving and maintaining oral health goals. (PC 8.1 – 8.9)
- Critically evaluate the effectiveness of implemented educational preventive, and therapeutic service and make modifications if necessary. (PC 9.1 – 9.5)
- Provide dental hygiene care while maintaining a demeanor of professional and ethical behaviors. (PC 1.1, 1.2)
- Employ proper infection control protocol to prevent the transmission of disease.(8.1)
- Demonstrate effective verbal and nonverbal communication techniques when treating the target population. (5.9)
- Apply the principles of record management for thorough, accurate, and legible documentation. (9.1-9.5)
- Assess, plan, implement and evaluate effective dental hygiene strategies and interventions. (6.1-6.15)

ADED 243C Community Dental Health II

Lecture Hours: 1

Lab/Practicum/Clinical Hours: 0

Credit Hours: 1

Students will implement the theory base from DN 242 into the Spring semester with practical applications of the ADED 242C course content. The course will entail completion of various projects and assignments with a community emphasis. (Prerequisites: ADED 212C and ADED 242C)

Learning Outcomes:

- Prepare and present appropriate oral health presentation clinically, in the classroom, or in an alternative setting to a targeted population. (PC 1.1-1.4)
- Discern and manage the ethical issues facing dental hygiene practice in a rapidly changing environment. (PC 1.1 - 1.4)
- Contribute to improving the knowledge, skills, and values of the profession.(PC 3.2 – 3.4)
- Provide planned educational services using appropriate interpersonal communication skills, and educational strategies to promote optimal health. (PC 4.1 – 4.4)
- Initiate and assume responsibility for health promotion and disease prevention activities for diverse populations in a variety of settings. (PC 5.1 – 5.6)
- Systematically collect, correlate, critically analyze, and record data on the general, oral, and psychosocial health status of a variety of clients using methods consistent with medico-legal-ethical principles. (PC 6.1 – 6.5)
- Formulate a comprehensive dental hygiene care plan that is evidence-based and client centered. (PC 7.1 – 7.7)
- Provide specialized care which includes educational, preventive, and therapeutic services designed to assist the client in achieving and maintaining oral health goals. (PC 8.1 – 8.9)
- Critically evaluate the effectiveness of implemented educational preventive, and therapeutic service and make modifications if necessary. (PC 9.1 – 9.5)
- Provide dental hygiene care while maintaining a demeanor of professional and ethical behaviors. (PC 1.1, 1.2)
- Employ proper infection control protocol to prevent the transmission of disease.(8.1)
- Demonstrate effective verbal and nonverbal communication techniques when treating the target population. (5.9)
- Apply the principles of record management for thorough, accurate, and legible documentation. (9.1-9.5)

- Asses, plan, implement and evaluate effective dental hygiene strategies and interventions. (6.1-6.15)

ADED 244C Pain Management for the Dental Hygienist I

Lecture Hours: 1

Lab/Practicum/Clinical Hours: 3

Credit Hours: 2

This course is designed to prepare student dental hygienists for the safe and effective administration of local anesthesia nerve blocks and infiltrations. The course includes classroom, lab, and clinical instruction. Course topics include the psychology of pain management, patient assessment and treatment planning, anesthesia techniques, complications, pharmacology of anesthetic agents, emergency precautions and management, ethical considerations, and a review of anatomy and physiology in relation to the administration of anesthetic agents. On successful completion of this course and graduation, participants will have completed the educational requirements for a local anesthesia permit for the state of N.H. All students enrolled in this course will be charged a \$200 pain management supplies fee. (Prerequisites: ADED 103C, ADED 114C, ADED 136C, ADED 140C, CHEM 125C)

Learning Outcomes:

- Describe fundamentals of nerve impulse generation and transmission, and the effects of local anesthesia upon impulse conduction (PC 2.1, 6.2, 8.8, 8.9).
- Discuss the concepts and methods to help in the management of pain, anxiety and fear in a variety of dental setting (PC 1.1-1.4, 2.1-2.3, 4.2, 5.2, 6.2, 6.11, 6.12, 6.14, 7.2, 7.6, 8.4, 8.8, 9).
- Describe the anatomical landmarks, bones, muscles, blood vessels and nerves associated with each type and location of local anesthetic injection (PC 2.4, 6.2, 6.3, 8.8).
- Describe the anatomy of the trigeminal nerve, including the divisions, branches and innervated structures (PC 2.1, 2.4, 6.2, 8.8, and 8.9).
- Differentiate between topical anesthesia, field block, and nerve block (PC 2.1, 2.4, 6.2, 6.3, 8.4, 8.8, and 8.9).
- Describe the pharmacology of the most commonly used dental anesthetics and their components including chemical structure, classification, potency, toxicity, mechanisms of action and metabolism of each (PC 2.1-2.4, 3.4, 6.2, 6.14, 8.6).
- Explain the pharmacology of the most common vasoconstrictors used in dentistry including function, advantages, disadvantage, mechanisms of action and maximum recommended dosages (PC 2.1-2.4, 3.4, 6.2, 6.11, 6.12, 6.14, 8.4, 8.7).
- Describe indications and contraindications of local anesthetic use in patient care (PC 1.1- 1.3, 2.1-2.3, 6.1, 6.2, 6.8, 6.12, 6.14, 7.3, 8.4).
- Describe the pharmacology and proper usage of topical anesthetic (PC 2.1-2.4, 3.4, 6.2, 6.11, 6.12, 6.8, 6.14, 7.3, 8.4, 8.8).
- Identify system conditions which influence the selection and the use of local anesthetics and vasoconstrictors (PC 1.1-1.3, 2.1-2.3, 6.1, 6.2, 6.8, 6.14, 7.3, 8.4, 8.8).
- Discuss potential drug interactions with the use of local anesthetics and the effects of local anesthesia (PC 2.1-2.4, 3.4, 6.2, 6.14, 8.8).
- Describe potential adverse effects of the use of anesthesia, vasoconstrictor, preservative or other components of the anesthetic solution (PC 2.1-2.4, 3.4, 6.2, 6.14, 8.8).
- Evaluate the patient medical history and physical status to determine the armamentarium, treatment modifications and potential for emergency situations in the administration of local anesthesia. (PC 1.4, 2.1-2.3, 5.2, 6.1-6.3, 6.8, 6.11, 6.12, 6.14, 7.2, 7.6, 8.4, 8.8).
- Demonstrate knowledge of relevant factors in the choice of proper local anesthetic solutions (PC 2.1-2.4, 6.1-6.3, 6.8, 6.11, 6.15, 7.2, 8.4, 8.8).
- Recognize and manage local and systemic complications due to the injection or local anesthetic solutions, including the causes, symptoms, treatment and prevention (PC 2.1-2.4, 6.1-6.3, 6.8, 6.11, 6.15, 7.2, 8.4, 8.8).
- Determine which injections are appropriate for given situations and select and properly assemble the correct armamentarium for each type of injection (PC 2.1-2.4, 6.1-6.3, 6.8, 6.11, 6.15, 7.2, 8.4, 8.8).
- Describe the procedure for each type of injection, including correct site for needle penetration and solution deposition, as well as the rationale for the selection of the appropriate local anesthetic (PC 2.1-2.4, 6.1-6.3, 6.8, 6.11, 6.15, 7.2, 7.3, 8.4, 8.8).
- Demonstrate effective aspirating technique when administering local anesthetic and explain the rationale for doing so (PC 1.1, 1.2, 2.1-2.3, 3.4, 5.1, 8.4, 8.8).
- Describe explanations to patients of what effects and sensations are likely to be experienced as well as providing verbal and non-verbal reassurance during the injection process (PC 1.1, 1.2, 2.2, 2.4, 3.2, 5.2, 6.2, 6.14, 7.2, 8.4, 8.8, 9.1-9.3).

- Describe the proper rate of anesthetic solution administration and explain the rationale (PC 1.1, 1.2, 2.1-2.3, 3.4, 8.1, 8.4, 8.8).
- Demonstrate the ability to properly and successfully administer infiltration and block local anesthesia in actual clinical settings (PC 1.2, 1.2, 2.1-2.3, 3.4, 5.1, 8.1, 8.4, 8.8).
- Continually assess the patient's response during the administration process of local anesthesia (PC 2.1,6.1, 6.2, 8.4, 8.8,).
- Demonstrate proper handling technique of the aspirating syringe during and after treatment, including needle recapping, syringe disassembly and cartridge and needle disposal (PC 2.1, 6.2, 6.11, 6.14, 8.1, and 8.4).

ADED 246C Pain Management for the Dental Hygienist II

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 4 Credit Hours: 1

This course is designed to provide didactic and lab instruction in nitrous oxide/oxygen analgesia in accordance with American Dental Association Guidelines. The dental hygiene student will acquire comprehensive knowledge and skills necessary to safely and effectively administer nitrous oxide and oxygen sedation with local anesthesia injections. On completion of this course and graduation from the Dental Hygiene program, students will have completed the educational requirements for nitrous oxide administration and monitoring for certification by the state of N.H. All students enrolled in this course will be charged a \$200 pain management supplies fee. (Prerequisites: ADED 212C and ADED 244C; corequisite: ADED 221C)

Learning Outcomes:

- Initiate and assume responsibility for health promotion and disease prevention activities for diverse populations in a variety of settings. C2
- Integrate critical thinking skills and comprehensive problem-solving to identify oral health care strategies that promote patient health and wellness. C2 & C3
- Apply a professional code of ethics, values, skills, and knowledge in the practice of dental hygiene. C4
- Application of disease prevention knowledge and components of effective dental health care delivery. C1 & C2
- Advocate for effective oral health care for underserved population. C1 & C3
- Evaluate reimbursement mechanisms and their impact on the patient's access to oral health care. C1, C3, & C4
- Integrate evidence-base decision making to evaluate emerging technology and treatment modalities to integrate into community dental health. C1 & C3
- Access professional and social networks to pursue professional goals. C1
- Assess the community's oral health needs and the quality and availability of resources and services. C1 & C3
- Initiate a interprofessional collaborative approach with all patients when developing and implementing community dental health programs that are specialized, culturally sensitive, and promote health and wellness to all populations. C1, C2, and C3

ADED 247C Dental Hygiene Science - Pharmacology

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 0 Credit Hours: 2

Emphasizes the study of drug origins, properties, dosages, and therapeutic effects. Specific consideration is given to those drugs used in dentistry and anesthesiology. (Prerequisites: BIOL 196C and BIOL 202C with minimum grades of C and ADED 136C)

ADED 248C Dental Hygiene Science - Oral Pathology

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 0 Credit Hours: 2

Oral pathology includes the study of diseases affecting the oral cavity, manifestations of inflammation, degenerative changes, neoplastic disease, and anomalies. Oral pathology prepares the student to detect deviations from normal in the assessment of a client's systemic and oral health status and to make appropriate decisions regarding referral and treatment when needed. (Prerequisites: BIOL 196C and BIOL 202C with minimum grades of C and ADED 136C)

ADED 275C Dental Assisting Theory II

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 3 Credit Hours: 2

Introduces the dental advanced functions to dental assisting students. Includes instruction in basic instrumentation concepts, removal of coronal cement, application of pit and fissure sealants, suture removal, coronal polishing,

expanded orthodontic functions, and the monitoring of nitrous oxide sedation. Preclinical skills will be introduced on mannequins and competency skills on patients. Advanced Dentrix computer applications will also be included. (Prerequisites: ADED 105C, ADED 110C, ADED 161C, ADED 175C, ADED 191C.)

Learning Outcomes:

- Provide a patient with a tray or varnish fluoride treatment.
- Demonstrate the ability to anticipate the needs of a dentist during a restorative procedure.
- Maintain a chain of asepsis when cleaning prosthetic appliance.
- Use a sturdy and safe fulcrum during instrumentation.
- Sit in the proper position to effectively treat a specified sextant of a patient's mouth.
- Explain the theory behind selective polishing.
- Demonstrate the placement of sealants.
- Demonstrate the safe monitoring of nitrous oxide.
- Identify specialty practice instruments.
- Demonstrate placement of a rubber dam and explain the reasons for utilization.
- Fabricate and finish provisional coverage.
- Remove and account for sutures.
- Describe the symptoms and treatment of alveolitis.
- Demonstrate the use of the intraoral camera.
- Demonstrate expanded orthodontic duties procedures.
- Describe the expanded duties qualifications for the traditional dental assistant, Certified Dental Assistant (CDA), and Graduate Dental Assistant of a CODA accredited dental assisting program.

ADED 298C Dental Assisting Clinical Experience III

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 8

Credit Hours: 4

Expanded opportunities in chairside assisting to encompass all dental specialties including orthodontics, surgery, endodontics, pedodontics, and prosthodontics. A weekly seminar is held to evaluate the individual clinical experiences. All students enrolled in ADED 298C will be charged a clinical surcharge per semester. (Prerequisites: ADED 196C, ADED275C, up-to-date CPR and clinical clearance with current health and liability insurance, and DANB Radiation, Health and Safety certificate)

Learning Outcomes:

- Perform expanded duties as per the laws and rules of the New Hampshire Board of Dental Examiners.
- Demonstrate the ability to anticipate the needs of a dentist during a restorative procedure.
- Maintain a chain of asepsis when cleaning prosthetic appliances.
- Use a sturdy and safe fulcrum during instrumentation.
- Sit in the proper position to effectively treat a specified sextant of a patient' mouth.
- Identify specialty practice instruments.
- Assist with the placement and removal of a rubber dam.
- Perform an initial preliminary oral inspection and charting.
- Demonstrate the use of an intraoral camera.
- Assist with the treatment of alveolitis.

Animation and Graphic Game Programming

In addition to listed prerequisites, students must earn grades of C or higher in each major field course and AGGP prerequisite to progress in the program.

AGGP 101C Introduction to Game Design and Creation with Programming

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 3

Credit Hours: 3

Introduces the student to game design with a focus on core programming concepts and common game mechanics. No prior knowledge of game development is assumed. Several hands-on game programming assignments demonstrate real-world implementations of abstract concepts. A research paper on the game industry and development topics is assigned. Each student is required to create a small game project during the last several weeks of the course. (Co/prerequisite: CPET 107C, or with permission of program coordinator)

AGGP 103C Introduction to Content Development

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 2 Credit Hours: 3

Gain practical experience in developing content using applications, techniques, and standards used by the game industry. This course includes an introductory overview of image editing and manipulation, sprites, tiles, and tile-based worlds. Course material is reinforced with hands-on assignments and the creation of a portfolio. (Prerequisite: Working knowledge of current desktop operating systems.) Students who do not intend to enter the AGGP program should consider enrolling in VRTS 193C: Introduction to Photoshop.

AGGP 131C Introduction to 2-D and 3-D Game Development

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 3 Credit Hours: 3

This course focuses on the fundamental aspects of programming, development, and design for games using 2-D gameplay. Other topics explored include an introduction to 3-D programming, single-system multiplayer programming, multi-platform programming, and support for data originating from level editors. The coursework is structured with several hands-on projects, classroom presentations, a team project, and a final public presentation. (Prerequisites: AGGP 101C, AGGP 103C, CPET 107C, or permission of program coordinator)

AGGP 140C Digital Art Modeling and Animation

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 3 Credit Hours: 3

An introduction to modeling and animation for game programmers to provide a common understanding to work with artists and designers in an effective manner. Topics include modeling, material creation, basic lighting, and an introduction to skeletal animation. Models will be created and then used to understand animation and asset pipelines using current industry tools and engines. Course topics are applied through practical hands on assignments. (Prerequisite: AGGP 103C or permission of program coordinator)

AGGP 225C 3-D Game Engine Application Development

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 3 Credit Hours: 3

Use of a commercially available game engine or framework. The majority of the work in the class will be hands-on using these technologies. A common practice within the industry is team development of applications using licensed game engine technology. Students will understand how to use the engine's interwoven mesh of different systems, which include user input, networking, and rendering. Game modification, also known as "modding," and source control will be covered. Prerequisites: AGGP 131C, AGGP 140C, CPET 125C, or permission of program coordinator.

AGGP 231C Application Development and Software Prototyping

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 3 Credit Hours: 3

Current application development can target multiple platforms across a range of devices such as phones, tablets, smart devices, consoles, and personal computers. Students will study current technologies for cross-platform development and deployment. Several intense hands-on software prototype projects will be required where students will design a concept, build a proof of concept, and conduct a postmortem review. (Prerequisites: AGGP 131C, AGGP 140C, CPET 125C, or permission of program coordinator)

AGGP 247C Math and Physics for Game Programmers

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 3 Credit Hours: 3

Math and physics play key roles in game programming. Effective use of math is needed for code design, data structures utilization, using design patterns, developing artificial intelligence, using scripting engines, controlling 3D pipelines, and texture-mapping development. Math is also needed to implement the physics utilized in Newton's laws and concepts of collisions and reactions. Programmed applications that use math and physics in game development will form the foundation for this hands-on course. (Prerequisites: AGGP 101C, CPET 125C, both AGGP math electives, or permission of program coordinator)

AGGP 291C Project Definition and Portfolio Specifications

Lecture Hours: 1

Lab/Practicum/Clinical Hours: 3

Credit Hours: 2

Students begin the construction of a professional industry portfolio. Assignments given to support an effective portfolio include collecting and polishing potential portfolio pieces, crafting resumes and cover letters, and learning job search networking techniques. An exemplary individual project is required in addition to other assignments. A study of game theory and game projects will be used to define a team capstone project to be undertaken in AGGP 294C.

(Prerequisites: Completion of all AGGP major courses in the first year of the curriculum; corequisites: the student must be enrolled or have already taken all AGGP major courses for the Fall semester of the second year curriculum or have permission of program coordinator)

Students enrolling in AGGP 291C come with the expectation that they will directly enroll in AGGP 294C the next semester. Students who do not take AGGP 294C in the next semester after taking AGGP 291C must re-take AGGP 291C before enrolling in AGGP 294C. Students who have passed AGGP 291C but are required to re-take the course should be aware that the cost of the course may not be covered by financial aid and should consult with the Financial Aid Office prior to registration.

AGGP 292C Portfolio Development

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 3

Credit Hours: 3

AGGP 292C builds on the work started in AGGP 291C. The lab in this course is devoted to a major portfolio piece or for students to be available for an internship off-campus. Students are expected to prepare a presentation of their work as part of this course. (Prerequisite: AGGP 291C)

AGGP 294C Animation and Graphic Game Programming Capstone Project

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 5

Credit Hours: 4

Students will be working on campus in team projects or off campus on internships. Students will be creating projects based on the specifications developed in AGGP 291C. The lab portion is devoted to student project development. All work will be supervised by an NHTI instructor and students are expected to work at an industry performance level. Final team presentations of the work accomplished are part of this course. (Prerequisites: AGGP 291C)

Anthropology

ANTH 101C Introduction to Cultural Anthropology

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

This course is an introduction to the perspectives, methods, and ideas of cultural anthropology and will analyze human diversity and similarities among people throughout the world, both western and non-western, through cross-cultural comparison. Topics include culture and society; ethnographic research; ethnocentrism and cultural relativism; how societies adapt to their environment; different forms of marriage and social relationships; male, female, and other forms of gender; the social functions of religion; and the processes of social-cultural change.

ANTH 210C Native American Studies I

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

A study of Indigenous North American cultures from ancient times to the 21st century. Native American cultures and traditions, including lifeways, religion, ceremonies, arts, sovereignty, government, and social organizations, are studied. The course focuses on ancient Mesoamerica through an in-depth review of the peoples and nations of North American culture areas, including the Northeast, Southeast, and the Great Plains, as well as the impact of settler colonialism.

Architectural Engineering Technology: Architectural Focus

ARET 101C AutoCAD 2D

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

This is an introductory course in computer-aided design (CAD) for beginning students. Topics include drawing setup, line drawing, text placement, orthographic drawing, basic editing, and dimensions. This hands-on course focuses on the most common basic functions necessary to complete 2-D drawings including move, mirror, copy, offset, trace, OSNAP, and distance. Projects incorporate basic techniques of drawing and CAD. This course is part of the CAD Certificate program. Students are expected to be able to read and interpret architectural/engineering graphics.

ARET 102C AutoCAD 3-D

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

This course introduces students to architectural 3-D CAD applications, 3-D manipulation of entities, and the creation and control of views in 3-D space through isometric and perspective projections. Topics include 3-D drawing, coordinate systems, viewing, rendering, modeling, and output options. On completion, students will be able to prepare basic architectural 3-D drawings and renderings. This course is part of the CAD Certificate program. (Prerequisite: ARET 101C or permission of the department chair)

ARET 103C Architectural Graphics and Sketching

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 2 Credit Hours: 3

The first semester is devoted to the basic ways of representing architectural ideas graphically through the development of sketching and computer-aided drawing (CAD) skills. Architectural line techniques, lettering styles, geometric construction, principles of projection, and drawing expression are the areas of early concentration. Architectural design issues are studied regarding residential planning and siting. The student produces floor plans, foundation plans, site plans, elevations, building sections, wall sections, and details. An introductory structural analysis for foundation loading is explored. Production of drawings by sketching and CAD demonstrates the student's ability to perform. (Corequisite: ARET 120C) CAD Certificate and Industrial Design Technology students taking this course are required to register for ARET 120C.

ARET 104C Architectural Design Studio I

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 2 Credit Hours: 3

The student will study the architectural design for an institutional building that is designated for public use. The terrain is sloping and provides for a two-story sloped roof structure that employs current construction methods. The student begins study through the use of sketch-to-scale drawings. With an outline of design criteria and project guidelines, the student develops preliminary presentation drawings for floor plans, elevations, and 3-D views. As the student comes to know and appreciate the design, the emphasis shifts to a more in-depth understanding of the technology of construction. The student prepares construction documents for floor plans, elevations, building sections, wall sections, and details. The preparation of preliminary drawings and construction documents include sketching to scale and drawings produced by computer-aided design (CAD) AutoDesk software. The student demonstrates competency by studying, discussing and producing these drawings and presenting them to the class as a way of working on relevant verbal skills. (Prerequisites: ARET 103C and ARET 120C)

ARET 120C Materials and Methods of Construction

Lecture Hours: 4 Lab/Practicum/Clinical Hours: 0 Credit Hours: 4

A survey of the materials used in building construction, the methods used in assembling these materials into structures, and the forces acting on structures. Included are the characteristics and properties of each material and their relative cost. Materials and methods studied include site work, concrete, masonry, metals, wood, plastics, thermal and moisture protection, doors and windows, and finishes.

ARET 150C Statics and Strength of Materials

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

A study of forces and the effect of forces on structural members in a state of equilibrium. It is the study of internal stresses and deformations that result when structural members are subjected to external forces through loading. While lectures and some labs deal mainly with the theory of force analysis and force systems solutions, lab projects involve the

application of various stress and strain measuring instruments on many materials used in construction. (Prerequisites: MATH 124C and PHYS 133C)

ARET 160C Introduction to Geographic Information Systems

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 2 Credit Hours: 3

An introduction to geographic information systems (GIS), global positioning systems (GPS), and ESRI's ArcGIS. Topics will include basic GIS concepts; the structure and availability of GIS data; the N.H. GIS database; creation of maps; editing and creation of GIS data; the use of GPS to collect information for use in GIS; and GIS processing and analysis. The course will combine lectures, hands-on exercises, and an individual student project over the course of the semester.

ARET 192C Revit Architecture

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Revit Architecture, a parametric building modeler based on parametric technology, enables the user to make a change anywhere in the building project and have it automatically updated everywhere else in the project. The course focuses on building a foundation for the basic elements in the software. Students are expected to be able to read and interpret architectural/engineering graphics to register for this course.

ARET 194C Microstation

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

This is an introductory course in Computer-Aided Drafting (CAD) for beginning students using Microstation V8 software. Topics include drawing set-up, line drawing, text placement, basic editing and dimensions. The course structure focuses on the most common basic functions necessary to complete drawings including move, mirror, copy, offset, distance and more. Projects incorporate basic techniques of drawing and computer-aiding drafting. Note: students are expected to be able to read and interpret architectural/engineering graphics to register for this course.

ARET 195C BIM Technologies

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Building Information Modeling (BIM) is a workflow for designing, evaluating, constructing, fabricating, and operating buildings. As BIM technology is developing this workflow is beginning to touch all aspects of the building industry. Understanding the role of BIM is critical to working in the building industry. The BIM model gives a building project a rich asset the entire team can use to deliver a better product to the building owners. Learn how BIM and BIM-related tools are used (and will be used in the future) in all phases of the building process from initial conceptual design to facilities management.

Students will learn how to use BIM models in multiple phases through the construction process, including performing energy and lighting analysis, construction simulations and interference reporting, quantity take-offs for construction cost estimating, and connection to an external database for building maintenance. (Prerequisite: ARET 192C with a grade of C or higher or permission of the department chair)

ARET 202C Architectural Design Studio II

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 2 Credit Hours: 3

Emphasis is placed on an architectural design solution for a multi-story addition to existing buildings and preparation of construction documents for an institutional building. The student will study a multistory steel- or concrete-framed and masonry-enclosed structure. Floor plans, elevations, sections, and details using materials typically used in construction today are sketched to scale and produced by computer-aided design (CAD) AutoDesk software. Lectures relating to the basics of circulation, egress requirements, structural steel framing, masonry, codes, metal pan stairs, barrier-free design, handicap code requirements, fire protection, acoustics, glazing, curtain-wall systems, roofing and building energy conservation, and sustainable strategies supplement studio work. Students will study sustainable strategies and energy utilization through the use of energy-modeling software. (Prerequisites: ARET 103C and ARET 104C; corequisite: CVET 240C.) This course is not required of students in Architectural Engineering Technology - Civil Focus.

ARET 250C Environmental System

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

A survey of the environmental control methods and support systems used in contemporary buildings. Emphasis is placed on the fundamentals of each system and design of simple systems and how they relate to energy utilization and conservation in building design. Students will use energy-modeling software to study the design of a building. Economic comparisons and cost/benefit ratios are also studied. (Prerequisite: PHYS 135C.) This course is not required of students in Architectural Engineering Technology - Civil Focus.

ARET 270C Construction Management

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

A course dealing with the business phase of a construction project from working drawings and specifications to final completion of the structure. The architect, engineer, and contractor roles in coordinating project activities are discussed. Also covered are cost control (estimating) and contractual arrangements, including recent innovations of the industry. The impacts of green, sustainability, and energy conservation issues on construction management will be studied. Guest lectures and a field trip to an ongoing construction project will supplement classroom lectures. (Prerequisite: ARET 202C or CVET 201C, and ENGL 125C)

ARET 297C Architectural Design Studio III

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 2 Credit Hours: 3

The student chooses a project to design from a collection of instructor-approved projects requiring real site considerations. By discussing the relevant design criteria and selection of a hypothetical client outside class, the student develops and refines the program of space requirements and acquires an appreciation of the in-depth functionality of architecture, especially space adjacency requirements. The study includes an analysis of a site, structure, codes, circulation, material usage, and sustainability and energy considerations. Schematic and preliminary designs, with an emphasis on sketching for study purposes, presentations drawings and construction documents are produced by CAD AutoDesk software. Students build a study and final model, and are required to submit a progress report. An emphasis is placed on a thorough coordination of the work, application of current technology, and application of the knowledge gained in the ARET program. (Prerequisites: ARET 202C, CVET 220C, CVET 240C, ENGL 125C)

Architectural Engineering Technology: Civil Focus/Civil Engineering Technology

CVET 201C Civil CAD

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 2 Credit Hours: 3

This course is an introduction to the use of computer-aided drawing (CAD) software for civil engineering. Areas of application of the software within engineering include mapping, topography, site development, and subdivision. Within the field of highway design the student applies civil design software to detail roadway alignment and create final drawings of plan, profile, and cross section. Lab time is typically for the student to generate designs and drawings with the support of the instructor. (Prerequisite: ARET 104C or permission of the department chair)

CVET 202C Soil Mechanics and Foundation Design

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 2 Credit Hours: 3

This course deals with the fundamentals of soil mechanics. Topics covered include moisture-density relations, mechanical and chemical gradation properties, basic shear strength theory, permeability, and compression. Lecture topics will be supplemented by field observations and lab work. On completion of this course, students will understand the essential elements of soil mechanics theory such that it may parlay into practical applications. (Prerequisites: ARET 150C, CVET 220C; or permission of the department chair)

CVET 220C Surveying

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 3 Credit Hours: 3

Familiarizes students with the equipment, procedures, and methodology of modern surveying practice. Includes measurement of distance, elevation, angle, and direction in the field with manual and electronic equipment. The methods of topographic, construction, and route surveying are also studied. Lastly, the student is taught to use software programs to aid in data collection, manipulation, and mapmaking. (Prerequisite: MATH 124C)

CVET 235C Reinforced Concrete Design

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 3 Credit Hours: 3

Learn the fundamentals of design and analysis of steel reinforced concrete structures including beams, floor and roof slab systems, columns, foundation footings, and structural walls. Design sketches based on calculations and in accordance with the latest American Concrete Institute (ACI) building code requirements are prepared. Also a major lab project including designing, building, and testing a reinforced concrete beam is done by student teams. (Prerequisite: CVET 240C)

CVET 240C Timber and Steel Design

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

The study of structural steel and timber that involves the design and analysis of beams with regard to bending, shear, and deflection. Columns are studied with respect to axial and eccentric loading. Miscellaneous structural elements such as beam-bearing plates, column base plates, and welded and bolted connections are also designed. The student is taught to make calculations manually then with the aid of computer software. The lab time (2 hours per week) is dedicated to activities during which the student is fully involved in the design, analysis, construction, and testing of timber and steel beams, columns, connections, bracing systems, load packages, and simple frames. The observations and results are documented through calculations, drawings, photos, and computer-aided design. (Prerequisites: ARET 120C, ARET 150C)

CVET 245C Hydrology/Drainage Design

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

This entry-level course teaches students the basics of stormwater drainage. They will learn how to delineate a watershed, apply runoff calculations to the watershed, and determine peak design flows. These design flows will then be used to instruct students in the basics of hydraulics as it pertains to stormwater flow. They will learn how storm drainage systems are planned and what components make up a drainage system. They will leave the course understanding stormwater flow in culverts, how to determine if a culvert is flowing with inlet or outlet control, and how to use nomographs in the selection of a particular culvert. Students will apply this knowledge to basic open channel flow and learn about erosion and sediment control. (Prerequisite: CVET 220C with a grade of C or higher)

CVET 297C Highway Design

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

This course focuses on the highway design process, beginning with transportation requirements and soil mechanics and continuing with highway location, site planning, geometric design, and pavement design. The knowledge gained equips students for project work. The course culminates with students' preparation (using computer-aided design) and presentation of final engineering drawings of a section of roadway. This project is evaluated with respect to alignment, safety, aesthetic impact, construction cost and professional quality. Labs will involve the use of a soil-testing lab, and visits to nearby road construction sites will be scheduled. (Prerequisite: CVET 220C)

Biology

BIOL 100C Introduction to Biology with Lab

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

An introductory course in biology intended to satisfy the biology admission requirement for NHTI health-related degree and professional certificate programs. Topics include scientific method and measurement, cell structure and function, energy transformation, nutrient processing, gas exchange, circulatory systems, nervous systems, principles of

homeostasis, and heredity. Lab exercises parallel lecture topics and include microscopy, dissection, biochemistry, and physiological experimentation. (For institutional credit only; does not count toward graduation requirements but is calculated into GPA; not intended for transfer.)

BIOL 111C General Biology I

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

Designed to provide the student with the basic principles of biology, including scientific method, cell structure, cellular biochemistry and energy transformations, and genetics. Labs are used to develop skills in scientific thought and common procedures used in biological experimentation. With BIOL 112C, intended to provide a foundation for further study in life sciences. (Prerequisites: Algebra I with a grade of C or higher; high school-level Biology and Chemistry with labs with grades of C or higher)

BIOL 112C General Biology II

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

A continuation of BIOL 111C. Includes a survey of the taxonomic groupings of life forms and the principles of evolution and ecology. (Prerequisites: BIOL 111C with a grade of C or higher, or permission of the department chair)

BIOL 115C Introduction to Ecology

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

Designed to give non-science majors the opportunity to learn about the interactions between the physical and biological components of the environment. The lecture will provide a broad introduction to the organismal, population, community, and ecosystem levels of ecological interaction. Instructional methods include readings, lecture/discussion, in-class applications, field observations, and field research. The lab portion will provide students with practical experience in ecological methods and the design, conduct, and analysis of ecological studies. Lab exercises are designed to correspond with major lecture topics. Exercises include lab and field studies. Student should come prepared to be outside for most labs. (Prerequisites: high school Biology with lab or BIOL 100C with a grade of C or higher; high school Chemistry with lab or CHEM 100C with a grade of C or higher; high school Algebra I or MATH 092C with a grade of C or higher)

BIOL 116C Field Ornithology

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

This course introduces the student to the biology of birds and the methods of modern field studies, identification, life histories, ecology, and behavior of birds, with an emphasis on local species. The course involves a major field component (observing and identifying birds in their natural habitats) complemented by investigations into aspects of bird biology and ecology, such as habitat use, bird morphology; flight, song, nesting and reproductive behavior; and migration. No previous experience with birds is expected. Lecture and lab may include demonstrations, discussion, and field trips. (High school Biology strongly recommended, or permission of the department chair)

BIOL 117C Introduction to Plant Biology

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

An introduction to the structure and physiology of plants at the molecular, cellular, and organismal levels; survey of major plant groups and their evolutionary relationships; and the relationships of plants to humans and other organisms. (Prerequisite: high school Biology with lab or NHTI's BIOL 100C, both with a grade of C or higher)

BIOL 120C Human Biology

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

A brief summary of human anatomical structure and physiological systems designed to provide students with the knowledge and perspective necessary to work in their chosen fields. (High school Biology recommended)

BIOL 122C Basic Pathophysiology

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Designed to provide the student with an understanding of the various mechanisms by which human diseases develop. Includes a survey of common disorders involving each of the major body systems. (Prerequisite: BIOL 120C with a grade of C or higher; or BIOL 195C and 196C with grades of C or higher)

BIOL 123C The Biology of Human Reproduction

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Intended to give an appreciation for the importance of the following areas of reproduction: male and female anatomy and development, sexual differentiation, puberty, menstruation, parturition, lactation, assisted reproductive technologies, birth control methods, and menopause. (High school Biology recommended)

BIOL 125C Human Genetics and Society

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

An introduction to genetics for students not majoring in the sciences. The student will be introduced to the basic principles of Mendelian and molecular genetics and will apply these principles to human genetic traits. Causes and treatments of common inherited diseases will be discussed as well as genetic technologies and their applications (recombinant DNA technology, genetic engineering, *in vitro* fertilization). The associated ethical and social issues will also be examined. Lab component to complement lecture. (High school Biology recommended)

BIOL 129C Introduction to Sports Nutrition

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

An introduction to the basic nutritional needs of those involved in individual and team sports. General nutrition topics will be interspersed with specific requirements and recommended intakes for athletes at all levels and ages. A variety of sporting activities, including those involving both endurance and strength athletes, will be covered. (High school Biology recommended)

BIOL 159C Personal Nutrition

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

An introductory course including lab for the individual interested in nutrition as a tool for personal health promotion and disease prevention. Incorporates basic principles of nutrition with discussions of contemporary issues. Lab exercises allow for exploration of lecture topics and will include scientific method, food analysis, diet analysis, and nutritional lifestyle analysis. (High school Biology recommended)

BIOL 195C Anatomy and Physiology I

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

An introduction to the structure and function of the human body. Includes elementary cytophysiology, histology, and anatomy and physiology of the integumentary system, skeletal system, muscular system, nervous system, and special senses. Lab work parallels lecture topics and includes microscopy, study of human anatomical models, dissection of preserved animals, and physiological experimentation. (Prerequisite: High school Biology with lab and high school Chemistry with lab, each with a grade of C or higher, or permission of the department chair)

BIOL 196C Anatomy and Physiology II

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

A continuation of BIOL 195C. Includes anatomy and physiology of the endocrine system, circulatory system, immune system, respiratory system, digestive system, excretory system, and reproductive system. Other topics covered include nutrition and metabolism, acid/base balance, fluid and electrolyte balance, and genetics. Lab work parallels lecture

topics and includes microscopy, study of human anatomical models, dissection of preserved animals, and physiological experimentation. (Prerequisite: BIOL 195C with a grade of C or higher or permission of the department chair)

BIOL 202C Microbiology

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 3 Credit Hours: 4

Lectures focus on three major areas: basic concepts of microbiology, including morphology and physiology of prokaryotes, eukaryotes, and viruses; host resistance to disease and immunology; and epidemiology of selected diseases caused by bacteria, viruses, fungi, protozoa, and parasitic worms. Labs focus on three major areas: basic skills such as staining, microscopy, and isolation techniques; bacterial physiology as is pertinent to identification of bacterial species; and control of microorganisms via chemotherapeutic agents, physical means, and chemical disinfectants. (Prerequisite: BIOL 112C or BIOL 196C with a grade of C or higher)

BIOL 211C Genetics

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

A lab course intended to enhance a student's knowledge of basic genetics and to provide the foundation necessary for further studies in molecular biology, cell biology, evolution, systematics, and behavior. Topics covered will include Mendelian genetics, molecular genetics, immunogenetics, genetics of cancer, and population genetics. (Prerequisites: BIOL 112C or BIOL 196C with a grade of C or higher; MATH 124C, an equivalent, or higher-level math course [excluding MATH 129C] with a grade of C or higher; or permission of the department chair)

BIOL 212C Ecology

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

Investigations into the biological and physical factors affecting the distribution, abundance, and adaptations of organisms. Interrelationships at the population, community, and ecosystem levels will be studied. (Prerequisites: BIOL 112C or BIOL 196C with a grade of C or higher; MATH 124C, an equivalent, or higher-level math course [excluding MATH 129C] with a grade of C or higher; or permission of the department chair)

BIOL 215C Freshwater Ecology

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

Enhances students' understanding of ecology and introduces them to the biological, chemical, and physical properties of lakes, streams, and wetlands as they relate to the structure and function of freshwater ecosystems. Students will gain an understanding of freshwater environmental concerns and experience in water quality assessment. The course will also cover topics in sustainability, management, and rehabilitation of natural aquatic environments in relation to human impact. (Prerequisite: BIOL 111C, BIOL 112C, or BIOL 115C with a grade of C or higher)

BIOL 222C Pathophysiology

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Provides the Allied Health student with an understanding of disease processes by building on the student's knowledge of normal anatomy and physiology. Common disorders of major body systems are discussed relative to the mechanisms by which they develop and their effects on homeostasis. (Prerequisite: BIOL 196C with a grade of C or higher or permission of the department chair)

BIOL 229C Nutrition in Exercise and Sports

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Introduces the student to nutrition as it relates to the improvement or optimization of physical performance. Dietary interventions for strength and endurance exercise training and sporting event participation will be thoroughly investigated. Special emphasis will be placed on weight management and the reduction, maintenance, and gain of body mass. (Prerequisites: BIOL 196C with a grade of C or higher, or BIOL 159C or an equivalent with a grade of C or higher)

BIOL 239C Public Health Nutrition

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Provides the foundation and core competencies of public health nutrition. This will include the skills, knowledge, and tools used in assessment, community intervention, and evidence-based approaches to promote health and prevent diseases. This course will engage students in critical thinking and productive discussion around public health nutrition and health promotion. The course will address major public policy initiatives related to public health nutrition, health promotion, and disease prevention. This course requires students to be proficient in writing. Successful completion of ENGL 101C strongly recommended. (Prerequisites: BIOL 159C or BIOL 129C or equivalent with a grade of C or higher, or permission of the department chair)

BIOL 259C Normal and Therapeutic Nutrition

Lecture Hours: 4 Lab/Practicum/Clinical Hours: 0 Credit Hours: 4

An introductory course in normal and therapeutic nutrition designed for students in Allied Health programs. Focuses on the application of basic principles of nutrition to health promotion and disease prevention, as well as the role of nutritional intervention as a therapeutic tool in specific pathologies. Includes discussion of contemporary issues in nutrition. It's recommended students not take BIOL 159C prior to taking this course. (Prerequisites: BIOL 196C or equivalent with a grade of C or higher, or permission of the department chair)

BIOL 260C Cell Biology

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 3 Credit Hours: 4

For biology majors, focuses on eukaryotic cells. General topics include the structure and function of principal cellular components, energy metabolism, signal transduction, apoptosis, the cell cycle, gene expression, and an introduction to cancer biology. Lab experiments include modern cell research techniques such as ELISA, gel electrophoresis, and animal cell culture. (Prerequisites: BIOL 112C or BIOL 196C or equivalents with grades of C or higher, or permission of the department chair)

BIOL 279C Life Cycle Nutrition

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Focuses on nutritional needs of the growing, developing human from conception to old age, with particular emphasis on the nutritional needs of infants, children, adolescents, adults, women, and aging adults. (Prerequisite: BIOL 159C or BIOL 259C with a grade of C or higher or permission of the department chair)

BIOL 290C Senior Capstone Project and Seminar

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

Serves as the capstone course for the Biology Program. The student will demonstrate the application of the knowledge gained throughout the program. This will be achieved either by independent study on a topic chosen by the student with guidance from a faculty member or through participation in a field internship with an approved industry partner. Independent study will involve the investigation of all sides of a current biological issue. The student will turn in a written paper and make a presentation of his/her project to all interested students and faculty in a student seminar. (Prerequisites: all science and MATH courses with grades of C or higher and approval of the department chair; only offered in the final semester of the Biology program)

Building Inspector and Plans Examiner

BIPE 101C Introduction to International Code Council Codes

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

International Code Council (ICC) building codes largely guide architecture, engineering, and construction industries to build safer and healthy built environment. Building codes continuously evolve in response to tragic incidents, technological advancements, and changing environmental dynamics. The scope and complexity of the building codes

require practitioners, reviewers, and enforcers to remain well informed of the relevant building codes. Especially when federal, state, and local interpretations, adoptions, and enforcement vary. A brief history of the code development explores the formation of various building codes with regards to the occupants' safety, health, well-being, and environmental issues.

BIPE 105C Construction Document Reading

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Introduces the fundamentals of reading construction documents for residential and commercial projects and drawing conventions. The course focuses on residential construction documents including the survey, off-site and site improvements; the structure, plumbing, mechanical, electrical systems; foundations, and below-grade construction and introduces commercial construction documents reading and applicable codes.

BIPE 110C Plan Review

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Highlights aspects of building planning review, fire protection systems review, means of egress, fire-resistance-rated construction, and interior finishes review. Some of the topics include international building code plan review record, components of fire-rated construction, fire detection and fire suppression systems, and ADA-based design requirements. The critical aspects of plan review process forms the basis of this course. (Prerequisites: BIPE 101C, BIPE 105C)

BIPE 115C State Construction Law

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Surveys state construction laws from legal, practical, and professional dimensions. The topics include RSAs regarding structure of laws and rules, land use laws, fire code, building code, conflicting and complimenting RSA and building code, and other state laws/agencies including licensing of contractors/architects/engineers, food service, ADA, and case laws. This course will enhance the student's understanding of construction problems from a building inspector's perspective by familiarizing them with the critical aspects of construction law, its enforcement, and impacts on the construction industry and project costs.

BIPE 120C Legal Aspects of Enforcement

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Provides insight into the local government law, state and federal legislative laws, administration and enforcement, administrative and constitutional laws, property law concepts, liability for intentional wrongdoing, negligent wrongdoing, civil rights actions, and the role of the witness. Discussions particularly focus on the issues of misfeasance, malfeasance, nonfeasance, laches, preemption, sovereign immunity, injunctive relief, appeals process, and indemnification.

BIPE 125C Building Inspector Skills (Capstone)

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Highlights the essential roles, skills, and responsibilities of a building inspector including careful inspections and reviews to ensure construction complies with all applicable national and local codes, zoning regulations, and contract specifications. Major topics include safe buildings, approaches to inspection, getting along, customer service, doing the right thing, and communication.

Business Administration

BUS 101C Introduction to Business

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

An introduction to the general concepts of business, including organization, forms of ownership, finance, management, marketing, production, and the relationship between business and society. The current business climate and attitudes will also be examined through the use of business publications and articles.

BUS 152C Foundations of Leadership

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Students will examine the outlook, skills, and behavior essential to successful leadership. Topics include leadership theory, motivation, group dynamics, communication, management, status, power and politics, and organization culture and ethics. Students will develop an approach to the leadership style that works for them while at the same time exploring techniques to develop leadership skills in others. The focus of the course is to bridge the distance between leadership theory and management practice.

BUS 170C Principles of Marketing

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

An introductory course presenting such topics as the seven managerial functions of marketing, problem-solving, decision-making, marketing research, ethics in marketing, new product development, price determination, marketing channels, and advertising.

BUS 174C Principles of Sales

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

A study of the selling process as it relates to training professional sales people and the basic elements of the persuasion process. A systematic approach will be used to develop techniques to adjust to individual styles. Students will study the tasks of the sales manager and techniques that are used to hire, train, and compensate the sales force. (Prerequisite: BUS 170C)

BUS 221C Healthcare Management in the U.S.

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Examines healthcare trends within the U.S. The focus will be on the evolving nature of healthcare and current debates. Students will explore such topics as: history of healthcare, hospital reorganization, care delivery settings, administrative and caregiver role changes, reimbursement, managed care, and governmental interventions.

BUS 225C Business Law I

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

The study of the fundamental principles of law as they apply in the business world. The course examines legal rights and remedies and contracts. Students will gain a detailed understanding of the law of torts and contracts and will learn business law through related textbook readings and online research. This course emphasizes the relationship of business law to an individual's personal and occupational life. Applications of the laws as they affect the individual in a moral society are featured.

BUS 226C Business Law II

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Focuses on various forms of legal entities and Articles 2 and 9 of the UCC. The major laws governing securities, entities, antitrust, bankruptcy, and environmental issues are reviewed. Special emphasis is given to the legal liability of the professional. This course is designed for the future business manager, entrepreneur, or professional who wishes to have information regarding laws governing business. (Prerequisite: BUS 225C)

BUS 240C Small Business Management

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Serves as the capstone experience for the Business Administration program through an integrated examination of formation, finance, marketing, operations, and the supply chain as applied to the small business. Conventional text assignments and assessments are supplemented with practical application of concepts and theory as teams of students operate a business via a web-based simulation. (Prerequisite: ACCT 101C, BUS 101C, BUS 170C, and BUS 270C or BUS 273C or permission of the department chair)

BUS 245C Organizational Behavior

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Helps students to develop a more complete understanding of the human dimensions of management. Emphasis is placed on the allocation of theory to real-world problems as well as the development of interpersonal skills. Topics include such issues as motivation, leadership, group dynamics, and interpersonal communication. (Prerequisite: BUS 101C or BUS 270C)

BUS 255C Personal Financial Planning

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Provides an effective learning experience in personal finance. Emphasis is on helping students make sound financial decisions in the areas of budgeting, insurance, taxes, credit, investment, real estate, and retirement planning. (Prerequisite: ACCT 101C or BUS 101C)

BUS 270C Principles of Management

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Provides an understanding and appreciation of organizational structures and the role of the manager within these structures, with emphasis on the influence of the social sciences on current management theory.

BUS 273C Human Resource Management

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

A study of human resource management including the evolution of the personnel process, organizational models, leadership patterns, and issues touching on planning, assessment, staffing, training, development, and environmental issues. Emphasis is placed on the application of theory and practice so students will gain a useful understanding of human resource management whether they seek careers in that field or in other disciplines. (Prerequisite: BUS 101C, BUS 170C, or HSTM 101C)

Chemistry

CHEM 100C Introductory Chemistry

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

Intended to satisfy the chemistry admission requirement for NHTI health-related degree and certificate programs. Consideration will be given to fundamental atomic theory, chemical arithmetic, kinetic theory, solution chemistry, acids, bases and salts, and introductory organic chemistry. Lab included. Proficiency with the mathematical operations of high school Algebra I or MATH 092C strongly recommended. (For institutional credit only; does not count toward graduation requirements but is calculated into GPA; not intended for transfer.)

CHEM 103C General Chemistry I

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

Fundamental laws and concepts of chemistry, including elements, atomic structure, the periodic table, chemical bonding, compounds, chemical equations, and stoichiometry. Labs are used to reinforce concepts presented in lectures and to develop skills in scientific thought and common procedures used in chemical experimentation. With CHEM 104C, intended to provide a foundation for further study in life sciences and physical sciences. (Prerequisites: high

school Chemistry with lab with a grade of C or higher; pre/corequisite: MATH 124C or higher-level math or permission of the department chair)

CHEM 104C General Chemistry II

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

A continuation of CHEM 103C. Topics include gases and gas laws, solutions, acid-base chemistry, oxidation-reduction reactions, chemical equilibrium, and thermodynamics. Also includes an introduction to organic chemistry and biochemistry. Labs are used to reinforce concepts presented in lectures and to develop skills in scientific thought and common procedures used in chemical experimentation. (Prerequisite: CHEM 103C with a grade of C or higher, or permission of the department chair)

CHEM 105C Chemistry

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

Introductory and cursory course in which the fundamental principles of chemistry are developed. Included are topics in atomic structure, chemical bonding, electronic configuration, the Periodic Table, stoichiometry, solutions, gases, and acid-base chemistry. Appropriate lab experiments will complement the lectures. This course is not meant as a substitute for either CHEM 103C or CHEM 104C. High school chemistry with lab strongly recommended. (Pre/corequisite: MATH 124C or higher-level math or permission of the department chair)

CHEM 110C Introduction to Biochemistry

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

Designed to provide Allied Health students with the basic principles of the chemistry of living processes. Includes the study of macromolecules, metabolic pathways, energy transformations, and enzyme action. (Prerequisite: high school Chemistry with lab or permission of the department chair)

CHEM 115C Brewing: The Science Behind Beer

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

Explores the most basic and more complex chemical reactions that take place during the production of beer, as well as discusses the microbiology and how it impacts the brewing process from beginning to end. Reactions that affect each stage of the process are discussed as well as the mechanisms that are utilized to control the properties of the finished product. There is also a focus on the importance of hygiene throughout the brewing process. Students taking this class must be at least 21 years of age. A valid ID must be presented to the instructor at the first class for confirmation.

CHEM 120C Introduction to Forensic Science

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

An overview of the multidisciplinary field of the forensic sciences. This course combines classroom lecture and lab analysis of samples from hypothetical criminal investigations to demonstrate the role of science and the forensic scientist in the criminal justice system. (Prerequisite: high school Chemistry with lab with a grade of C or higher, or permission of the department chair)

CHEM 125C Introduction to General, Organic, and Biochemistry

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

Designed for students who need an introductory chemistry course that covers the fundamentals across inorganic, organic, and biological chemistry. This course focuses on the chemistry and chemical processes that operate in living systems. Topics will include physical and chemical properties of matter, chemical bonding, solutions, acids and bases, the properties and naming of organic compounds, metabolic pathways, and energy production. Appropriate lab experiments will complement the lectures. (Prerequisite: high school Chemistry with lab or permission of the department chair)

CHEM 205C Organic Chemistry

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 3

Credit Hours: 4

An introduction to the nomenclature, structure, and reactions of organic compounds. Lab. (Prerequisites: CHEM 104C or CHEM 105C with a grade of C or higher, or permission of the department chair)

Communications

COMM 120C/ENGL 120C Communication

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Focuses on the application of communication principles and theories, enabling students to develop public speaking, interpersonal, intrapersonal, and group communication skills. Through an in-depth look at self concept, and verbal and nonverbal language and listening skills, students gain an increased awareness of the way they perceive themselves and others as well as the cultural and ethical implications of behavior. Coursework includes speeches, exercises, and writing assignments. (Students who have received credit for ENGL 120 cannot also receive credit for COMM 120.)

COMM 120MC/ENGL 120MC Communication: Mindful

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Focuses on the application of communication principles and theories. Students develop public speaking, interpersonal, intrapersonal, and group communication skills. Through an in-depth look at self concept, and verbal and nonverbal language and listening skills, students gain an increased awareness of the way they perceive themselves and others as well as the cultural and ethical implications of behavior. Coursework includes speeches, exercises and writing assignments. Sections identified as MC (Communicating Mindfully) feature the study of mindfulness and incorporate mindfulness meditation as an instructional method while exploring aspects of contemplative neuroscience and emotional intelligence as they relate to effective communication. (Students who have received credit for ENGL 120MC cannot also receive credit for COMM 120MC.)

COMM 125C/ENGL 125C Communication and the Literature of Science and Technology

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Built around the theme of science and technology, this course focuses on improving communication skills. Areas of study include critical reading, critical thinking, public speaking, interpersonal communication, and writing. Topics vary and could include any of the following: physical and technical sciences, natural and health sciences, or social sciences. (Students who have received credit for ENGL 125 cannot also receive credit for COMM 125.)

COMM 135C Introduction to Media Studies

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Focuses on the nature, development, and effects of various media in relation to culture and society. Students gain an understanding of print and electronic media, public relations, advertising, media policy and law, global communications, and media ethics. Coursework includes presentations, exercises, and writing assignments. This course does not satisfy NHTI's Humanities or English Literature requirements. (Successful completion of ENGL 101C strongly recommended.) (Students who have received credit for ENGL 135 cannot also receive credit for COMM 135.)

COMM 201C Interpersonal Communication

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Focuses on the application of interpersonal communication principles and theories. Students will develop skills in perceiving self and others, nonverbal communication, emotions, relationships, and managing conflict. Students will also demonstrate an increased awareness of the cultural and ethical implications of interpersonal behavior. Coursework includes a variety of exercises and writing assignments, as well as a case study presentation. (Prerequisite: ENGL 120C)

COMM 202C Intercultural Communication

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Focuses on the application of intercultural communication principles and theories. Students will develop skills in understanding the importance and challenges of intercultural communication, the components of human communication and competence, family roles in other cultures, religion and values in other cultures, cultural history, values and identity in other cultures, verbal and nonverbal messages in other cultures, and managing intercultural differences. Coursework includes a variety of exercises and writing assignments, as well as research papers. (Prerequisite: ENGL 120C)

COMM 203C Advanced Public Speaking

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Focuses on the application of public speaking principles and theories. Students will develop skills in the essential elements of public speaking, managing apprehension, the 10-step process for preparing and presenting a speech, listening guidelines, and criticism of speeches. Students will also demonstrate an increased awareness of the cultural and ethical implications of public speaking. Coursework includes a variety of writing assignments, presentations, and speeches. (Prerequisite: ENGL 120C)

COMM 204C Communications Capstone

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 0 Credit Hours: 1

Consists of students developing a multi-media case study to integrate and apply learning from their communications courses in a comprehensive manner. Students will evaluate and apply their personal, professional, and ethical growth and critical thinking skills in the study of communication by analyzing a public relations crisis in an organization. They will formulate conclusions, recommendations, ethical implications, and applications for future scenarios for the crisis in the organization. (Prerequisites: completion of all courses in the Communications degree or enrollment in the capstone during the final semester)

COMM 227C Professional Communication

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Focuses on the specific tools for communicating in complex, professional environments. Students develop digital, social, and visual media skills; learn interpersonal, cultural, team, leadership, and ethical skills; learn a three-step process for composing business correspondence, letters, articles, e-mails, instant messages, blogs, tweets, and webpages; develop skills in researching, planning, and writing reports and proposals; write employment messages, letters, and resumes; develop and deliver oral presentations, a group presentation with a PowerPoint, and an impromptu speech; and develop questionnaires and conduct interviews. This course does not satisfy NHTI's Humanities or English Literature requirements. (Successful completion of ENGL 101 strongly recommended.) (Students who have received credit for ENGL227C cannot also receive credit for COMM227C.)

COMM 294MC/ENGL 294MC Communicating Mindfully Capstone

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 0 Credit Hours: 1

Reviews and builds upon key elements of mindful communication students have been studying throughout their degree program. Students practice applying mindful communication skills in the workplace and reflect on those experiences to improve interactions with colleagues, customers, clients, and others. In addition, students work in small groups in which each partner has a different major than the other (when possible). Through online discussion posts, students practice mindful communication techniques practice attending to others, confirming understanding, and providing feedback that is respectful, insightful, and useful. Students are encouraged and given the opportunity to engage in regular contemplative practices such as mindfulness meditation. (Students who have received credit for ENGL294C cannot also receive credit for COMM294C.) (Prerequisites: ENGL 101MC, ENGL 102MC, and ENGL 120MC, or permission of the Department Chair of English; corequisite for IT majors only: IST 294C.)

Computer Engineering Technology

Students must earn a grade of C- or higher in each CPET and ELET course listed as a prerequisite to a subsequent CPET course.

CPET 107C Introduction to Programming with C++

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 3 Credit Hours: 3

Introduces the student to program design using the language C++. No prior knowledge of programming is assumed. Focuses on effective structured design of code with variables, decisions, loops, functions, arrays, and introduction of pointers. Use of professional programming design approaches and coding style will be used in lab assignments. Completion of this course provides the programming design skills to continue on with the study of the language C++ or other computer languages.

CPET 125C Data Structures

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 3 Credit Hours: 3

Introduces students to abstract data types, object-oriented programming, and algorithm analysis. Students will use procedural and object-oriented techniques to program stacks, queues, linked lists, hash tables, and binary trees. Asymptotic (Big O) notation will be used to analyze data structures and sort algorithms. The effective use of C++ topics such as pointers, operator overloading, and templates will be covered. Students will write programs in C++ and Java. (Prerequisites: CPET 107C or permission of the department chair)

CPET 215C Integrated Circuits and Interfacing

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 3 Credit Hours: 4

For CPET and other NON-EET majors. Supplements ELET 115C with basic linear and interface electronics. Topics covered include simple power supplies, op-amps, stepper motors, A/D and D/A conversion, and interfacing a computer bus. Advanced digital topics such as synchronous logic, programmable logic devices and digital signal processing will also be covered. The labs demonstrate real world implementation of otherwise abstract academic concepts. Fluency with the use of test equipment and debugging skills will also be stressed in the lab environment. It is strongly recommend the student having previously taken or to be concurrently taking ELET 144C. (Pre/corequisite: CPET107C, ELET 101C, and ELET 115C, or permission of the department chair)

CPET 222C Data Communications and internetworking

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 3 Credit Hours: 4

Provides the student knowledge and skills in a wide range of topics covering data communications, packet transmission, and the internet. Data communications subtopics include transmission media, serial communications, error detection and correction schemes, data security, and signal processing required for long-distance communications. Packet transmission subtopics include local area networks, hardware addressing, LAN building blocks, and wide area networks. internetworking subtopics include TCP/IP communication stack, ISO 7-layer communication stack, network addressing, internet protocol, address resolution protocol, internet control message protocol, IP routing protocols, transport control protocol, user datagram protocol, and client-server API. (Prerequisites: CPET 107C and CPET 125C; corequisites: CPET 240C, CPET 252C recommended; or permission of the department chair)

CPET 240C Programming for Windows Operating Systems

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 3 Credit Hours: 4

The Microsoft Windows API and Microsoft.Net Framework will be covered from Windows Applications to full utilization of the internet. Microsoft Visual Studio.Net with its integrated development environment will be studied and utilized. Topics include Windows services, DLLs, accessing databases using ADO.NET, programming for the internet using ASP.NET, .NET assemblies, and advanced features of programming languages used to access the Widows API and .NET platform. Experience will be gained using extensive hands-on lab assignments. (Prerequisites: CPET 107C, CPET 125C or AGGP 121C, or permission of the department chair)

CPET 252C Networking and internet Technologies

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 3 Credit Hours: 4

Provides the student knowledge and skills in a diverse range of topics including structured query language, client-server programming, selected internet applications, and LAMP. SQL subtopics include relational database concepts, the SQL language and relational database design. Client server programming is studied in C++ using socket APIs and Java using socket classes. Selected internet applications include domain name system, hypertext transfer protocol, and file transfer protocol. LAMP topics include a Linux overview, Apache web server configuration, dynamic web pages using PHP, and MySQL relational database. Each student is also required to define, implement, demonstrate, and present a networking project. (Prerequisites: CPET 107C, CPET 125C or AGGP 121C, or permission of the department chair)

CPET 260C Computer Real Time Interfacing

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 3 Credit Hours: 4

Focuses on interfacing computers to the outside world. The course content focuses on practical real-time and multithreaded programming techniques used in interfacing with computer inputs and outputs. The course is divided into two major parts: A programmable logic controller industrial computer using the language relay ladder logic (Boolean algebra based) is used to teach the fundamentals of real time control; the second part covers multithreading programming techniques and issues including resource sharing, deadlock, critical sections, mutexes, and events. A final project is presented to the class. (Prerequisite: CPET 107C; corequisite: CPET 125C or permission of the department chair)

CPET 301C Computer Project Definition

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 0 Credit Hours: 1

A first phase to CPET 303C. During this course, a student selects a project that is either provided by an industrial sponsor or chosen by the student. The selections are made with the guidance and approval of the instructor. The student will meet with the sponsor to initiate the project and then will write a specification to define the project. (Prerequisite: CPET 107C, ELET 101C, ELET 115C, CPET 125C; corequisites: CPET 240C, CPET 260C, or permission of the department chair)

CPET 303C Computer Project

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 4 Credit Hours: 3

The student will complete the project defined in CPET 301C while maintaining logbook to provide the advisor with progress reports. A formal oral presentation describing the project and a demonstration is required. (Prerequisites: CPET 301C, CPET 240C, CPET 260C, ELET 144C; corequisites: CPET 222C and CPET 252C; or permission of the department chair)

Criminal Justice

CRMJ 101C Introduction to Criminal Justice

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Presents the history, development, and current status of the criminal justice system in the U.S. and the challenges it faces. When appropriate, the opportunity is taken to visit relevant agencies.

CRMJ 121C Criminal Procedure

Lecture Hours: 4 Lab/Practicum/Clinical Hours: 0 Credit Hours: 4

Analyzes the constitutional issues in the U.S. that have direct bearing on the role and policies of criminal justice agencies. Application of these issues as they relate to investigation, arrest, pretrial, and appeal will be emphasized. The course is a combination of the case law and lecture method.

CRMJ 123C Criminal Law

Lecture Hours: 4 Lab/Practicum/Clinical Hours: 0 Credit Hours: 4

Combines an examination of the historical origins and development of criminal law as a form of social control. It will include the general principles of constitutional and statutory factors as they pertain to criminal liability, defenses to criminal charges, and sentences. The final emphasis is placed on the substantive aspect of criminal law and how it differs from civil law.

CRMJ 150C Criminology

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

A detailed analysis of the development of criminological theory, embracing the contributing disciplines of biology, psychology, sociology, political science, and integrated theory combining those disciplines. Attention is also paid to the offender/victim relationship.

CRMJ 205C Police Administration and Operations

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Covers the principles of police organization, administration, community policing, and the selection, training, promotion, and socialization of officers. It deals with the conflicting roles that the police and individual officers face in today's society as part of the justice system. It also examines issues involving the influence of research, police deviance, minorities, the use of force, and the general hazards of police work.

CRMJ 210C Juvenile Justice Administration

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Theories, causation, and prevention programs are studied. Rehabilitative theories and treatment programs of public institutions and public and private agencies are included. Case studies are made available to the student for analysis. Adolescent behavior, peer pressure, and the role of the family will be examined.

CRMJ 215C Corrections Operations

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

A study of correctional processes and services, standards, personnel, and principles of management. Includes the allocation of resources, training and staffing, the role of sentencing and work release programs, special programs, and the use of outside contracts.

CRMJ 225C Drug Abuse and the Law

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

In the first part, the historical use of the major drug groups (including alcohol) will be reviewed. In the second part, the reaction of the criminal justice system to illegal involvement with drugs and alcohol and methods of treating substance abusers will be reviewed.

CRMJ 230C Justice and the Community

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Deals with the interaction of the various components of the justice system with the community. It involves an analysis of the way the work of police departments, courts, correctional institutions, and community corrections agencies appear to the public. The image of the justice system in the media is examined; specific attention is paid to the issues of the young, minorities, and community organizations.

CRMJ 270C Internship

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 9 Credit Hours: 3

Offers the student the opportunity to put learned theory to practical application. The student is responsible for seeking out the agency placement with the assistance of the course instructor. The internship requires the completion of a

mandatory minimum number of hours. A log is kept and the final grade is based on a combination of the log, supervising agency assessment, and final analytical report.

CRMJ 275C Senior Project

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Through ongoing and individualized contact with the supervising instructor, the student develops a topic pre-approved through a prospectus. The student may develop any topic raised in any major class and is not limited by category. Empirical studies, surveys, and literature reviews are among the acceptable categories of research. The final grade is determined by a review of the final product and the extent to which the student has followed the course guidelines.

HMSC 101C Introduction to Homeland Security

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Introduces students to the study of the agencies necessary for the protection of the U.S. and the relationships among them. It will examine the individual and cooperative roles of federal, state, and local law enforcement agencies, as well as the roles of private security agencies and first responders in implementing the Homeland Security Act. (Open to current TSA employees only)

HMSC 105C Intelligence Analysis and Security Management

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Provides an overview of national intelligence community operations and the collection and analysis of information. Students will see how the resulting intelligence products help provide a common operating picture for security management at all levels of government. Students will develop an understanding of the methods for collection and analysis of data to develop intelligence products to support both tactical operations and strategic planning for Homeland Security leaders. (Open to current TSA employees only)

HMSC 110C Transportation and Border Security

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Provides an overview of modern border and transportation security challenges, as well as different methods employed to address these challenges. This course covers a time period from post-Sept. 11, 2001, to the present. The course explores topics associated with border security and security for transportation infrastructure to include seaports, ships, aircraft, airports, trains, train stations, trucks, highways, bridges, rail lines, pipelines, and buses. The course will include an exploration of technological solutions employed to enhance security of borders and transportation systems. Students will be required to discuss the legal, economic, political, and cultural concerns and impacts associated with transportation and border security. The course provides students with a knowledge level understanding of the variety of challenges inherent in transportation and border security. (Open to current TSA employees only)

Diagnostic Medical Sonography

DGMS 201C Principles of Sonography

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

An introduction to principles of ultrasound with emphasis on physical principles, instrumentation, and terminology. Lab sessions will offer hands-on learning techniques.

DGMS 221C Sonographic Physics

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Study of the physical principles involved in ultrasound and state-of-the-art equipment technology. (Prerequisite: DGMS 201C)

DGMS 233C Seminars in Sonography

Lecture Hours: 4 Lab/Practicum/Clinical Hours: 0 Credit Hours: 4

Sessions will be used for case presentations by students and preparation for registry exams. (Prerequisites: DGMS 297C and DGMS 241C)

DGMS 241C Principles of Vascular Ultrasound

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

Study of physical and doppler principles utilized in the ultrasound study of vascular structures. Lab sessions will introduce students to scanning techniques used in vascular studies. (Prerequisites: DGMS 201C, DGMS 221C.)

DGMS 265C Sonographic Anatomy and Pathology I

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Study of gross, sagittal, and cross sectional anatomy of the abdomen and the pathological changes and disease processes that are found in ultrasound examination of the abdominal region.

DGMS 266C Sonographic Anatomy and Pathology II

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

A continuation of DGMS 265C with an introduction of small parts anatomy and an in-depth study of pathologic changes and disease processes found in relation to these structures. (Prerequisites: DGMS 201C and DGMS 265C)

DGMS 275C Sonographic Principles of OB/GYN I

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

In-depth study of the anatomy of female reproductive organs and associated pathological changes with introduction to first trimester fetal development.

DGMS 277C Sonographic Principles of OB/GYN II

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

A continuation of DGMS 276C, with emphasis on the continuing process of fetal development and associated pathologic conditions. (Prerequisites: DGMS 201C and DGMS 275C)

DGMS 291C DMS Clinical Procedures I

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 12 Credit Hours: 4

Two days per week of observation and direct hands-on experience in the campus lab designed to familiarize students with working procedures in an ultrasound lab. Basic examination techniques will be performed. Students will work with each other and faculty on ultrasound equipment, simulators, and computer applications.

DGMS 296C DMS Clinic II

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 24 Credit Hours: 6

Three days per week of clinical experience at selected clinical sites. Students will gain continued scanning experience. All students enrolled in DGMS 296C will be charged a \$500 per semester clinical surcharge. (Prerequisites: DGMS 201C, DGMS 265C, DGMS 275C, and DGMS 291C)

DGMS 297C DMS Clinic III

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 21 Credit Hours: 5

Four 8-hour days per week at selected clinical sites for a 10-week period with emphasis on expanded roles in the ultrasound studies. Students will develop intermediate level skills and recognition of pathology will be stressed. All

students enrolled in DGMS 297C will be charged a \$500 per semester clinical surcharge. (Prerequisites: DGMS 221C, DGMS 266C, DGMS 277C, and DGMS 296C)

DGMS 298C DMS Clinic IV

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 32 Credit Hours: 8

Four days per week of final experience to strengthen scanning and interpretation skills in preparation for challenging registry exams and entry into the sonography field. All students enrolled in DGMS 298C will be charged a \$500 per semester clinical surcharge. (Prerequisites: DGMS 241C and DGMS 297C)

Digital Communications

DCOM 105C Digital Communications

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Provides an introduction to digital communications covering key digital platforms such as websites, search engines, social media, email, and mobile applications. Using research spanning the digital communications industry, students create a marketing plan focused on the digital landscape. Students will learn to understand how digital marketing influences consumer behavior and the importance for businesses of optimizing their approaches to utilizing the internet.

DCOM 130C Ecommerce, Websites, and Blogging

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Students create a functional website with a blog and e-commerce modules. The course covers basic website design, e-commerce management, and blogging techniques. Students will examine the multidimensional functions of websites and the importance of optimizing websites for ROI.

DCOM 150C Social Media Strategy

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Students create and implement a social media marketing plan. Topics addressed include determining and matching social media tactics with the appropriate marketing target, and developing a strategic approach to engage each market segment using several social media channels.

DCOM 210C Search Engine Optimization

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Introduces a strategic approach to search engine marketing, keyword research, algorithms, competitive analysis, link building, local and geo search, and SEO tools. Through online platforms, applications, and tracking methods, students develop the vocabulary of industry professionals. Students will learn to understand how search engines influence consumer behavior and the importance for businesses of optimizing their strategic approach. (Prerequisite: DCOM 105 strongly recommended)

DCOM 230C Email and Mobile Promotion and Marketing

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Provides an introduction to email and mobile marketing. Topics include email communication, creating an email, automation, spam, metrics, mobile sites, loyalty programs, mobile search, and analyzing the user journey. Students learn how email and mobile marketing influences consumer behavior and the importance of optimizing the business approach. (Prerequisite: DCOM 105 strongly recommended)

DCOM 250C Digital Analytics

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Provides an introduction to theory and strategy in data and analytics. Students examine the foundations to optimize their online approach. Students will obtain certifications in Google Analytics, Google Adwords, and Hubspot; these professional certifications can be utilized throughout their profession to solve real-world challenges. (Prerequisite: MATH 251C and DCOM 210 strongly recommended)

Early Childhood Education

ECE 101C Growth and Development of the Young Child

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Major theories and research findings in the physical, cognitive, language, and social/emotional domains of development of young children from conception through age 8. The work of Piaget, Erikson, Montessori, Vygotsky, and Dewey are emphasized. Students use tools to observe and record the development of young children in early-care settings as they explore domains and theories. Emphasis is on understanding children's development in the moment and the power of observations. An NHTI ECE lab fee is assessed for all students taking ECE 101C. Students will be expected to complete 2 hours per week of observation and practice in a childcare setting.

ECE 130C Afterschool Basics

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Provides individuals interested in planning and implementing developmentally appropriate curriculum with a focus on before and after school care that covers kindergarten through grade 5. Topics include growth and development, learning environments and curriculum development, observation and assessment of youth, interactions and engagement; family, school and community relationships; safety and wellness, and professional development and leadership. Students learn these topics to promote respect for cultural diversity and create inclusive and respectful environments. This curriculum aligns with the National Afterschool Association and the N.H. After School Credential. Students are expected to complete 2 hours/week of observation and practice hours in an afterschool setting.

ECE 143C Teaching and Learning - STEAM

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

With emergent curriculum as the overarching approach to curriculum development, this course focuses on designing, implementing, and evaluating appropriate activities and environments for children in preschool and kindergarten with a focus on blocks, math, science, woodworking, and technology with literacy and art concepts integrated into each area. Emphasis is on the concrete, practical application of different philosophies, theories, and current research manifested in early childhood education curriculum models. Students reflect together as they explore the cycle of inquiry and project work for developing, implementing, and assessing curriculum. Emphasis is on planning stimulating, age-appropriate classroom and outdoor learning environments that encourage child-initiated discovery and act as a tool in behavior management. These environments are child- and family-friendly, barrier free, and inclusionary, and meet state regulatory requirements. Students learn about and apply successful attributes of documentation panels that make children's learning visible. An NHTI ECE lab fee is assessed for all students taking ECE 143C. Students are expected to complete 2 hours per week of observation and practice in a preschool or kindergarten setting.

ECE 155C Using Children's Literature to Support Young Children's Language and Literacy Development

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

High-quality children's books are used as a vehicle for supporting and applying current research on the acquisition of language and reading. This course provides an overview of exemplary authors and illustrators of children's literature from birth to age 8. Students become familiar with Caldecott Award-winning books and the artistic techniques used to create these books. Poetry, multicultural books, and bibliotherapy as applied to early childhood education are studied. Students learn how to use children's literature to highlight the literacy elements of characterization, plot, setting, and theme. They learn how to teach domains of language (phonology, semantics, syntax, morphology, and pragmatics) through shared storybook reading. Additionally, students explore the teacher's role in promoting family literacy. An NHTI ECE Lab fee is assessed for all students taking ECE 155C. Students are expected to complete 2 hours per week of observation and practice in a childcare setting.

ECE 167C Positive Behavior Guidance and Supporting Young Children with Challenging Behaviors

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

By exploring theories of behavior management and functions, the role of positive behavioral supports in preparing young children to become competent and cooperative individuals with a strong social and emotional foundation is emphasized. Developmentally appropriate methods of guiding individual and group needs are shared as approaches to preventing disruptive behaviors in the classroom. Techniques for dealing with more challenging and explosive behaviors using functional assessment, identifying replacement skills, and creating and implementing behavior intervention plans are used. Partnering with families in developing these plans is emphasized. A study of the "Social Emotional Supports for Early Learning: Pyramid Model" give students tools for universal, primary, secondary, and tertiary prevention of challenging behaviors. They understand when and how to reach out for support in the community in dealing with issues beyond their expertise. An NHTI ECE lab fee is assessed for all students taking ECE 167C. Students are expected to carry out 2 hours per week of observation and practice in a childcare setting. (Prerequisite: ECE 101C or permission of the department chair)

ECE 188C Health, Safety, and Nutrition in Early Childhood Education

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Offers an introduction to major issues affecting the health and safety of young children in early childhood settings. Nutrition and policy considerations about medication administration, infectious disease control, sick child care, universal precautions and liability, and health record keeping are discussed. Health regulations, best practices, and education for the prevention of child sexual abuse are highlighted. Students learn to integrate curriculum for young children related to health, safety, and nutrition into the overall program. Students complete the Health and Safety training certifications required by N.H. child care licensing. An NHTI ECE lab fee is assessed for all students taking ECE 188C. Students are expected to complete 2 hours per week of observation and practice in a childcare setting.

ECE 195C Child and Family Study Practicum I

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 8

Credit Hours: 4

Students work in an approved human service setting under the supervision of an approved professional. Periodic conferences between the supervisor and practicum coordinator are planned to evaluate the student's progress. At the close of the semester, students submit documentation of the practicum activities/experience and demonstrate their ability to relate theory to practice in the chosen field of experience. Students completes 125 hours of field experience. (Prerequisites: HSV 111C, HSV 242C, MHTH 187C, PSYC 105C, and PYSC 283C, each with a grade of C or higher, and permission of the department chair)

ECE 215C Infant/Toddler Development and Programming

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

A study of important influences on infant and toddler development supported by research on brain development during the first three years of life. Emphasis is on the role and responsibilities of families, child care teachers, and specialists in creating high-quality supportive environments. Sensitivity to attachment and the importance of observation and communication skills to nurture positive family, caregiver, and child relationships through the roles of primary caregiving, transitions, and continuity of care are highlighted as students learn to design responsive programs for infants and toddlers and their families. An NHTI ECE lab fee is assessed for all students taking ECE 215C. Students are expected to complete 2 hours per week of observation and practice in an infant or toddler setting. (Prerequisite: ECE 101 or permission of department chair)

ECE 225C Autism Spectrum Disorder

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Examines the neurological underpinnings and behavioral characteristics of children from birth to age 8 with autism spectrum disorders. It focuses on an overview of the strengths and challenges of child-centered, developmental, research-based interventions used in natural environments. The centrality of the family is emphasized. Students shadow an interventionist working with a young child with autism for a minimum of 10 hours. (Prerequisite: ECE 101C or permission of the department chair)

ECE 242C Child, Family, and Community

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Provides an overview of families and family systems (including Bronfenbrenner's Bioecological Theory) with emphasis on developing effective models of teacher/program/family partnerships. Students will identify their own biases as a precursor to exploring issues of power and privilege in society. Cultural dilemmas and their impact on early care and education will be identified as students begin to evaluate their own cultural competence. Students will learn how to identify and strengthen protective factors that empower families and reduce the risk of child abuse. Students will research various crises encountered by families and identify an action plan to positively address the crisis. Community resources will be identified and involved. Service learning is a component of this course. (Prerequisite: ECE 101C)

ECE 262C Leadership and Administration of Child Care Programs

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

A survey of organization and management of early childhood programs and/or child care centers for the practicing professional. Emphasis is on learning how to plan, organize, manage, and evaluate programs and facilities for children. Specific skills addressed include licensing procedures, hiring, motivating, and evaluating staff and parent involvement. Financial record-keeping to inform program management decisions are based on an understanding of Excel computer program use. Leadership and visioning skills are taught, and evidence of implementation is required. Students are required to spend 15 hours outside class on a final project to be implemented in their professional work. This course meets the requirements for director certification from the state of New Hampshire and accreditation by the National Association for the Education of Young Children.

ECE 270C Teaching Young Children with Exceptionalities

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Broadens students' awareness of the theoretical and legal foundations for programs serving young children (infancy through age 8) with a range of special educational needs. Students examine the causes, symptoms, social consequences, and behavior characteristics of children with exceptionalities. Students learn how to develop curriculum modification/accommodation strategies in all domains of development in an inclusive classroom setting or other natural environment including the use of appropriate assistive technologies and how to create a supportive environment for children learning to use these technologies. Emphasis is on collaboratively working with a child's classroom teacher, interventionist, and the child's family to understand the benefit of working together on behalf of the child. Students develop an understanding of child and family needs and develop a resource file of state, local, and national supports. (Prerequisite: ECE 101C)

ECE 275C Practicum 1 - Observation, Interpretation, Assessment, and Portfolio Documentation

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 7

Credit Hours: 4

Students work in NHTI-approved early childhood education settings for children in infant/toddler care, preschool, or kindergarten under the supervision of early childhood mentor teachers. Students conduct an in-depth child study that includes documenting, interpreting, and assessing child observations. Students create, manage, and use portfolio documentation to generate invitations that support a child's individual goals (set by the student, mentor teacher, and family of the child). Students summarize, in narrative form, a child's growth in developmental domains. All of this is used to plan and carry out two parent conferences. NHTI ECE faculty schedule site visits to review and evaluate student progress. If on-site visits are not applicable, videos of practicum students in action are required. The student will complete a total of 105 hours of field experience. (Prerequisites: all 100-level ECE courses; a 2.5 minimum GPA in major field courses; permission of the ECE practicum coordinator; and submission of all required documents. ECE 155C may be taken concurrently with ECE 275C.)

ECE 276C Practicum 2 - Exploring Teaching: Implementing Responsive Emergent Curriculum

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 7

Credit Hours: 4

Students work in NHTI-approved early childhood education settings for children in infant/toddler care, preschool, or kindergarten under the supervision of early childhood mentors. NHTI faculty support students as they explore the characteristics of a responsive child-centered emergent curriculum projects. Students document and reflect on their

experiences with children, families, and professional partners as they develop their skills in connecting theory to practice. Students have opportunities to help children develop an age-appropriate social competency through a class meeting and including the teaching team in follow-up, supportive guidance. Students assume lead teaching responsibilities and require flexibility in scheduling to allow for two full days at the site. NHTI ECE faculty schedule site visits to review and evaluate student progress. If on-site visits are not applicable, videos of practicum students are required. Service learning is a component of this course. The student will complete a total of 105 hours of field experience. Students must earn a C or higher in this practicum to graduate from the degree program. (Prerequisites: all 100 level ECE courses, a C or higher in ECE 275C; a 2.5 GPA in major field courses; permission of the ECE practicum coordinator; and submission of all required documents. ECE 242C, ECE 270C, and ECE 290C may be taken concurrently with ECE 276C.)

ECE 282C Preschool Special Education Practicum

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 7 Credit Hours: 4

Students work in NHTI-approved community-based settings with preschool children with special needs under the supervision of mentors. Students conduct in-depth observations of preschoolers with special needs using a variety of tools and observe, document, and create portfolios of a child's development as it compares to IEP goals. They participate in IEP meetings and suggest and implement appropriate activity-based interventions that are part of a child's IEP. NHTI program faculty schedule site visits to review and evaluate student progress. The student will complete a total of 105 hours of field experience. Students must earn a C or higher in this practicum to graduate from the degree program. (Prerequisites: all first-year courses, 2.5 GPA in major field courses, permission of the practicum coordinator, and submission of all required documents)

ECE 283C Early Intervention Practicum

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 7 Credit Hours: 4

Provides students with a supervised opportunity to develop skills and demonstrate competencies necessary in early intervention/home visiting in natural settings (child care, homes, public schools). Supervisors provide guidance and support needed to enhance students' development as early intervention paraeducators or home visiting specialists. Through participation in an IFSP or IEP team, students learn how to partner with families in the education of their children. Identifying biases to support families of varying race, culture, and socio-economic status is examined. Students demonstrate their ability to create a culturally competent resource binder that includes games, activities, and outings to be shared with a family to support the child's development. Students complete a total of 105 hours of field experience. Students must earn a C or higher in this practicum to graduate from the degree program. (Prerequisites: all other courses in either the Young Children with Autism and Exceptionalities Certificate or first year courses in the Early Care and Education for Young Children with Disabilities Degree with a GPA of 2.5 or higher in major field courses)

ECE 290C Early Childhood Leadership Seminar

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 0 Credit Hours: 1

Explores the role of the early childhood professional in the workplace. Topics discussed include leadership, working in a team, and professional ethics. Students develop a resume and create a professional portfolio for interview purposes. Emphasis is placed on the role of ongoing professional development activities and involvement in the early childhood field through participation in boards and meetings around topics specific to the field. Students should plan on attending professional development opportunities as defined by the instructor. (Prerequisites for ECE students: all 100-level ECE courses, ECE 275C; may be taken concurrently with ECE 242C, ECE 276C, and ECE 270C; for EYCD students: all 100-level courses, ECE 282C; may be taken concurrently with ECE 215C, ECE 242C, and ECE 283C)

ECE 298C Child and Family Study Practicum II

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 8 Credit Hours: 4

The student continues field experience work in an approved human service setting under the supervision of an approved professional. Skills, knowledge, and personal characteristics are built on and integrated into the learning and supervision of this course, as well as second year coursework including criminology and elective options that fit the

students' field work. Students submit documentation of the practicum activities/experience and demonstrate the ability to relate theory to practice in the chosen field of experience. The student completes a total of 125 hours of field experience. (Prerequisites: HSV 195C, HSV 111C, HSV 242C, MHTH 187C, PSYC 105C, and PYSC 283C, each with a C or higher, and permission of the department chair)

Economics

ECON 101C Macroeconomics

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Concerned with the behavior of the economy as a whole, particularly fluctuations in economic activities. Basic elements of economic reasoning are applied to the public policy issues of unemployment, inflation, and economic growth. A brief survey of the history of economic ideas is followed by a study of the consequences for national policy of the changing institutional structure of the U.S. economy and of the conflicts inherent in, and generated by, competition and private enterprise. Analytic tools are used to evaluate monetary and fiscal policies and to understand current macroeconomic controversies.

ECON 102C Microeconomics

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

An investigation into the functioning and politics of the U.S. economy from the vantage of the marketplace, emphasizing microeconomics, wage bargaining, taxation, and the distribution of wealth and income. Topics include the theories of demand and production and the determination of prices and quantities for commodities and factors of production in competitive and noncompetitive markets.

Education

EDU 101C Introduction to Exceptionalities

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Introduces the exceptionalities and related topics in the field of special education including definitions, prevalence, assessment, and intervention. It includes discussion of strategies for facilitating students' independence, learning, social connections, and self-advocacy skills. Curriculum emphasizes the philosophical and practical applications of valuing students' abilities and diversity and collaborating with educators and families. It will explore curriculum modifications and accommodations, problem-solving strategies, and transition issues. Ten hours of field work are required in this course. A \$25 fee will be assessed to all students to cover the cost of clinical practice.

EDU 104C Foundations of Education

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Investigates the philosophical, historical, and social/cultural character of education in the U.S. It is intended to be an examination of how schools function organizationally. Discussions will include the role of education, system philosophy, and trends that have shaped contemporary education; field observations are included. This course is a concentration requirement for both Special Education and Education Associate Degree programs. It is intended to be the first in a series of learning experiences for those interested in careers as teachers. Ten hours of classroom observation required. A \$25 fee will be assessed to all students to cover the cost of clinical practice.

EDU 200C Supporting Students with Challenging Behaviors

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

This course will focus on the knowledge and skills necessary for supporting students with challenging behaviors in various learning environments, using the framework of positive behavioral supports. Students will gain knowledge of the basic assumptions about the context, function, and role of behavior. Students will learn to use a variety of positive behavior intervention techniques to control targeted behavior, support learning, and maintain the attention of students. Ten hours of field observation required. A \$25 fee will be assessed to all students to cover the cost of clinical practice.

EDU 201C Legal and Ethical Issues in Education

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Predicated on legislative requirements such as the Individuals with Disabilities Education Act, this course considers theories and issues in the context of inclusive instructional settings. Students will develop an understanding of the various legal and ethical requirements as well as effective instructional strategies for curriculum adaptation and delivery within the context of federal and N.H. state special education and education laws and procedures. (Prerequisite: EDU 104C/TECP51C or permission of the department chair)

EDU 203C Teaching Strategies for Diverse Learners

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Focuses on practical instructional strategies for designing developmentally appropriate and challenging learning experiences based on the unique needs of individual learners. Students use differentiated instruction and universal design for learning as frameworks for designing lessons that meet the needs of diverse learners. Methods for adapting instruction and supporting students through modifications, accommodations, and assistive technology are explored. Students will collect a repertoire of evidence-based strategies for identifying and addressing the reading, writing, math, and study skills of students with disabilities. Through field experience, students have the opportunity to observe in the classroom and gain practical experience planning, delivering, adapting, and reflecting on a series of individualized lessons. Ten hours of field work are required. Ten hours of field observation required. A \$25 fee will be assessed to all students to cover the cost of clinical practice.

EDU 204C Instructional Technology

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Presents the theory and strategies for effective integration of technology resources and technology-based methods of instruction and assistive technology designed for students with disabilities. A background of mediated instruction will be provided along with a review of the qualities and benefits of technology options, including assistive technology, available to instructional settings. Opportunities to apply instructional delivery using common forms of media, multimedia, computers, and specialized programs for students with disabilities will be integral to this course, in addition to contemplation of future issues of integration of technology and matters of time and place of the learning experience. (Prerequisite: EDU 104C or permission of the department chair)

EDU 208C Content Literacy

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Focuses on methods for integrating explicit instruction of effective reading comprehension strategies into content area teaching. Before, during, and after reading strategies that will help students to comprehend challenging content area reading material will be introduced and practiced. Mentor texts will be used to demonstrate text structure and make the connection between reading and writing in the content areas. Students will learn strategies for motivating and engaging students with reading, modeling effective reading and writing strategies, guiding comprehension, facilitating metacognitive discussions, and teaching vocabulary and study skills. Methods for assessing and developing skills in reading, writing, listening, and speaking will be explored. Methods for differentiating and accommodating for struggling readers and writers including the use of assistive technology will also be explored. (Prerequisites: EDU 104C/TECP 51C)

EDU 209C Curriculum and Assessment

Lecture Hours: 4 Lab/Practicum/Clinical Hours: 0 Credit Hours: 4

Focuses on designing appropriately challenging learning experiences based on curriculum standards and individual needs. Students will learn strategies for direct and indirect instruction, supporting self-directed and collaborative learning, and promoting critical thinking and problem solving through questioning. Classroom management strategies that promote student engagement and a positive learning climate will be explored. Students will learn how to select, design, conduct, interpret, and use the results of formative and summative assessments. Use of the common core state standards in the planning, instruction, and evaluation process will be examined. 10 hours of classroom observation are

required. (Prerequisites: EDU 104C/TECP 51C or EDU 101C/TECP 50C or permission of the department chair) A \$25 fee will be assessed to all students to cover the cost of clinical practice.

EDU 210C Cross-Cultural Education Seminar

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 0 Credit Hours: 2

Offers candidates a professional forum for researching, reviewing, and discussing socio-cultural contexts and topics in language teaching and education. In the course candidates will develop a broad-based understanding of cross-cultural education and discover appropriate practices and techniques for the multi-cultural classroom. The course is a requirement for all education and TECP candidates.

EDU 211C Reading and Language Development

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Focuses on assessing and addressing student literacy skills. Students will learn about the language development process and demonstrate their ability to use a variety of assessments to identify the language skills and needs of individual learners. Using data driven, collaborative decision making, students will plan appropriate interventions. Research-based methods for teaching phonics, vocabulary, spelling, fluency, reading comprehension, and writing will be explored. Students will learn how to guide readers and writers in developing effective strategies for reading, writing, speaking, and listening. Authentic, evidence-based, differentiated instruction linked to the common core standards will be emphasized. (Prerequisites: EDU 104C/TECP 51C)

EDU 220C Field Experience in Education

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 6 Credit Hours: 3

Practical experience in a learning environment. The student spends a minimum of 45 hours per semester in a supervised assigned learning environment and participates in a weekly seminar. In the instructional environment, students will work with individuals and groups and develop and deliver an instructional unit. This is a concentration requirement for the Associate in Science in Education program. (Prerequisites: interview and permission of the department chair)

EDU 222C Language, Reading, and Literacy in ESOL

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Designed to assist student educators in constructing a favorable learning environment for their English language learners with regard to reading and literacy in the content area. Appropriate literacy strategies, instruction and assessments will be evaluated, and various aspects of first and second language acquisition will be examined. All aspects of second language development will be considered such as phonemic awareness, vocabulary, fluency, comprehension, and writing. Approaches for assisting young and older learners with reading comprehension will be addressed, and students will learn to adjust language instruction to meet the developmental literacy needs of the language learners from various socio-cultural, educational, and linguistic backgrounds. Students will have weekly opportunities to work as one-on-one content tutors with English language learning needs to develop an understanding of language-learning needs and to increase educator effectiveness in improving student skills. Assessing and tracking English language learner progress will be explored. There will be a 20-hour service learning component wherein students will support ESOL learners and their community. This course is required for those in the TECP: ESOL Certification programs. Others must have permission from the TECP director or the director of cross-cultural education. A \$25 fee will be assessed to all students to cover the cost of clinical practice.

EDU 230C Essentials of Career and Technical Curriculum and Instruction

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Explores the history, philosophy, principles, organization, and operation of career and technical education in the U.S. Students will develop a functional understanding of the role and responsibilities of a professional career and technical educator. This course will provide the participant with the foundation and skills needed to design, implement, and manage a curriculum in career and technical education. Identification of resources and occupational analysis, derivation

of content, formulation of objectives, defining measurable learning outcomes, and the selection and development of activities and evaluation methods will be explored.

Electronic Engineering Technology

Students must earn a grade of C- or higher in each CPET and ELET course listed as a prerequisite to a subsequent CPET course.

ELET 101C Electric Circuits

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 3 Credit Hours: 4

Covers basic electric circuit theory, the nature of electricity, resistance, current and voltage. Detailed coverage of topics includes direct current, alternating current, Ohm's law, series circuits, parallel circuits, and energy and power relationships. This course also covers DC circuit analysis techniques including mesh and nodal analysis, and network theorems such as Norton's, Thevenin's, and maximum power transfer. The transient response of capacitors and inductors are discussed when a DC voltage is applied using the circuit and analysis techniques. Additional topics include the discussion of alternating waveform characteristics and analysis of sinusoidal alternating waveforms. Lab experiments are designed to reinforce the classroom work. It is strongly recommend that students have previously taken or are concurrently taking ELET 115C. (Corequisite: MATH 124C or permission of the department chair)

ELET 102C Circuit Analysis

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 3 Credit Hours: 4

A continuation of ELET 101C; covers AC circuit analysis techniques including mesh and nodal analysis, and network theorems such as Norton's, Thevenin's, and maximum power transfer. Treatment is given to circuits containing dependent and independent sources of voltage and current. Resonance and basic filters are covered in detail as well as magnetism. Additional topics covered include transformers and three-phase circuits. Lab experiments are designed to reinforce the classroom work. (Prerequisites: ELET 101C, ENGL 101C, and MATH 124C; or permission of the department chair)

ELET 110C Electronics I

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 3 Credit Hours: 4

This is a study of the physical behavior of electronic devices. Emphasis is on analysis and application of electronic circuits utilizing semiconductor diodes, operational amplifiers, and transistors. Topics covered include rectification, clipping and clamping circuits, regulated power supplies, basic op-amps, biasing of transistors, and simplified AC modeling of transistor circuits. Engineering design automation tools are used to reinforce the theory through electronic analysis simulations. Lab experimentation reinforces classroom theory with practical work. (Prerequisites: ELET 101C)

ELET 115C Digital Fundamentals

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 3 Credit Hours: 2

Open to all majors; designed for students with little or no electronics skills. Topics covered include basic logic gates; base 2, 10, and 16 number systems; BCD, Gray and ASCII codes, Boolean algebra, Karnaugh maps, flip-flops, counters, programmable logic devices, and other related digital devices. Hands-on lab experiments are an integral part of this course. The labs demonstrate real-world implementation of otherwise abstract academic concepts and provide valuable experience in breadboarding, testing, and debugging circuits. (Prerequisite: Algebra I or permission of the department chair)

ELET 144C Embedded Microsystems

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 3 Credit Hours: 4

Personal computers are used to host an integrated hardware/software development system for applications with embedded Microcontrollers. A system-level approach to the specification, decomposition, hardware/software development, and system integration for the implementation of embedded systems is covered through lecture and lab

experiments. Topics covered include microprocessor architecture, instruction sets, interfacing, and real-time programming techniques in assembly language. Lab exercises consist of system-level development in serial and parallel data transfer, data acquisition, and analog input and output signal processing. (Prerequisites: CPET 107C, ELET 101C and ELET 115C or permission of the department chair)

ELET 210C Electronics II

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 3 Credit Hours: 4

A continuation of ELET 110C covering more advanced electronics topics with a variety of applications. The non-ideal characteristics of op-amps and other electronic devices will be discussed with applications emphasizing offset, gain, and linearity. Other topics may include but are not limited to sensors, pulse width modulations, Bode plots, SCRs, TRIACs, and optoelectronics. EDA tools are used to reinforce the theory with electronic analysis simulations. (Prerequisites: ELET 110C; corequisite: ELET 102C or permission of the department chair)

ELET 215C Advanced Digital Electronics

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 3 Credit Hours: 4

Advanced topics in digital electronics including the internal structure of logic families, complex digital circuits, synchronous logic, A/D and D/A conversion, timing diagrams, computer bus systems, programmable logic devices (PLD), and complex circuit debugging. The topic of digital interfacing is also covered. This includes interfacing various logic families to each other as well as interfacing logic to various I/O loads, such as inductive loads and 120VAC loads. (Prerequisites: CPET 107C, ELET 110C, ELET 115C, and ELET 144C; or permission of the department chair)

ELET 251C Advanced Topics in Electronics

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 3 Credit Hours: 4

Introduces students to advanced applications in electronics. Topics covered include but are not limited to an introduction to electronic communication theory including digital communications, fiber optics, programmable logic controllers, and human-machine interface. Lab exercises are used to reinforce classroom theory. (Prerequisite: ELET 115C, ELET 144C, and ELET 210C; or permission of the department chair)

ELET 305C Design Project Preparation

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 5 Credit Hours: 3

Contains the background material and preparation necessary for ELET 306C and consists of three integrated learning objectives, which are studied concurrently. Objective one will be to document, design, and build a team project that will use a typical industry project management process to complete a project assigned by the instructor. Product design documents will be created to guide this objective. Objective two covers the mechanics of designing and fabricating printed circuit boards. This includes the use of EDA tools. The tools used include but are not limited to schematic capture and printed circuit board layout. Printed circuit boards will be fabricated that encompass both traditional through-hole components and modern surface-mount technologies. An overview of industry standards of workmanship and safety are included. In objective three, the student selects a senior project to be completed in ELET 306C, obtains approval for that project, and develops a detailed project definition. Much latitude is given in selecting a project. Projects may be undertaken individually or as teams. They may be internal or collaborative with industry. The project may involve developing a specific circuit or a more general exposure in an appropriate industrial environment. Ultimately, the project must meet the requirements outlined in EL 306 and receive final approval from the instructor. The definition will serve as a guideline for the next phase of the senior project. (Prerequisites: ELET 102C, ELET 110C, ELET 115C, and ENGL 125C or ENGL 120C; corequisite: ELET 144C, and ELET 210C; or permission of the department chair)

ELET 306C Senior Design Project

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 5 Credit Hours: 4

The culmination of two years of theoretical study in the electronics engineering field; is intended to exercise and enhance the student's practical competency in that field. When combined with its preparation course (ELET 305C), it prepares each student to each student be involved with design, development, implementation, and testing of a

curriculum-related design as required by the project definition developed by the student in ELET 305C. An accurate record of time invested is to be kept, all work is to be documented in a logbook, and regular progress reports are to be submitted. As the project nears completion, a technical write-up will be required as well as a formal presentation of the project. (Prerequisite: ELET 305C, ELET 144C, ELET 210C; corequisites: ELET 215C; or permission of the department chair)

English

ENGL 101C English Composition

Lecture Hours: 4 Lab/Practicum/Clinical Hours: 0 Credit Hours: 4

Required of all first-year students and designed to teach students to write clear, vigorous prose, this course takes students through all stages of the writing process. Essay topics range from personal narratives to logical arguments. All students learn the resources of the NHTI library and write at least one documented research paper. Available in honors format. Students who have received credit for ENGL 101C cannot also receive credit for ENGL 101FC, ENGL 101XC, GST 100C, or GST 102C.

ENGL 101FC English Composition—FYE

Lecture Hours: 4 Lab/Practicum/Clinical Hours: 0 Credit Hours: 4

Meets the same objectives as ENGL 101C and embeds topics typically covered in a first-year experience course such as career and major research, priority management, and study skills such as note-taking, test-taking, and critical thinking. Students who have received credit for ENGL 101FC cannot also receive credit for ENGL 101C, ENGL 101XC, GST 100C, or GST 102C. (Prerequisite: Placement testing or ENGL 100C; permission of academic advisor)

ENGL 101MC English Composition: Mindful

Lecture Hours: 4 Lab/Practicum/Clinical Hours: 0 Credit Hours: 4

Designed to teach students to write clear, vigorous prose. This course takes students through all stages of the writing process. Essay topics range from personal narratives to logical arguments. All students learn the resources of the NHTI library and write at least one documented research paper. Features the study of mindfulness and incorporates mindfulness meditation as an instructional method while exploring aspects of emotional intelligence as they relate to effective communication. Students who have received credit for ENGL 101MC cannot also receive credit for ENGL 101C, ENGL 101FC, and ENGL 101XC.

ENGL 101XC English Composition—Corequisite

Lecture Hours: 4 Lab/Practicum/Clinical Hours: 2 Credit Hours: 5

Designed for students who need practice in foundational skills while engaging college-level reading and writing skills. Weekly lab sessions will reinforce skills and topics directly related to lecture topics. The course takes students through all stages of the writing process. Essay topics range from personal narratives to logical arguments. All students learn the resources of the NHTI library and write at least one documented research paper. Students who have received credit for ENGL 101XC cannot also receive credit for ENGL 101C and ENGL 101FC.

ENGL 102C Introduction to Literature

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

An introductory survey exposing the student to representative works from the major genre forms: fiction, poetry, and drama. Available in honors format. Students who have received credit for ENGL 102C cannot also receive credit for ENGL 102C-FYE and ENGL 102MC.

ENGL 102C-FYE Introduction to Literature: Hero's Journey

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Introduces students to representative works from major genres, such as fiction, poetry, and drama and the concept of the “hero’s journey.” Through reading, writing, discussion, and presentation students analyze texts to understand the role of literature in culture. Using the framework of the literature, students will examine and plan their own journey through college and beyond. Students who have received credit for ENGL 102C-FYE cannot also receive credit for ENGL 102C and ENGL 102MC. ENGL 101C recommended.

ENGL 102MC Introduction to Literature: Mindful

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Introduces students to representative works from major genres such as fiction, poetry, and drama. Through reading, writing, and class discussion, students analyze texts to understand the role of literature in culture. ENGL102MC features the study of mindfulness and incorporates mindfulness meditation as an instructional method while also exploring aspects of emotional intelligence as they relate to effective communication. Students who have received credit for ENGL 102MC cannot also receive credit for ENGL 102C and ENGL 102C-FYE.

ENGL 110C Introduction to the Theatre

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Provides a broad survey of the basic components of theatre. Students study theatre from different perspectives. They examine plays, the history of theatre as an art, acting, technical theatre, theatre's impact on society, and important practitioners in the field. Plays are unique in all of literature because they're only finished in performance in front of an audience. To understand how plays come to their complete realization, the class will see several productions both on and off campus. The student will be responsible for the cost of one ticket for an off-campus production.

ENGL 120C/COMM 120C Communication

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Focuses on the application of communication principles and theories, enabling students to develop public speaking, interpersonal, intrapersonal, and group communication skills. Through an in-depth look at self concept, and verbal and nonverbal language and listening skills, students gain an increased awareness of the way they perceive themselves and others as well as the cultural and ethical implications of behavior. Coursework includes speeches, exercises, and writing assignments. (Students who have received credit for ENGL 120 cannot also receive credit for COMM 120.)

ENGL 120MC/COMM 120MC Communication: Mindful

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Focuses on the application of communication principles and theories. Students develop public speaking, interpersonal, intrapersonal, and group communication skills. Through an in-depth look at self concept, and verbal and nonverbal language and listening skills, students gain an increased awareness of the way they perceive themselves and others as well as the cultural and ethical implications of behavior. Coursework includes speeches, exercises and writing assignments. Sections identified as MC (Communicating Mindfully) feature the study of mindfulness and incorporate mindfulness meditation as an instructional method while exploring aspects of contemplative neuroscience and emotional intelligence as they relate to effective communication. (Students who have received credit for ENGL 120MC cannot also receive credit for COMM 120MC.)

ENGL 121C Introduction to Film

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

The art, history, technology, and theory of the narrative motion picture from the silent period to the present.

ENGL 125C/COMM 125C Communication and the Literature of Science and Technology

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Built around the theme of science and technology, this course focuses on improving communication skills. Areas of study include critical reading, critical thinking, public speaking, interpersonal communication, and writing. Topics vary

and could include any of the following: physical and technical sciences, natural and health sciences, or social sciences. (Students who have received credit for ENGL 125 cannot also receive credit for COMM 125.)

ENGL 150C Introduction to Drama

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

An introductory survey involving the study of drama as literature and performance beginning with the Greeks and continuing through Shakespeare to the present.

ENGL 160C Introduction to Poetry

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Designed to make students aware of the aesthetic value of poetry and develop their critical skills as readers. Included is an in-depth study of the various genres and structural elements of poetry. Genres considered are sonnet, ode, elegy, ballad, epic, dramatic monologue, and open form. Structural elements surveyed include imagery, sound, rhythm, rhyme, tone, and diction.

ENGL 201C English Composition II

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Aiming at higher levels of writing competencies, this class focuses on analysis, argument, and research. It addresses issues of style and structure, from the sentence level to the whole essay, and incorporates peer review and critique. Students are required to collect and evaluate information, to analyze subjects from a variety of critical perspectives, and to use logic to present and defend conclusions. Students compose essays of varying lengths, including shorter reflections and more sustained arguments. Individual instructors may offer the course based on a theme. (Prerequisite: ENGL 101C with a grade of C or higher)

ENGL 210C British Literature I

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Traces the development of British literature from the Middle Ages through the early eighteenth century and includes readings in poetry, fiction, essay, and drama. Authors' works will be examined within the cultural, philosophical, and political climate in which they were created. (Prerequisite: ENGL 101C or equivalent, or permission of the department chair. An introductory-level literature course is highly recommended.)

ENGL 211C British Literature II

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

This course traces the development of British literature from the late eighteenth century to the present. The poetry, fiction, essays, and dramas of several major authors of the Romantic, Victorian, and Modern periods will be studied. Authors' works will be examined within the cultural, philosophical, and political climate in which they were created. (Prerequisite: ENGL 101C or equivalent, or permission of the department chair. An introductory-level literature course is highly recommended.)

ENGL 214C American Literature Survey I: to 1865

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Traces American Literature to 1865. Students read representative major, as well as minor, writers from all literary periods and various movements. Readings are set in the cultural contexts in which they were created. (Prerequisite: ENGL 101C or equivalent, or permission of the department chair. An introductory-level literature course is highly recommended.) Available in online format.

ENGL 215C American Literature Survey II: 1865 – present

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Covers American literature from 1865 to the present. It is designed for English majors and others interested in the character and history of U.S. literature. Students read representative major, as well as minor, writers from various literary periods and movements. Readings will be set in an historical and cultural context. (Prerequisite: ENGL 101C or equivalent, or permission of the department chair. An introductory-level literature course is highly recommended.)

ENGL 221C Film Genres and Directors

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Offers students an advanced, focused examination of the art, history, and theory of a body of narrative films, which may be related by genre, filmmaker, country, style, movement, theme, and/or culture and ideology. Uses viewing, lectures, and class discussion and emphasizes film theory, criticism, and history. This course may be repeated for credit as topics change, providing student earned a grade of C or better. (Prerequisite: ENGL 101C or equivalent, or permission of the department chair. An introductory-level literature course is highly recommended.)

ENGL 221AC Images of Light

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Utilizing viewings, lectures, and class discussion and emphasizing film theory, criticism, and history, this course explores the creative and dynamic interrelationships of filmmaking, particularly between the director and the director of photography between the vision of a film and its realization.

ENGL 221BC Films of 1962

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

An examination of the year 1962 in film, arguably the best year in international filmmaking. Utilizing film viewing, lectures, projects, and discussions, the course will explore not only how and why international filmmaking reached its apogee in 1962 but also the lasting effects of these films and the filmmakers. Films screened include *Jules et Jim*; *Eclipse*; *Through a Glass Darkly*; *Viridiana*; *Yojimbo*; *Last Year at Marienbad*; *Cleo From Five to Seven*; *Manchurian Candidate*; *To Kill a Mockingbird*; *Lolita*; *Ride the High Country*; *Miracle Worker*; *Man Who Shot Liberty Valance*; and *Lawrence of Arabia*.

ENGL 221CC American Independent Cinema

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

An independent film is one that has been funded independently of a major studio; typically the monies come from limited partnerships, personal loans, presales, private investors, or credit cards. The late 1980s and 1990s saw a tremendous emergence of U.S. independent cinema, as a variety of eccentric and challenging filmmakers and evolving film styles came to America. This course will focus on American independent film directors, the process of conception, funding to creation, and distribution of their initial film. With several directors we will explore their achievements and studio flops.

ENGL 221DC The Modern Classics

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Utilizing viewings, lectures, class discussions, presentations and emphasizing film theory, criticism, and history, this course explores the audacity, range, depth, and stylistic experimentation of the newest wave of filmmaking (the influences on films since the 1994 release of Quentin Tarantino's *Pulp Fiction*) as seen through American and foreign films.

ENGL 221EC German Expressionism

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Utilizing viewings, lectures, and class discussion and emphasizing film theory, criticism, and history, this course explores the creative and dynamic interrelationships in Germany of the Expressionist Film movement in the time between the two world wars as well as the reinterpretation of that period prior to reunification. Expressionism and Post-Expressionism as movements will be explored within the context of the times, concentrating on the intensity of the artist's inner world capturing the nightmarish quality of artistic vision. Emphasis will be placed on the mood of Expressionism and how art anticipates history.

ENGL 221FC American Cult Cinema

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Allows the student to view, research, and discuss nearly two dozen motion pictures more or less widely regarded as "bad movies" in one or more ways. In seeking to determine intelligently what factors might contribute toward cinematic badness, students will consider subject matter, personal and societal prejudices, the effects of the passing of time, the effects of change, stigmatization of particular movie genres and/or directors and/or actors, and a wide variety of other aspects relating to viewer perception of a movie's quality or lack thereof.

ENGL 221GC Darkness and Light: Film Noir

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Utilizing viewings, lectures, and class discussion and emphasizing film theory, criticism, and history, this course explores the origins of film noir and examines pre-noir films but also noir films of the classic period as well as those of the post-classic and modern periods.

ENGL 221HC Alfred Hitchcock

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

An in-depth study of the film techniques and unique storytelling genius of Alfred Hitchcock, including an examination of the influences of other directors and cinematic movements on Hitchcock. This course will trace his career as the "master of suspense" from his early films in England to his American works and includes the star system, character development, storyboards, and the art of the action montage.

ENGL 221IC Stanley Kubrick

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

As a director known for controversial films such as *Lolita*, *Dr. Strangelove*, and *A Clockwork Orange*, Stanley Kubrick repeatedly bucked the Hollywood mainstream, emerging as an outsider who resisted the scrutiny of conventional film criticism and biography. This class will study in-depth the film techniques, influences of other directors and cinematic movements, and unique storytelling of Stanley Kubrick.

ENGL 240C Cultural Identity through Young Adult Fiction

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Students will read, discuss, and evaluate a range of literature written for young adults (grades 8-12). This course will investigate the social and cultural norms presented to teens through the literature written for them. Students will consider whether YA literature is reflective of changing cultural norms or if the shifts in popular literature can shape the collective identity of a generation of teens. In addition to exploration of mass media spin-offs and popular literature fads, students will critically analyze the major contributing authors in modern YA literature and how the common themes teens deal with are handled by those authors. (Prerequisite: ENGL 101C or equivalent with a grade of C or higher, or permission of the department chair)

ENGL 251C Contemporary Drama

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

A seminar focused on major European and American drama since the 19th century. Through reading, discussion, and lecture regarding the works of major writers, students are exposed to contemporary issues in the development of the

dramatic art. (Prerequisite: ENGL 101C or equivalent, or permission of the department chair. An introductory-level literature course is highly recommended.)

ENGL 255C Shakespeare

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

A study of representative works by William Shakespeare. Selections are chosen from histories, comedies, and tragedies. Students are introduced to the social and cultural characteristics of the Early Modern Period, the biography of the author, and various issues surrounding the life and works. No previous knowledge of Shakespeare is assumed. (Prerequisite: ENGL 101C or equivalent, or permission of the department chair. An introductory-level literature course is highly recommended.)

ENGL 260C The Novel

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

A genre class designed for advanced students; selects from a wide range of representative texts in this essential literary form. Students will read approximately eight works of fiction. Selections may be drawn from any period of literature from the 18th-century origin of the form up to the present and may incorporate both texts written in English as well as English translations of non-English texts. Readings will be set in their historical and cultural contexts and will display the wide range of texts covered by the word Novel.

ENGL 272C Modern Short Fiction

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

A study of fiction focusing on elements and themes of the short story art form in stories written in the past 150 years. Through close reading, lectures, and discussions, stories are placed in the contexts of literary trends and periods. Biographical information may also be studied to gain a better understanding of the unique styles and perspectives of individual authors. (Prerequisite: ENGL 101C or equivalent, or permission of the department chair. An introductory-level literature course is highly recommended.)

ENGL 285C Literature, Technology, and Culture

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Examines the cultural implications of science and technology in the modern world. Students study a range of essays and fictional works in traditional literature, science, and science fiction, which may include such works as *Frankenstein* and *Brave New World*. (Prerequisite: ENGL 101C or equivalent, or permission of the department chair. An introductory-level literature course is highly recommended.)

ENGL 286C/TECP 86C Introduction to Linguistics

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Focuses on linguistics, the scientific study of language. Students explore the properties of language and linguistic challenges faced by English language learners. The course will expand on the subfields within the linguistics: phonetics and phonology, morphology and syntax, and semantics and pragmatics. Concepts relevant to teaching English will be taught: pronunciation, grammar, and vocabulary. Language variation and written discourse will also be addressed as well as how to apply this knowledge to the English language classroom. Linguistic principles and features of both English and other languages will be examined to promote familiarity with the language experiences of English language learners. A native speaker of a world language will act as a "grammar text" as we decipher an unknown grammar in a field methods format. This course is required for those in the TECP: ESOL Conversion program. Others must have permission from the director of TECP or the director of cross-cultural education. (Prerequisites: ENGL 101C, minimum of B average)

ENGL 287C Women in Literature

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Images and roles of women in literature are traced from historical to contemporary times through a study of selected works in fiction, poetry and drama. (Prerequisite: ENGL 101C or equivalent, or permission of the department chair. An introductory-level literature course is highly recommended.)

ENGL 291C Contemporary Issues and World Literature

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

An investigation of current and enduring issues through world literature. Emphasis on 20th century works, but works from other periods are also considered. Topics vary from year to year and with the instructor. See department for details of current offerings. (Prerequisite: ENGL 101C or equivalent, or permission of the department chair. An introductory-level literature course is highly recommended.) Available in honors format.

ENGL 291AC Contemporary Latin American Literature

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Images and examples of Latin American culture in literature are traced from historical to contemporary times with an emphasis on 20th century contemporary works through a study of selected works in fiction, poetry, film, and drama.

ENGL 294MC/COMM 294MC Communicating Mindfully Capstone

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 0 Credit Hours: 1

Reviews and builds upon key elements of mindful communication students have been studying throughout their degree program. Students practice applying mindful communication skills in the workplace and reflect on those experiences to improve interactions with colleagues, customers, clients, and others. In addition, students work in small groups in which each partner has a different major than the other (when possible). Through online discussion posts, students practice mindful communication techniques practice attending to others, confirming understanding, and providing feedback that is respectful, insightful, and useful. Students are encouraged and given the opportunity to engage in regular contemplative practices such as mindfulness meditation. (Students who have received credit for ENGL294C cannot also receive credit for COMM294C.) (Prerequisites: ENGL 101MC, ENGL 102MC, and ENGL 120MC, or permission of the Department Chair of English; corequisite for IT majors only: IST 294C.)

ENGL 295C Creative Writing

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Designed for writers interested in learning about creative writing. Students will present and critique their own original work and the work of their classmates as well as examine published works. Additionally, students will explore the various elements of drama, fiction, or poetry or mixed genre, depending on the focus of the specific course. Information on preparing a manuscript for submission and publication may also be included. (Prerequisite: ENGL 101C or permission of the instructor; an introductory-level literature course is highly recommended.)

ENGL 295AC Creative Writing: Fiction

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Designed for writers interested in learning more about the craft of fiction writing. Students will examine published short stories in the classic and contemporary canon as well as present and critique their own work and the work of others. Additionally, the students will explore some of the genres of fiction in more depth including science fiction and fantasy, mystery, and children's books. Lectures on preparing a manuscript for submission and the publishing industry are included. Available in honors format. (Prerequisite: ENGL 101C or permission of instructor. Students who do not have the prerequisite may be asked to submit a writing sample. An introductory-level literature course is highly recommended.)

ENGL 295BC Creative Writing: Poetry

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Designed for writers interested in learning about the craft of poetry writing. Students will present original work to their teacher and classmates for discussion and critique as well as examine published works. Additionally, the students will explore the various elements of poetry. Students will be expected to spend the majority of their time writing and revising original works. Information on preparing a manuscript for submission and publication may also be included. (Prerequisite: ENGL 101C or permission of the instructor; ENGL 102C or ENGL 160C is recommended.)

ENGL 295CC Creative Writing—Nonfiction

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Provides an introduction to the art and craft of writing creative nonfiction, an approach to "telling the truth" that many tools of fiction writing and journalism. Students will read, write, critique, and analyze pieces demonstrating the different styles in this genre: memoir, essay, and literary journalism. In addition, this course will include lectures, workshops, and peer editing. Students will experiment with the basic techniques of journalism, such as researching, reporting, and interviewing. The goal is to help students write stories that give meaning to experience, in a way that touches others. (Prerequisite: ENGL 101C or by permission of the instructor.)

ENGL 295DC Playwriting

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Illuminates and guides students through the art and craft of writing for performance. This course explores the fundamental principles needed to build a realistic play that is intended to be produced on the stage. Though the course is built around the construction of plays, the principles, writing exercises, readings, and other assignments serve as a solid base for any form of dialogue-driven writing. The class will culminate in the writing and staged-readings of 10-minute plays and performance texts. Students are expected to attend, at their own expense, one live theater production to be specified. (Prerequisite: ENGL 101C with a grade of C or higher.)

English for Speakers of Other Languages

ESOL 101C Basic Writing

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Focuses on developing writing skills at the paragraph level. Students will develop writing skills through a learning process that integrates reading, writing, and grammar practice. In learning and practicing a variety of writing tasks, students will gain increasing competence in expressing themselves in appropriate written English in an academic context. The developmental process also encourages cultural learning. The three institutional credits awarded for this course do not count toward graduation requirements but are calculated into GPA. (Prerequisite: Enrollment in this course is dependent on placement using multiple measures. Completion of this course with a grade of C or better will satisfy the prerequisite for ESOL 201C.)

ESOL 102C Pronunciation Matters

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

The purpose of this course is to guide students into speaking clear and natural American English. It addresses basics in pronunciation for clear communication. Contents include sound/spelling patterns, syllables, consonant/vowel problems, linking, stress, and rhythm. The course will be a learner-centered, encouraging interactive activities and practice. The three institutional credits awarded for this course do not count toward graduation requirements but are calculated into GPA. (Prerequisite: Enrollment in this course is dependent on placement using multiple measures. Completion of this course with a grade of C or better will satisfy the prerequisite for ESOL 202C.)

ESOL 104C American Culture I

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Introduces and explores American culture through selected topics of interest. The course introduces typical American people, places, and ideas, providing students with essential information about the U.S. and stimulating cross-cultural exchange. This course emphasizes cultural awareness and addresses the four basic language skills - reading, writing,

speaking, and listening. A variety of high-interest topics will enable students to take part in discussions, present short talks, solve problems, and interact with each other. The three institutional credits awarded for this course do not count toward graduation requirements but are calculated into GPA. (Prerequisite: Enrollment in this course is dependent on placement using multiple measures. Completion of this course with a grade of C or better will satisfy the prerequisite for ESOL 204C.)

ESOL 201C Academic Writing

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Prepares students for English composition and other academic writing at the college level. It focuses on developing writing skills at the essay level. Students will move from writing structured paragraphs to organizing, drafting, and revising complete essays. Course content includes introduction to patterns of essay organization such as the comparison and contrast, cause and effect, and process analysis. Grammar and complex sentence structures will be reviewed as needed. The three institutional credits awarded for this course do not count toward graduation requirements but are calculated into GPA. (Prerequisite: ESOL 101C with a grade of C or better, or permission of the ESOL department chair as determined using multiple measures)

ESOL 202C Clear Communication

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Helps non-native speakers of English develop skills of oral communication and listening comprehension. Various pronunciation needs for communicating more effectively in academic or professional settings will also be addressed. The learner-centered instruction guides students in developing communicative English through interactive practices including stresses of words, intonations of sentences, and styles of communication. The three institutional credits awarded for this course do not count toward graduation requirements but are calculated into GPA. (Prerequisite: ESOL 102C with a grade of C or better, or permission of the ESOL department chair as determined using multiple measures)

ESOL 203C Grammar Practice

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Focuses on training students in developing proficiency through active grammar practice. Students will learn grammar structures through systematic themes as well as practical application through exercises. Reading and other communicative activities will be integrated. Grammar exercises will cover a broad content of both a scientific and humanistic nature as well as selections from TOEFL. The three institutional credits awarded for this course do not count toward graduation requirements but are calculated into GPA. (Prerequisite: ESOL 101C with a grade of C or better, or permission of the ESOL department chair as determined using multiple measures)

ESOL 204C American Culture II

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Expands the students' knowledge of the American culture through selected topics of interest. The course not only provides students with essential information about the U.S. but also stimulates cross-cultural exchange. This course provides students with the opportunity to conduct research and then develop and deliver presentations to the class on their findings. Four language skills - reading, writing, speaking, and listening - are addressed in this course. The three institutional credits awarded for this course do not count toward graduation requirements but are calculated into GPA. (Prerequisite: ESOL 104C with a grade of C or better, or permission of the ESOL department chair as determined using multiple measures)

ESOL 205C Reading Comprehension

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Moves learners toward higher proficiency in reading comprehension and cultural literacy by investigating concepts and texts related to many fields of study to include business, science, psychology, politics, and technology. Classes will emphasize a developmental process that integrates reading comprehension, vocabulary expansion, problem solving, critical thinking, and cultural literacy. Readings from journals, newspapers, and works of fiction and non-fiction will be

explored in this course. The three institutional credits awarded for this course do not count toward graduation requirements but are calculated into GPA. (Prerequisite: ESOL 101C or ESOL 104C with a grade of C or better, or permission of the department chair of cross-cultural education as determined using the student's score on the MTELP)

Environmental Science

ENVS 101C Fundamentals of Environmental Science

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

Provides an introduction to the structure, function, and interactions of atmospheric, terrestrial, and aquatic systems, as well as the impact of the human population on such systems. Topics will include basic scientific concepts and methods for understanding human population growth and their impact on the environment, including cycles of carbon, water, and other materials, weather and climate, and sustainability of natural resources, in particular water and energy. The course will evaluate natural environmental processes, as well as human impacts to these processes, using case studies and real data to demonstrate the role of science in solving pressing environmental problems. High school Biology and Chemistry are recommended.

ENVS 220C Introduction to Soil Science

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

Introduces students to the study, management, and conservation of soils as natural bodies, both as a media for plant growth and as a part of a larger ecosystem. Students will learn to identify soil types in natural and disturbed communities. This course will present the concept of soil science such as composition, chemical, physical and biological properties, classification and mapping, soil water, soil conservation, management practices, and soil fertility and productivity. The world's soils are being greatly impacted by environmental impacts such as climate change, water pollution, deforestation, and development. The quality of the soil determines the capacity of land to support natural ecosystems and human society. This course will provide an introduction to the soil types found in northern New England and how those soil types will determine our capacity to grow food.

ENVS 250C Agroecology

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

- Introduces the discipline of agroecology from an ecological perspective. An emphasis will be placed on relevant ecological theory within the context of production agriculture. Students will examine and measure the interactions between plants, animals, soil, and climate as well as the impact that human engagement has on these components. Students will research and present the history and consequences of modern industrial agricultural systems and the need for more sustainable management practices that consider ecological interactions. (Prerequisite: BIOL 111C with a grade of C or higher)

ENVS 290C Senior Capstone Project and Seminar

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

Serves as the capstone course for the Environmental Sciences program, in which the student will demonstrate the application of the knowledge gained throughout the program. This will be achieved either by independent study investigating all sides of a current environmental issue selected by the student with guidance from his/her program advisor or through participation in a field internship with an approved industry partner. The student will submit a written paper and make an oral presentation to all interested students, faculty, and industry partners in a seminar format. (Prerequisites: a grade of C or higher in all major field and other required science courses taken prior to the semester in which the student registers for this course and permission of the department chair. Prerequisites or corequisites: ARET 160C, GEOL 101C, PHIL 242C, BIOL 215C)

Fine Arts

MUSC 105C Introduction to Music

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Offers a fundamental approach to perceptive listening based on a detailed study of several masterpieces representing different periods and forms. The pieces will be studied from aesthetic and historical perspectives.

MUSC 106C The History of Jazz, Blues, and Rock and Roll

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Examines the history of three of America's great musical contributions to world culture via detailed study of several masterpieces in each genre. Students will explore the fundamental musical elements, the historical roots, and the development of musical traditions of each style. Various listening and vocal music guides will facilitate the student's knowledge and awareness.

MUSC 107C World Music

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Through the exploration of soundscapes, or music within a cultural setting, students will learn sound characteristics and instrument classification that can be used for any type of music. Students will come to understand the significance of music within a culture. Students will develop critical listening skills and the vocabulary necessary to understand and evaluate music. No musical background is necessary.

MUSC 150C Introduction to Guitar

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Offers a fundamental approach to learning the guitar for beginning students with varied levels of experience. Students will be involved with and exposed to performance situations, some practical applications of music theory, and different playing styles and techniques. Students must provide their own acoustic instruments.

MUSC 155C Vocal Production and Performance

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 2 Credit Hours: 3

Offers an opportunity to study various aspects of vocal production and performance, which will include vocal process from theory to application. The vocal process will focus on optimizing one's vocal understanding through performance techniques and musicianship.

THTR 101C Acting I

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Introduces drama as a performing art, with emphasis on physical movement and the use of voice in the development of characterization. Students will learn to use improvisation and theatre games to make feelings accessible to the student actor for the purpose of performance. The class will take a functional approach to the basic techniques of acting with an in-class performance final. Students will be introduced to the fundamentals of acting that include action, relaxation, objective, spontaneity, emotion, monologues, texts, projection, presence, substitution, referential movement, character analyses, and heightened diction. It will include ideas about the rehearsal process, play scripts, scenes, staging, and performance.

ENGL 110C Introduction to the Theatre

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Provides a broad survey of the basic components of theatre. Students will examine plays, the history of theatre as an art, acting, technical theatre, theatre's impact on society, and important practitioners in the field. Plays are unique in all of literature because they are only finished in performance in front of an audience. To understand how plays come to their complete realization, we will see several productions, both on and off campus. The student will be responsible for the cost of one ticket for an off-campus production.

General Studies

GST 100C College Success Seminar

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 0 Credit Hours: 1

Introduces students to the foundations of college success and to the academic environment and community of NHTI. Academic advising, assessment of skills and interests, and career and transfer research help students to identify academic and professional goals and support lifelong learning. This course is required for all General Studies and Associate in Arts in Liberal Arts majors except for those enrolled in GST 102C or for those planning to apply for experiential credit. Please see the General Studies department chair for the Waiver Policy for this course.

GST 101C Assessment of Prior Learning

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 0 Credit Hours: 1

Required for all General Studies majors who wish to apply for experiential learning credit. It will assist students in defining career objectives and preparing proposals for experiential learning credit. It will include advising and in-class writing sessions.

GST 102C Study Strategies

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 0 Credit Hours: 2

Through the presentation of topics ranging from reading and study strategies to stress management, students become better equipped to adjust to the college experience and increase their chances of academic success. Individual periodic conferencing is also a key element of the course. It is open to all students and required for some AGS students. Waivers from GST 102C can be granted for students transferring two or more college-level classes with grades of B- or better. GST 102C will fulfill the GST 100C course requirement for all General Studies and Associate in Arts majors. GST 102C may not be taken as an elective to meet graduation requirements.

Geography

GEOG 110C Introduction to Cultural Geography

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Focuses on economic, social, and cultural geography to study the relationships between humans and their natural environment. Students will review the basic physical geography concepts as well as ideas for reviewing and comparing cultural traditions, resources, globalization, and interaction of countries and regions. This class introduces students to the study of people, culture, arts, tourism, regions, and issues facing humanity.

Geology

GEOL 101C Essentials of Geology

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

Introduces students to the basic geological principles, including minerals, rock formation, volcanism, weathering, external and internal processes in sculpting and modifying landscapes, geologic time and history, global cycles, and human impacts on geological processes. Environmental resource use and conservation issues are also addressed. Required field trips. (Prerequisites: high school-level Biology with lab and high school-level Chemistry with lab, both with grades of C or higher)

Gerontology

GERN 195C Gerontology Practicum I

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 8 Credit Hours: 4

The student will work in an approved gerontological setting under the supervision of an approved professional. Periodic conferences between the supervisor and practicum coordinator are planned evaluate the student's progress. At the close of the semester, the student will submit documentation of the practicum activities/experience and demonstrate the ability to

relate theory to practice in the chosen field of experience. The student will complete a total of 125 hours of field experience. (Prerequisites: HSV 111C, HSV 242C, MHTH 187C, PSYC 105C, and PYSC 283C, each with a grade of C or higher, and permission of the department chair.)

GERN 298C Gerontology Practicum II

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 8 Credit Hours: 4

Students will continue their field experience work in an approved gerontological setting under the supervision of an approved professional. Skills, knowledge, and personal characteristics are built on and integrated into the learning and supervision of this course, as well as second-year coursework including ethics, individual counseling, and conflict resolution. Periodic conferences between the supervisor and practicum coordinator are planned to evaluate the student's progress. At the close of the semester, the student will submit documentation of the practicum activities/experience and demonstrate the ability to relate theory to practice in the chosen field of experience. The student will complete a total of 125 hours of field experience. (Prerequisites: GERN 195C, HSV 111C, HSV 242C, MHTH 187C, PSYC 105C, and PYSC 283C, each with a grade of C or higher, and permission of the department chair)

The student will also complete an interview with the practicum advisor the semester prior to the first scheduled practicum. Special requests regarding practicum entrance may be brought to the department chair by the student. Review of the requests will be made by the department faculty and special exemptions may be made for entrance into the practicum.

Health Science

HLTH 101C Medical Terminology

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Promotes an understanding of the proper use, spelling, pronunciation, and meaning of medical terms. This course emphasizes learner participation through group activities and reading assignments. Basic anatomy and physiology and common pathology of the body systems will also be discussed. Designed for people working in the healthcare environment.

HLTH 104C Healthcare Data Content and Delivery Systems

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Introduces the generic components of the content, use, and structure of healthcare data and datasets, how these components relate to primary and secondary record systems, and how to introduce legal and ethical issues applicable to health information. Discussions will include health record content, documentation requirements comparing the various regulatory agency requirements, and an introduction to payment and reimbursement systems. The organization, financing, and delivery of healthcare services in both the hospital and the medical office practice will also be discussed.

HLTH 120C Care and Prevention of Athletic Injuries

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

Covers basic first aid and the principles and techniques involved in prevention and care of common athletic injuries. Weekly lab sessions will be used to demonstrate and practice special tests, taping and wrapping, and recognition of athletic injuries, and will coincide with material covered during lecture.

HLTH 125C Coaching Principles I

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Focuses on sport philosophy, sport pedagogy, and sport management for success as a coach at any level. Topics include educational techniques, leadership, planning, legal aspects, successful coaching strategies, practice, and event and game management. Students will explore the principles and foundations of coaching required to develop and successfully administer a sport at any level.

HLTH 150C Introduction to Personal Wellness

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 1 Credit Hours: 1

Students in this course evaluate the concept of personal wellness and improve self-selected areas of wellness. Students compare the physical, social, emotional, spiritual, intellectual, and environmental areas of personal wellness to determine factors that affect each. Initial self-assessments provide information reflective of students' levels of wellness, and students then set goals for individual focus during the semester, while also assessing NHTI's current supports for personal wellness areas. The format for the course is group discussion and lab exercises.

HLTH 152C Personal Trainer Course

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

This course addresses pertinent topics for the fitness professional and bridges the gap between theory and practice through practical hands-on training performed within the classroom and lab portions of the course. Following a structured "read, write, and apply" format, students will attain the knowledge and abilities necessary to competently perform the tasks required of successful fitness professionals. On completion of the course, students should be well prepared to take the National Council on Strength and Fitness NCSF-CPT examination.

History

HIST 104C Western Civilization: Antiquity to 1650

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

The first of a two-course sequence about Western civilization. Study of history addresses the goals of being an educated person by liberating the learner from a narrowed perspective. Thinking about and understanding the past clearly provides for better alternatives in the present and the future. This course provides opportunities to learn about major historical events and trends from the earliest civilizations up to the Reformation which have shaped the past, present and will impact on the future. Social, political, intellectual, and economic changes will be among the topics explored, as will critical scrutiny of Western tradition.

HIST 105C Western Civilization: 1650 to Present

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Study of history addresses the goals of being an educated person by liberating the learner from a narrowed perspective. Thinking about and understanding the past clearly provides for better alternatives in the present and future. This course provides opportunities to learn about major historical events and trends since the mid-fifteenth century that have shaped the past, present and will impact on the future. Social, political, intellectual, and economic changes will be among the topics explored, as will critical scrutiny of Western tradition.

HIST 120C United States History to 1870

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Explores the critical historical events that have interacted to shape life in this country from its discovery until 1870. Included will be the discovery of America; colonization; social, political and economic development; the American Revolution; political documents which establish our form of government (Declaration of Independence/Constitution); slavery, the Civil War; and Reconstruction. Major topics are emphasized within a chronological framework and serve as a systematic introduction to U.S. history prior to 1870.

HIST 121C United States History 1870 to Present

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Explores the critical historic events and forces that have interacted to shape life in the U.S. Topics will include the Industrial Revolution, World Wars, the Cold War, the role of the U.S. as a world power, social revolutions, the Great Depression, and the workings of democracy within the republic.

HIST 132C World History II 1500 to present

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Examines the histories of civilizations in Asia, Africa, Europe, and the Americas from 1500 to present. The interrelationships among these societies, and their political, social, economic, religious, and cultural features will be explored.

HIST 221C New Hampshire History

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

A general survey of N.H.'s past, from prehistoric periods to the present. The course will be chronological, with emphasis on immigration and ethnicity, rural development, urban and industrial growth, tourism, environmental changes, and the evolution of government. Students will not simply be exposed to major events and personalities in N.H. history; they will explore ways that people removed from us in time have made their living on the land we call N.H. In addition, students will use state and local resources to better understand the nature of history and ways that the study of history provides a better appreciation of ourselves and the world in which we live.

Hospitality and Tourism Management

HSTM 101C Introduction to the Hospitality and Tourism Industry

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Provides an overview of the structure and scope of the travel/tourism and hospitality industries. This course examines the components of the tourism industry: transportation, accommodation, food and beverage, and attractions. Other topics include the history, political, social, and cultural impacts tourism has on local, state, and global environments. A section of the course is devoted to the N.H. tourism environment. Students will review marketing, motivation, and other forces that draw guests to the state. Students will be required to prepare a career-planning outline. A travel fee of \$75 will be assessed for all students. The money will be used to defray some of the costs associated with student travel experiences.

Learning Outcomes:

- Review and understand the state of N.H. Tourism Environment.
- Prepare a career-planning outline.

HSTM 110C Introduction to Hotel Operations

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Designed to give an overview of the working components of a hotel and their interrelationships. Students will explore in a descriptive fashion the responsibilities of each hotel department and how and why their interactions are important. Students will examine the difference in operations of various types and sizes of hotels from B&B to full-service hotels. (Prerequisite: HSTM 101C with a grade of C or higher or permission of the program coordinator)

Learning Outcomes:

- Gain a full working knowledge of the organizational chart for a full service lodging property.
- Possess the ability to discern between revenue-generating departments and support departments.
- Understand how all full-service hotel departments work in conjunction with each other.
- Understand the responsibilities of each department (management/associate).
- Have a working knowledge of hospitality terminology.
- Know how to successfully perform a case study.

HSTM 115C Introduction to Fitness, Spa, and Wellness Management

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Examines the interrelationships among fitness, spa, and wellness. Students will take a comprehensive look at industry basics: How to establish a wellness business, marketing and administrative practices, and client management. The course will evaluate many different approaches to maintaining a healthy lifestyle. A review of standard therapeutic programs will be studied. HSTM 101C recommended.

HSTM 195C/SPTS 195C Sports Tourism

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Examines the relationship between sport travel and the tourism industry. As more people choose to travel to attend or participate in sporting events, a branch of the hospitality and tourism industry has developed to focus on the needs of these clients. Youth sport tourism, for example, has become a \$7 billion industry in the U.S. alone. The study of sports tourism draws on the disciplines of management, finance, economics, event planning, and marketing.

HSTM 205C Quality Service Management

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

This course examines the techniques and methods in delivering exceptional quality service for external and internal customers. Students will learn the skills and attitudes for service management through observation, video, case studies, and role play. Students will review the processes of total quality management. (Prerequisite: HSTM 101C or HSTM 110C with a grade of C or higher, or permission of program coordinator)

Learning Outcomes:

- Define the basics of customer service and identify benefits of excellent customer service.
- Understand the role HR plays in the hiring process.
- Examine the importance of strong communicational skills.
- Understand customer behavior and measure customer satisfaction rates.
- Recognize the needs of guests and develop techniques in dealing with angry customers.
- Develop best practices in managing customer service.

HSTM 225C Front Office Operations

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

A comprehensive study of the front desk operations from a small inn to a full-service hotel. The student will explore front and back office systems. Topics include reservation procedures, registration, auditing, tour groups, check out procedures, room control, maintenance on guest accounts, public relations, and sales. (Prerequisite: HSTM 101C or HSTM 110C with a grade of C or higher, or permission of the program coordinator)

Learning Outcomes:

- Have knowledge of hospitality terminology.
- Be familiar with property management systems.
- Understand the relationship between the front office, front desk, reservations, PBX, housekeeping and engineering.
- Understand the front desk as an information center for the guest and the associates.
- Understand space release policies and forecast management.
- Know management styles and be familiar with legal issues facing the front desk.

HSTM 230C

Courses listed under this heading provide the opportunity to focus on specialized topical issues encompassing the tourism/hospitality industry and will be offered with an interdisciplinary approach. Faculty will be presenting material not normally covered in regular course offerings. (Prerequisite: HSTM 101C or HSTM 110C with a grade of C or higher or permission of the program coordinator)

HSTM 230AC Writing for the Travel Professional

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Travel writing provides some of the most powerful, elegant, and descriptive forms of writing. Travel writing ranges across the whole of the modern world, dealing with issues as varied as environment, culture, history, geographic, and political issues. The first part of the course will review the evolution/history of travel writing. The second part will review current trends in travel writing for many types of media: TV, radio, print advertisements, short stories, and essays. The student will write an article for publication. (Prerequisite: HSTM 101C or HSTM 110C with a grade of C or higher, or permission of the program coordinator)

HSTM 245C Event, Meeting, and Convention Planning

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Gives students the experience in developing an event, meeting, and/or conference program. Students will go through the step-by-step process of pre-planning, budget/agenda preparation, and marketing the event. Other topics include sales, negotiations, and contracts. Students will complete a portfolio to include an agenda, floor plan, budget, and brochure. (Prerequisite: HSTM 101C or HSTM 110C with a grade of C or higher, or permission of the program coordinator)

Learning Outcomes:

- Understand the scope and magnitude of the MEEC industry.
- Know the various knowledge, skills, and abilities that are necessary to be a successful event professional.
- Know the tasks and activities involved in producing a meeting or event.
- Be familiar with the issues involved in producing a meeting or event.

HSTM 247C Principles of Wedding Planner Management

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Provides an introduction to the planning and management of weddings. Students will examine all aspects of wedding planning from event coordination to design and planning of weddings, including destination weddings. Key content to be studied includes culture, contracts, timelines, budgets, venues, food and beverage management, ceremonies, music, and correlated issues. Time management skills are key to success in this course. (Prerequisite: Permission of the program coordinator)

Learning Outcomes:

- Understand the role and scope of wedding consultancy.
- Demonstrate understanding of the political and economic influences on weddings.
- Understand contract negotiations with bride, vendors, and other contracted workers.
- Be familiar with different types of wedding traditions and culture with an understanding of ethnic backgrounds.
- Develop and implement a wedding day timeline and wedding budget.
- Engage the involvement of businesses in the wedding planning process.

HSTM 260C Hospitality Sales and Marketing

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Focuses on the hospitality markets and products. The student will analyze the organization of the hotel sales and marketing department by looking at the importance of increasing revenue through special market segment, planning itineraries with tour operators, brochure design, and advertisement. (Prerequisite: HSTM 101C or HSTM 110C with a grade of C or higher, or permission of the program coordinator)

Learning Outcomes:

- Understand the role and scope of wedding consultancy.
- Demonstrate understanding of the political and economic influences on weddings.
- Understand contract negotiations with bride, vendors, and other contracted workers.
- Be familiar with different types of wedding traditions and culture with an understanding of ethnic backgrounds.
- Develop and implement a wedding day timeline and wedding budget.
- Engage the involvement of businesses in the wedding planning process.

HSTM 263C Tour Planning and Cruise Sales

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

The first half of the class is devoted to planning, guiding, and escorting tours. Students will develop a tour, budget, and marketing plan. Additional areas covered are group behavior, ethics, and dealing with unexpected disasters. The second half will focus on the cruise industry. Knowledge of cruise lines, destination, amenities, and marketing/sales is examined. Students' understanding of the relationship geography has to identification of cruise ports is also studied. Sales skills and qualifying the client in selecting of cruise is reviewed. (Prerequisite: HSTM 101C with a grade of C or higher, or permission of the program coordinator)

Learning Outcomes:

- Identify the fundamentals of business planning, destination planning, and tour development.
- Identify the relationships that form between tour operators and their clients.
- Examine the relationships of tour components such as transportation, lodging, dining, sightseeing, and attractions.
- List ways tour operators develop destinations.
- Develop and price a tour itinerary.
- List marketing techniques tour operators use to market the tour.
- Understand group tour psychology.
- Understand the history of cruising and the way it affects the vacation of today.
- Identify the classification of ships according to their style.
- Identify the key geographical regions cruise lines travel.
- Understand sales techniques for selling a cruise to a perspective client.

HSTM 269C Food and Beverage Management

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Students will examine the financial relationship of the food and beverage aspect of the hotel industry. Topics covered are marketing, food purchase controls, production, service, management of bar and beverage, sales techniques, and sanitation.

Learning Outcomes:

- Gain working knowledge of food and beverage terminology.
- Understand the distinction between restaurant chains, franchises, independents, and private clubs.
- Know the differences between seasonal, noncommercial, and catering operations.
- Understand menu structure in relation to operations
- Understand the sanitation aspect of the industry including: cleaning, sanitizing, and maintaining equipment; refrigeration, and the Health Department's role in equipment sanitation.
- Know the responsibilities of a leader in the hospitality industry in relation to guidelines for supervisors.
- Understand the history of alcoholic beverages, including terminology, fermentation, distillation, and safety.

HSTM 270C Catering Operations

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Food service can determine the success or failure of any event. This course examines how a conference/event planner designs and implements the food service needs of the event. Students will review menu planning and design, software programs, beverage operations service, and standards training. (Prerequisite: HSTM 101C or HSTM 110C with a grade of C or higher, or permission of program coordinator)

Learning Outcomes:

- Understand food functions for a conference, meeting, expo, and event.
- Know catering services procedures and their integration into food service operations.
- Know the market potential of a catering business.
- Understand several catering software systems.
- Identify the components of a catering menu programs.
- List management tools used to set policies and procedures to ensure a consistent standard of purchasing, production, and presentation.
- Define and create quality standards and operating practices for catering services.

HSTM 280C Senior Travel Seminar

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 0

Credit Hours: 2

Addresses current issues in the hospitality and tourism industry through discussion, reports (oral and written), and reading professional literature. Students will examine business ethics and professional development through the use of the case studies. Additional topics include resume preparation and interviewing techniques. Students will complete a capstone project related to their interest in the hospitality and tourism industry. (Prerequisite: HSTM 101C with a grade of C or higher, or permission of the program coordinator)

Learning Outcomes:

- Understand literature of the tourism industry.
- Evaluate tourism literature.
- Identify types of resumes.
- Identify tourism areas in which job opportunities are available.
- Describe how personal work habits and attributes affect the work environment.
- Understand ethical responsibility/problems and how they relate to marketing, sales, and public contacts.
- Relate the importance of service to the hospitality industry.
- Maintain personal and professional balance.

HSTM 290C Hospitality and Tourism Internship

Lecture Hours: 0

Lab/Practicum/Clinical Hours: 9

Credit Hours: 3

Offers the opportunity to put learned theory to practical application in a supervised work environment. Students are required to complete a minimum of 90 hours and complete a portfolio on the internship. Periodic conferences between the site supervisor and NHTI internship coordinators are scheduled to monitor and evaluate student progress. This course is limited to seniors and requires the approval of the program coordinator. (Prerequisite: 2.5 GPA in major field courses)

Human Service

HSV 111C Introduction to Human Service

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Identifies the programs and activities of social and human service. Focuses on the practical problems facing the human service/mental health worker and examines the attitudes and objectives to be attained.

Learning Outcomes:

- Demonstrate a fundamental knowledge and understanding of Human Services including its definition, description and purpose.
- Identify your potential effectiveness, personally and professionally, working in the human service field.
- Identify and discuss the 12 skills standards of the human service profession.
- Learn and discuss the basic duties and responsibilities of case management.
- Demonstrate a fundamental knowledge of specialized populations and careers in human services.
- Know human service agencies in New Hampshire.
- Understand how a human service professional is able to utilize community resources in the delivery of services.
- Understand the historical development of the human services, social work, counseling, and psychology professions to the present and future of the field.
- Understand professional organizations, the historical aspects of development, and the purpose and structure seen today.
- Understand the ethical responsibilities of human services, social work, and counseling professionals.
- Understand the variety of populations with which human service workers engage.
- Understand cultural diversity and competence.
- Understand disenfranchised individuals, social justice, and change in our society.
- Understand and describe the history of deinstitutionalization and state the effects this had on the mental health movement, community service agencies, families, communities, and society.

HSV 195C Human Service Practicum I

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 8

Credit Hours: 4

The student will work in an approved human service setting under the supervision of an approved professional. Periodic conferences between the supervisor and practicum coordinator are planned to evaluate the student's progress. At the close of the semester, the student will submit documentation of the practicum activities/experience and demonstrate the ability to relate theory to practice in the chosen field of experience. The student will complete a total of 125 hours of field experience. (Prerequisites: HSV 111C, HSV 242C, MHTH 187C, PSYC 105C, and PYSC 283C, each with a grade of C or higher, and permission of the department chair)

Learning Outcomes:

- Understand an educational professional environment and a community learning environment.
- Demonstrate self-awareness in one's work and supervision.
- Discuss the importance of mindfulness in the helping profession.

HSV 221C Social and Professional Issues in Today's Society

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

The student will examine and explore a variety of social and professional issues in today's society relating to the helping field. Skill- and knowledge-based topics necessary for the success of the student's career in today's workplace may include basic human needs in homelessness, poverty, advocacy work, grant writing/proposals/funding, culturally competent counselor standards, and community mental health delivery systems, as well as professional issues and skills that face today's helping professional.

Learning Outcomes:

- Understand the history, nature, extent, and causes of poverty and welfare in the United States.
- Understand the reality of class distinctions in this country and the effect on individuals and groups.
- Understand poverty as a condition caused by social and individual factors.
- Understand selective issues such as racism, physical handicaps, emotional/behavioral disorders, domestic violence, child care and educational deficits that are associated with poverty.
- Understand sociality influences of different generations that make up today's population.
- Understand the costs of higher education, housing and children in today's society.
- Understand generational debt.
- Understand the changing characteristics of the aging population.
- Recognize cultural stereotypes concerning aging and their effects.
- Recognize services that exist for aging people.
- Understand major health issues germane to the aging population and how the medical field operates and what other choices may exist.
- Consider the impact from the significant increase of the aging population on our society.

HSV 242C Ethics and the Professional Helper

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

A case-related study of the ethical principles determining the standards of practice in the human service field including mental health and addiction counseling. This course is reserved for the practitioner. Topics taken from the related national code of ethics will be discussed. The issues presented will be roleplayed and resolved according to universal philosophical principles. Philosophy as the foundation of professional practice guides this course. It will meet professional requirements for ethical training. (Prerequisites: HSV 111C, MHTH 187C, and ADCL 120C, each with a grade of C or higher, and permission of the department chair)

Learning Outcomes:

- Respond to ethical dilemmas using a decision-making process.
- Communicate a value system with emphasis on how these values are likely to impact counseling practice.
- Identify the different major components of ethical codes for professional counselors.
- Communicate how her/his personal values influence her/his ethical posture.
- Identify the professional organizations for counselors.
- Recognize aspects of cultural competency and work productively with people from diverse cultures.

HSV 298C Human Service Practicum II

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 8

Credit Hours: 4

The student will continue field experience work in an approved human service setting under the supervision of an approved professional. Skills, knowledge, and personal characteristics are built on and integrated into the learning and supervision of this course, as well as second-year coursework including ethics, individual counseling, and conflict resolution. Periodic conferences between the supervisor and practicum coordinator are planned to evaluate the student's progress. At the close of the semester, the student will submit documentation of the practicum activities/ experience and demonstrate the ability to relate theory to practice in the chosen field of experience. The student will

complete a total of 125 hours of field experience. The student will also complete an interview with the practicum advisor the semester prior to the first scheduled practicum. Special requests regarding practicum entrance may be brought to the department chair by the student. Review of the requests will be made by the department faculty and special exemptions may be made for entrance into the practicum. (Prerequisites: HSV 195C plus HSV 111C, HSV 242C, MHTH 187C, PSYC 105C, and PYSC 283C, each with a grade of C or higher, and permission of the department chair)

Learning Outcomes:

- Understand an educational professional environment and a community learning environment.
- Demonstrate self-awareness in one's work and supervision.
- Discuss the importance of mindfulness in the helping profession.

Industrial Design Technology

INDS 110C History of Industrial Design

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Topics in history of industrial design from 1750 to 1945, such as collaborations between art and industry, mass production, changing patterns of consumption, advances in material processes, the social and/or technological impact of industrial design, and the social and/or technological impact of industrial design on transportation, healthcare, consumer goods, domestic space, and the workplace.

Learning Outcomes:

- Understand major design styles and movements, significant designers, manufacturers, design-related companies, and innovations in technology and material use.
- Understand definitions of industrial design and identify historical antecedents that may have arisen before 1750, as well as more modern, contemporary, and future definitions of the profession.

INDS 150C Industrial Design Studio 1

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 3 Credit Hours: 4

The design process is introduced and practiced as students apply learned fundamental principles to multiple 3-D forms, structures, and products. Students will be introduced to various model-making methods. Students address the historical context of their designs as they practice critical thinking, research, problem solving, and aesthetic refinement. Projects require sketches, models, written reports, and verbal presentations of design concepts.

Learning Outcomes:

- Exhibit an uncompromising and high professional standard for design and prototyping skills, techniques, tools, materials, and craftsmanship.
- Develop design concepts through sketching, technical drawings, mock-ups and prototyping.
- Build and/or improve time management skills as evidenced by the ability to generate and explore design ideas during and between class meetings and by completing assignments on time.
- Safely and respectfully work in and navigate a product development lab.

INDS 180C Digital Rendering and Modeling

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Computer-aided design (CAD) has become a major part of the product designer's skillset in recent years. This includes digitally constructing 3-D models of designs for manufacturing as well as image creation for marketing review and material visualization. There are many different CAD programs and associated rendering technologies available, and a design firm's decision of what to use often comes down to cost, availability, and the experience of those who will use the program. One option is called Rhinoceros, or just Rhino. It is inexpensive, powerful, and easy to learn. Rhino also communicates directly in many of the same file formats as those CAD packages used by mechanical engineers. This combination of attributes make it a good choice to learn for students looking to enter a design firm or start one of their own.

INDS 225C User Experience

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Anywhere there is a person using a system, human factors and engineering concepts inevitably apply. The class concerns the design of systems, products, and services to make them easier, safer, and more effective for human use. The course focuses on human factors concepts and is a broad survey of human factors topics important to designers and researchers. This course surveys topics related to the design of products and interfaces ranging from alarm clocks, cell phones, and aircraft cockpits to logos, presentations, and web sites. Design of such systems requires familiarity with human factors and ergonomics, including the physics and perception of color, sound, and touch, as well as familiarity with case studies and contemporary practices in interface design and usability testing. Students will solve a series of design problems individually and in teams.

INDS 230C Material and Fabrication and Processes

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 3 Credit Hours: 4

Students become better designers when they have an intimate knowledge of a range of materials. Students will learn about the properties of natural wood and engineered wood-based materials, investigate the related technical processes, and evaluate how this information is both connected to and influenced by the design process. Students will work with materials directly and master skills needed to manipulate these materials. They will develop projects that allow them to engage in the design and development process and promote creativity, problem-solving, and the correct use of materials. Facility procedures, safety, care, and use of tools and equipment will be stressed.

INDS 232C Business of Design

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Moving a great idea into a sustainable reality requires a fundamental understanding of business. Successful designers understand that business principles overlap, complement, and enhance design principles. Through a variety of exercises students will learn how to approach a variety of real-world scenarios, understand company expectations, and anticipate employer concerns that will help them transition into an entry-level career opportunity. At the end of the course, students will have started a portfolio and will understand basic professional practices including interviewing for jobs, pitching ideas, networking, freelancing, licensing, and contracts. Students will also understand basic business vocabulary and the way design thinking skills can be used to identify and execute.

Learning Outcomes:

- Understand employer expectations and the interviewing process.
- Understand how the government plays a role in your professional life through IP, taxes, and regulatory.
- Understand the different types of design offices and their basic functionality.
- Develop a resume, portfolio structure, contact list and cover letter.

INDS 240C Plastics: Materials and Fabrication

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 3 Credit Hours: 4

Explores the structures, properties, and behavior of plastics as well as how they can be altered through mechanical working and heat-treating. Consideration is also given to the selection of these materials to meet manufacturing and design criteria. Lab experiments will complement the classroom presentations.

INDS 242C Manufacturing Techniques

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Introduces students to methods, materials, and manufacturing processes that translate design processes into mass-produced goods. A major component of downstream design activity involves manufacturing issues - the techniques by which materials are selected, manipulated, and then assembled. Consideration is also given to the selection of these materials to meet manufacturing and design criteria. In-class demonstrations of manufacturing techniques and site visits to local manufacturers will complement the classroom presentations.

Learning Outcomes:

- Understand the primary methods, materials, and manufacturing processes that translate design processes into mass-produced goods.
- Have the experience of the selection of these materials to meet manufacturing and design criteria.

- Understand the major component of downstream design activity involving manufacturing issues and the techniques by which materials are selected, manipulated, and then assembled.
- Have the experience of the selection of these materials to meet manufacturing and design criteria.

INDS 250C Industrial Design Studio II

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 3

Credit Hours: 4

Students will work in teams and continue to hone the design process by dissecting an existing product, analyze a market segment, and redesign the product to fit the described market. Students integrate their drawing, model making, and material knowledge to design for consumers. (Prerequisite: INDS 150C with a grade of C or higher)

Learning Outcomes:

- Identify and define the right questions to ask.
- Demonstrate a deeper understanding of the process of product development and the role the industrial designer plays as a team member.
- Understand the role and expectations of a junior industrial designer.
- Demonstrate improved skill and confidence in design communications through sketching and prototyping.
- Create a robust portfolio by encompassing multiple skill sets obtained in class lecture, discussion, and exercises.
- Define execute user and market research methodologies.
- Gain leadership experience.
- Develop and/or improve time management and project estimation skills while meeting assignment and/or project expectations.

Information Technology

IST 102C PC Applications

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Introduces students to desktop applications with an emphasis on topics from a user perspective. Topics include use of an operating system, word processor, spreadsheet, presentation software, internet, and hardware and software considerations. Students may not receive credit for IST 102C, IST 102AC, and IST 102XC.

Learning Outcomes:

- Use word processing software.
- Use electronic spreadsheet and develop workbooks, formulas and functions, and charts.
- Use presentation program to develop an electronic slide show.

IST 103C Programming with Raspberry Pi

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 2

Credit Hours: 3

Designed for students new to the world of IT. It emphasizes hands-on learning using Raspberry Pi to introduce key IT concepts that appear throughout the Networking and Software Development degree programs. Concepts include computing principles and terminology, the relationship between hardware and software, programming principles, system administration and automation, and an introduction to digital networks.

Learning Outcomes:

- Describe components of a digital computing system.
- Deploy and configure a Linux server.
- Create an application using Python.
- Use programming principles to solve simple computing challenges.
- Connect devices on a digital network.
- Build and deploy a simple web application.
- Explain the origin and impact of key digital technology trends.
- Design and implement an IT solution to solve a digital communication challenge.

IST 104C PC/Mobile Hardware and Networking

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 2

Credit Hours: 3

An in-depth exposure to computer hardware concentrating on CompTIA A+ Core 1 objectives. Students learn the functionality of computer hardware and suggested best practices in maintenance and safety issues. Through hands-on activities and labs, students learn how to assemble and configure computer hardware and the basic installation of Windows operating systems. In addition, an introduction to networking is included. This course prepares students for the first exam in CompTIA's A+ certification path, CORE 1 (220-1001). Students registering for this course should be proficient in daily computer use (such as downloading and installing software from the internet) and should be familiar with basic computer terms.

Learning Outcomes:

- Demonstrate basic applications of computer technology to be competent on both a professional and personal level.
- Demonstrate scientific thought, both quantitatively and qualitatively.
- Identify all parts of a PC.
- Discuss the functions and interactions of all PC subsystems.
- Identify and troubleshoot common PC hardware problems.
- Listen, diagnose, and walk a person/customer through a troubleshooting scenario.
- Select quality PC components based on performance and cost.
- Install, replace, and upgrade PC hardware components.
- Install and troubleshoot PC peripherals such as printers and expansion devices.
- Understand basic networking principles and apply them in challenging lab exercises.
- Acquire and demonstrate safety and computer maintenance best practices skills

IST 106C IT Career Topics

Lecture Hours: 1

Lab/Practicum/Clinical Hours: 0

Credit Hours: 1

A series of presentations and panel discussions lead by alumni, HR representatives and other industry leaders in the field on important topics in IT specifically regarding careers in IT. The goal of this course is to expose students to a variety of career types that incorporate IT. Students will have a better understanding of what IT career and IT programs they would like to pursue. This course also gives students a chance to get to know one another within the IT programs. Incorporated into this course are also brief assignments that help students plan their college work, learn how to interact with their professors, and learn how to start a resume. The in-person section in the fall semester also includes a field trip; students choose a business they would like to visit in the area.

Learning Outcomes:

- Understand variety of career types that incorporate IT.
- Have a working comfort level with other students in the IT major.

IST 109C PC OS Security and Cloud Fundamentals

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 2

Credit Hours: 3

This course is a continuation of the current material taught in IST 104C with emphasis placed on CompTIA's Core 2 Objectives. Labs and hands-on activities are used extensively to illustrate concepts. Topics include installing, maintaining, troubleshooting, and optimizing computer operating systems. Significant time is dedicated to security topics, best practices, and exploring real-world security issues. Mobile devices, virtualization, and software diagnostic utilities are also covered. This course prepares students for the second exam in CompTIA's A+ certification path, CORE 2 (220-1002).

Learning Outcomes:

- Use virtualization techniques in the creation of virtual machines.
- Demonstrate methods for installation, maintenance, troubleshooting, and optimizing computer operating systems.
- Troubleshoot common operating system and application software issues.
- Develop in-depth research skills, critical for solving software issues.
- Demonstrate methods of securing confidential data on Windows computers.
- Identify and apply mitigation techniques to solve malware issues.
- Recognize common security ploys and demonstrate avoidance techniques.

- Explore mobile device operating systems.
- Discuss change management and the importance of documentation.
- Be proficient using Microsoft Windows system tools.

IST 110C Programming Fundamentals

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 2 Credit Hours: 3

Introduces students to design and develop computer programs using the C# language. Students learn and resolve a range of programming problems by applying techniques of design, structured coding, debugging, error-handling, and troubleshooting. The course begins by exploring procedural syntax and concludes with an introduction to object-oriented programming. Topics include problem analysis, computer logic and flow control, decision and repetition structures, use of methods, arrays, program documentation, class definitions, and use of a debugger. No prior programming knowledge is necessary.

Learning Outcomes:

- Understand the use of Microsoft Visual Studio to design, develop, debug and execute small computer programs.
- Write computer programs in C# programming language
- Use memory concepts while writing programs using primitive data types.
- Use concepts of value types, reference type and output variables.
- Design and develop modular computer programs while using control structures and algorithms.

IST 120C Programming Essentials in Python

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 2 Credit Hours: 3

Covers all the basics of programming in Python, as well as general computer programming concepts and techniques. The course also familiarizes the student with the object-oriented approach. Students have access to hands-on practice materials, quizzes, and assessments to learn how to utilize the skills and knowledge gained on the course and interact with some real-life programming tasks and situations. The aim of the course is to familiarize students with general computer programming concepts like conditional execution, loops, Python programming language syntax, semantics, and the runtime environment, as well as with general coding techniques and object-oriented programming. This course is aligned towards the PCAP industry certification and once students complete this course they will be ready to take the PCAP –Certified Associate in Python programming. The Python Institute offers students who successfully complete the PCAP I Programming Essentials in Python course a 51% discount on the list price for the PCAP I Python Certified Associate Programmer Certification exam taken at Pearson VUE Testing Centers.

Learning Outcomes:

- Use variables and variable naming conventions.
- Use operator, along with the rules governing the building of expressions.
- Perform loops (while and for) and how to control their behavior using the break and continue.
- Describe the difference between logical and bitwise operations.
- Create code that passes arguments in different ways and sets default values, along with the mechanisms of returning the function's results.
- Implement try-except instruction, with its applications, and the raise instruction. Demonstrate the use of strings and their specific methods, together with their similarities and differences compared to lists.
- Demonstrate the difference between OOP and the classical, procedural approach.
- Use standard objective features such as: inheritance, abstraction, encapsulation, and polymorphism, along with Python-specific issues like instance vs.class variables, and Python's implementation of inheritance.

IST 140C Database Design and Management

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 2 Credit Hours: 3

Introduces students to the basic concepts used in database design and advanced topics such as structured query language (SQL), data modeling, table creation, normalization, views, forms, queries, and reports. The lab component includes development of business applications using a relational database, MS SQL Server. This is an entry-level course. No prior database knowledge is needed.

Learning Outcomes:

- Understand relational database concepts and database terminology.
- Create a relational database.
- Normalize a database.
- Write moderately complex SQL queries that may include sub-query, joins, and built-in functions.

IST 154C Introduction to Networks

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 2 Credit Hours: 3

Introduces the architecture, structure, functions, components, and models of the modern internet and computer networks. Configuration of IPv4 and IPv6 addresses is covered. Other topics of discussion include ethernet protocol, media access control, routing principles, subnetting, and variable length subnet masking. By the end of the course, students will be able to build simple LANs that include basic router and switch configurations, successful implementation of IP addressing schemes, and network attack mitigation. A grade of C or higher must be achieved to continue to the next Cisco C2 Course.

Learning Outcomes:

- Configure switches and end devices to provide access to local and remote network resources.
- Explain how physical and data link layer protocols support the operation of Ethernet in a switched network.
- Configure routers to enable end-to-end connectivity between remote devices.
- Create IPv4 and IPv6 addressing schemes and verify network connectivity between devices.
- Explain how the upper layers of the OSI model support network applications.
- Use security best practices to configure a small network.
- Troubleshoot connectivity in a small network.

IST 170C Introduction to Linux

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 2 Credit Hours: 3

This is the first of a two-course series that takes a computer professional knowing nothing about Linux to be a fully capable Linux administrator. Students learn how to install and configure a computer running Linux, perform maintenance tasks with the command line, manage hardware and disks, maintain the file system, and edit text files. (Prerequisite: IST 103)

Learning Outcomes:

- Perform core system administration tasks in a Linux environment.

IST 180C Cloud Services and Windows Server

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 2 Credit Hours: 3

Focuses on the use of the Windows Server operating system in a business environment. Topics include business analysis and matching system needs with an appropriate solution that includes physical, virtual and cloud based servers. Students will also study software as a service (SaaS), platform as a service (PaaS), and infrastructure as a service (IaaS) solutions and implement these solutions on a cloud provider platform. (Prerequisite: IST 104C or permission of instructor)

Learning Outcomes:

- Install and configure version(s) of Microsoft Server.
- Set up users, groups, and organization units, and assign the appropriate privileges.
- Configure services such as DNS, DHCP, file, print, and web services.
- Recreate many of the services listed above on a cloud provider platform.
- Understand the benefits of cloud computing versus traditional server environments.
- Understand the differences between software as a service (SaaS), platform as a service (PaaS), and infrastructure as a service (IaaS).

IST 200C Spreadsheets

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

This course provides training in introductory and advanced topics related to spreadsheet creation, formatting, and printing. Topics include row and column operations, formula creation (including functions), graph creation and printing,

database management techniques, and macro design and execution. (Prerequisite: IST 102C or permission of the department chair)

Learning Outcomes:

- Use functions.
- Create and edit charts, heat maps, and pictographs.
- Use filters, data validation, and worksheets.

IST 210C Object-Oriented Programming

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 2

Credit Hours: 3

Begins with an introduction to the Java programming language and then uses both Java and C# programming languages to cover topics such as: arrays, strings, collections, exception handling, and object-oriented programming. Object-oriented programming covers problem conceptualization, class definition, object instantiation, method definition and invocation, the principles and practices of reuse, inheritance, and polymorphism. It also introduces GUIs and event-driven programming. (Prerequisite: IST 110C or permission of the department chair)

Learning Outcomes:

- Know the syntax of Java programming language as well as C# programming language.
- Create, compile, run and debug moderately complex Java applications.
- Use local and online code editors as well as full IDEs to create, debug, and run moderately complex programs.
- Create objects and use inheritance, polymorphism, string class to create simple multithreaded programs.
- Understand and use event handling, AWT, Swing and/or JavaFX to create interfaces.
- Use generics and the collections framework to develop applications, single and multi-dimensional arrays, and exception handling in Java.

IST 215C Advanced Windows Programming

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 2

Credit Hours: 3

Builds on the concepts learned in IST 210 and uses .NET Framework and C# programming language. Besides using object-oriented programming, students learn and use functional programming to design and develop moderately complex applications. Students also learn data structures and algorithms, generics, collections, WPF, UWP, and entity framework. Hands-on labs include performance analysis of sorting and searching algorithms, as well as business applications development with a GUI that uses ADO or entity framework to access a database. (Prerequisite: IST 210C and IST 140, or permission of instructor)

Learning Outcomes:

- Design, develop, and debug moderately complex Console, Windows Forms and WPF applications.
- Use the latest .NET technologies such as XAML, WPF, ADO, LINQ, Lambda expressions, extension methods and code synchronization.
- Design applications that has a GUI frontend and SQL Server as the backend.
- Use the basic searching and sorting of algorithms and to solve complex problems.

IST 216C Introduction to Web Programming

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 2

Credit Hours: 3

Explores frontend web development technologies and techniques with a focus on HTML, CSS, JavaScript, and supporting libraries and frameworks. Students should be familiar with basic programming concepts prior to taking this course. (Prerequisites: IST 110 and IST 140)

Learning Outcomes:

- Structure and organize data using hypertext markup language (HTML).
- Style document presentation using cascading style sheets (CSS).
- Build a functional web page using HTML and CSS.
- Manipulate HTML using JavaScript and the document object model (DOM).
- Build a simple web application using HTML, CSS, and JavaScript.
- Deploy a web application to a local server or cloud platform.
- Use web-based resources to develop and refine a technical skillset.

IST 218C Mobile Application Development

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 2

Credit Hours: 3

A hands-on training course for designing and building mobile applications on the Android platform. This course walks students through a series of app-driven exercises showing the relationships among application building blocks. (Prerequisite: IST 110C; corequisite: IST 210)

Learning Outcomes:

- Understand the architecture of an Android application.
- Use Android Studio to develop simple to moderately complex Android apps using XML, Kotlin, and Java.
- Use emulators and real devices for development, debugging, and testing apps.
- Know the syntax of Kotlin or Java programming language as it pertains to Android programming.
- Understand when to use XML and when to use Kotlin and Java for developing graphical user interface.
- Configure and use "Gradle", the compiler used by Android Studio.
- Use touch, multi-touch, and event handling in Android Studio including implicit and explicit intents and save and retrieve data.

IST 240C Advanced Web Programming

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 2

Credit Hours: 3

Students learn to design, build, and deploy a modern web application. Topics include database integration, asynchronous communication, design patterns, and security. Coursework combines conceptual and hands-on learning components and concludes with an independent web application development project. (Prerequisites: IST 210 and IST 140)

Learning Outcomes:

- Use an integrated development environment (IDE) to write software.
- Use PHP, ASP.NET, Node.js or similar technology to build a web application backend.
- Integrate a web application backend with a SQL database.
- Integrate client-side and server-side components to build a complete web application.
- Describe contemporary web application design patterns.
- Describe security considerations for a web application.
- Deploy a complete web application to a local or cloud platform.

IST 254C Switching, Routing, and Wireless Essentials

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 2

Credit Hours: 3

Topics covered include but are not limited to implementation of virtual local area networks (VLANs), configuration and troubleshooting of inter-VLAN routing, configuration of dynamic host configuration protocol (DHCP) on networking devices utilizing IPv4 and IPv6, and the purpose and evolution of spanning tree protocol (STP). An introduction etherchannel is also included. Students will learn about wireless LAN concepts and configurations as well as routing protocols. A grade of C or higher must be achieved to continue to the next Cisco C3 Course.

Learning Outcomes:

- Configure VLANs and Inter-VLAN routing applying security best practices.
- Troubleshooting Inter-VLAN routing on layer 3 devices.
- Configure redundancy on a switched network using STP and EtherChannel.
- Troubleshoot EtherChannel on switched networks.
- Explain how to support available and reliable networks using dynamic addressing and first-hop redundancy protocols.
- Configure dynamic address allocation in IPv6 networks.
- Configure WLANs using a WLC and L2 security best practices.
- Configure switch security to mitigate LAN attacks.
- Configure IPv4 and IPv6 static routing on routers.

IST 256C Enterprise Networking, Security, and Automation

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 2

Credit Hours: 3

Students will learn how to configure routers and switches for advanced functionality. Topics of discussion include but are not limited to SingleArea open shortest path first (OSPFv2) concepts and configuration, networking security concepts such as access control lists and network address translation, and wide area network (WAN) concepts. Students will learn about quality of service (QOS) and how VPNs are used. The course will focus on network design, management, and troubleshooting. Network virtualization and automation will be introduced. (Prerequisite: CCNA C2 with a grade of C or higher)

Learning Outcomes:

- Design and configure a network for a small- to medium-sized business.
- Implement networking technologies such as Open Shortest Path First routing protocol, Etherchannel, Hot Standby Routing Protocol, Dynamic Host Configuration Protocol, ACLs, Network Address Translation, and VPNs.

IST 260C CyberOps

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 2

Credit Hours: 3

Provides an introduction to the knowledge and skills needed for a security analyst working with a security operations center team. Students will learn core security skills needed for monitoring, detecting, investigating, analyzing, and responding to security events, thus protecting systems and organizations from cybersecurity risks, threats, and vulnerabilities. Course aligns directly to a certification from Cisco. (Prerequisites: IST 154 and IST 170)

Learning Outcomes:

- Understand cybersecurity operations network principles, roles, and responsibilities as well as the related technologies, tools, regulations, and frameworks available.
- Monitor, detect, investigate, analyze and respond to security incidents.
- Apply for entry-level jobs as Associate Security Analyst and Incident Responder.
- Take the Cisco Certified CyberOps Certification exam.

IST 263C Network Security

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 2

Credit Hours: 3

Gives students the skills needed to identify and resolve computer and network security issues. The course will provide students an introduction to firewalls and other network security components that can be used to work together to create an in-depth defensive perimeter around a local area network (LAN). Students will learn how to identify threats, plan and design firewalls, develop a security policy, configure routers, workstations, servers, switches, and firewall equipment for various packet-filtering and security measures, create user authentication policies and methods, design and set up VPNs; and maintain and troubleshoot these systems.

Learning Outcomes:

- Understand network security and the threats associated with it.
- Manage authentication and authorization.
- Design and set up remote access systems.
- Understand the hardware and software associated with network security.
- Troubleshoot network issues.

IST 265C Information Security

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 2

Credit Hours: 3

Covers basic security principles, compliance and operational security, threats and vulnerabilities; application, data, and host security; access control and identity management, and cryptography. It also covers mobile device security, cyberattacks and defenses, and recent developments and emerging trends in information security, such as virtualization. The course prepares students for the CompTIA Security+ certification exam. (Co/prerequisites: IST 180 and IST 154C; prerequisite: IST 109)

Learning Outcomes:

- Plan and implement network security.
- Plan and implement operational security to include risk management, incident response, physical security, and security awareness and training.

- Identify and mitigate security threats and vulnerabilities.
- Implement application, data, and host security.
- Implement access control and identity management.
- Understand and use appropriate cryptographic methods.

IST 267C Cisco VoIP

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 2 Credit Hours: 3

Incorporates both theory and hands-on labs on topics such as connecting IP phones to the LAN infrastructure, installing call manager express (CME), CME phone configuration, gateway and trunk concepts and configuration, and other topics pertaining to VoIP. Students successfully completing this course will have mastered the skills necessary to install a Cisco VoIP solution for a small- to mid-sized company.

Learning Outcomes:

- Successfully deploy Cisco VoIP technologies.

IST 270C Advanced Linux

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 2 Credit Hours: 3

The second of two courses that introduce the basics of Linux system management; prepares students to earn a Linux Certification. It is designed as a natural extension of IST 170C and introduces advanced file-system management capabilities, security controls, and firewall configuration. Students will learn how to manage scheduled jobs, and perform troubleshooting tasks, network- and security-related tasks, and other administrative-related tasks (Prerequisite: IST 170C)

Learning Outcomes:

- Perform core system administration tasks in Linux.
- Build additional skills needed to be a Linux system administrator.

IST 290C IT Career Development

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 2 Credit Hours: 1

Consists of a series of readings, exercises, and assignments designed to prepare students to succeed in their IT careers. Topics include resume writing, personal networking, job search resources, interviewing, compensation negotiation, and career development. (Prerequisites: students must have accumulated 21 credits of IT-related courses before enrolling into this course)

IST 291C IT Internship Search and Approval

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 4 Credit Hours: 1

Students will complete assignments and visit companies for networking internship search purposes. Students will also make a final formal presentation to the IT Internship Review Board (IRB) to obtain internship approval. Students must obtain an approved internship before enrolling in this course. (Prerequisite: IST 290)

Learning Outcomes:

- Interview for a job.
- Seek potential employment.
- Prepare materials for a job search (including resume, cover letters, and thank you responses).
- Deliver a presentation.

IST 294C Senior IT Internship

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 8 Credit Hours: 2

This is a capstone course for the Information Technology curriculum providing application of skills acquired in a real-world environment. Students will test their ability to organize and interpret data, develop, apply programmed solutions to problems, and submit thorough documentation of the task.

Learning Outcomes:

- Develop and apply solutions to real world problems from knowledge gained in the IT program.
- Identify and explain skills gained from the internship.

Interdisciplinary

INDL 101C STEM in the First Year Experience

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Introduces new college students to a STEM field through integration with the social sciences and humanities while developing the “habits of mind” and academic skills critical to first-year college success. Through examination of a special topic, students will be challenged to reflect on the behaviors that both improve and impede their learning of specific subject matter and their overall academic progress. (Enrollment limited to first-time college students and transfer students with fewer than 12 credits by permission of authorized academic advisors. Interested students should contact the Advising Center.)

Learning Outcomes:

- Discuss the essential characteristics of science as a process and the basic assumptions under which scientists work.
- Evaluate the interaction between science and society, including common confusions or misunderstandings regarding science, the scientific method, and the status of scientific results or conclusions.
- Explain the nuances of the course’s special topic, including the social, political, and economic effects.
- Describe the ethical issues related to public policy and decisions individuals make about the special topic.
- Develop scientific writing skills.
- Identify and use campus resources.
- Create academic and career plans.
- Use effective self-assessment and self-management techniques.
- Explain the importance of working harmoniously with people of diverse backgrounds.

INDL 120C Global Public Health Issues

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Provides an introduction to and overview of the key areas of global health by addressing the major determinants of health and how health status is measured to determine the burden of disease in the developing world. Using the perspectives of public health, the course will cover factors associated with the development of health problems and efforts to prevent disease in impoverished areas. Students will explore the role of social communication, politics, religion, economics, education, and culture in contributing to global public health issues and will integrate these factors and values in developing solutions to the widespread public health issues impacting communities worldwide. Students will learn about the magnitude of disease in the developing world (e.g., communicable and non-communicable disease, women and child health, nutrition, and unintentional injuries) and how health is assessed and how health systems effectively work together to improve global health. (This course may be used to meet either an SOCI elective or a Humanities elective but not both.)

Learning Outcomes:

- Explain the importance of public health and the interconnectedness of local and global societies.
- Describe the ethical basis of health and well being.
- Evaluate examples of successful efforts that have been done to improve lives and livelihoods.
- Identify mechanisms that impact global health within chosen careers.
- Discuss methods used to measure and assess the health of populations.

Landscape Design

LAND 101C Identification and Uses of Trees

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Introduces evergreen and deciduous trees commonly found and used in the Northeast. Emphasis will be on identification, cultural requirements, and design applications in the landscape. Students will become proficient in

identifying trees by recognizing distinctive features such as height, form, twig and bud characteristics, leaf shape, color, and flowers.

Learning Outcomes:

- Properly develop a landscape plan.
- Understand that trees are just one part of a total landscape design.
- Understand a tree's impact on a landscape can be very positive or can be a liability.
- Understand the important use of trees in the landscape.

LAND 102C Identification and Uses of Shrubs, Groundcovers, and Vines

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Introduces evergreen and deciduous shrubs, vines, and groundcovers commonly found and used in the Northeast. Emphasis will be on identification, cultural requirements, and design applications in the landscape. Students will become proficient in identifying plants by recognizing distinctive features such as height, form, twig and bud characteristics, leaf shape, color, and flowers.

Learning Outcomes:

- Understand how to select appropriate shrubs, vines, and groundcovers for use in professional environmental and landscape design.

LAND 109C Basic Site Grading and Surveying

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 2 Credit Hours: 3

Familiarizes students with surveying techniques and grading principles that are integral to interpreting topographical information and understanding natural and man-made features that influence grade changes in the landscape. Emphasis will be on practical and basic applications of survey equipment, note-keeping, plotting, and other measuring techniques that are useful to landscape contractors and designers. Practical exercises include incorporating designed features such as stairs, retaining walls, ramps, walkways, swales, etc., into the landscape. High school-level Algebra I and Algebra II, with grades of C or higher, are recommended.

Learning Outcomes:

- Understand slope and horizontal and vertical spatial concepts.
- Measure and record data in organized fashion.
- Prepare an accurate sketch which graphically communicates proposed improvements.
- Calculate areas and volumes.
- Estimate cost of time and materials.

LAND 112C Landscape Drawing and Presentation Techniques

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 2 Credit Hours: 3

Focuses on learning the fundamentals of landscape design drawing necessary to graphically communicate design ideas. Students will learn techniques to improve line quality, lettering, sketching, rendering, and drawing layout. Black and white and color media will be used. These drawing and rendering techniques will be used to create presentation quality site plans, elevations, and perspectives. The use of computers as a means in creating presentation drawings will be introduced.

Learning Outcomes:

- Properly develop a landscape plan.
- Understand that trees are just one part of a total landscape design.
- Understand a tree's impact on a landscape can be very positive or can be a liability.
- Understand the important use of trees in the landscape.

LAND 115C Landscape Design Theory

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Introduces the student to the field of landscaping design. Lectures, reading, and problem-solving exercises provide a basic overview of historical, philosophical, and technical aspects of landscape design and the profession of landscaping architecture. The course will also explore how design, site environment, and legislation affect the design process.

Learning Outcomes:

- Have working knowledge of landscape design principles and practice.
- Have proficiency in written, oral, and graphic communication skills necessary to express design ideas and concepts in a professional environment.
- Have a working knowledge of and appreciation for the natural physical environment in the context of landscape and environmental design-related field.

LAND 118C Natural Resource Stewardship

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 2

Credit Hours: 4

Welcomes students of all levels of interest in outdoor careers, regional natural history, natural resources, and the relationship between thriving ecosystems and healthy communities. The course is held outdoors on 700 acres of historic woodlands, farm fields, orchards, gardens, and ponds at the landmark Canterbury Shaker Village Museum (15 minutes north of Concord). Students engage with field specialists while experiencing the science behind topics that include tree and plant identification, ecological landscaping, local wildlife and their habitats, urban and rural forestry practices, water quality, invasive species, climate change, and permaculture. Skill is achieved through experiential learning and supported by rich online resources and assignments that focus on the ecosystems surrounding our homes and communities. In a real-world, service-learning opportunity, students apply scientific and horticultural skills to a project of their own interest; experience is gained in public outreach, local government access, and natural resource stewardship from awareness to activism. Visit nhstewards.org to learn more about this course in partnership with UNH Extension and other N.H. natural resource partners and organizations.

LAND 200C Vectorworks Landmark 2-D

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Teaches students the basic functions and uses of computer-aided design (CAD) software in landscape architecture, design, and construction. This course will focus on 2-D applications of CAD software to create presentation and construction documents. Students will learn how to import hand-drawn concepts, survey plans, create planting plans, construction drawings, and details. Some 3-D applications will be demonstrated at the end of the semester. On completion students should be able to prepare basic 2-D landscape and planting plans.

Learning Outcomes:

- Understand the power and precision of computer-aided modeling and drafting.
- Understand and be proficient at using 2D tools.
- Communicate 2D drawings and 2D representations of 3D plans and objects in a perspective view and section.
- Construct 2D drawings in industry-standard plan form and plot.

LAND 218C Landscape Design Studio

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Focuses on understanding and analyzing the requirements of the program and the site to develop designs that respond both to client needs and environmental context through lectures, site visits, and design projects. Moving through projects that range in size, scale, and complexity, this course examines different issues in context, program, and client requirements. Students will learn to inventory and record existing site conditions. Emphasis in this design studio will be on preparing landscape plans, sections, planting plans, specifications, and details. (Prerequisites: LAND 101C, LAND 102C, LAND 115C, and LAND 220C, or permission of the department chair)

Learning Outcomes:

- Associate and classify biotic and abiotic components of N.H. natural resources and their functions in urban and rural ecosystems.
- Describe and evaluate the effects of human impact on N.H. ecosystems.
- Describe statewide ecological issues including land fragmentation, loss of habitat and biodiversity, invasive species, landscape practices, and urban forestry.

- Identify and evaluate techniques to mitigate human impact on functioning ecosystems.
- Appraise and document the physical, social, economic, and health benefits that healthy ecosystems provide to communities.
- Distinguish and apply tools and techniques for ecosystem restoration and resource conservation.
- Summarize the process of natural resources planning at the community level from awareness to stewardship.
- Describe the values that land conservation techniques, open-space, and greenway corridors provide to the healthy communities and ecosystems.
- Assess and apply ecologically-sound landscape practices such as inventory, site analysis, soil testing, and proper pruning, planting, and extended care of trees and shrubs and other plant material.
- Summarize steps for smart growth and community planning and principles for permaculture and sustainable living.

LAND 220C Planting Design

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Includes the combination of landscape elements when used with architectural, aesthetic, engineering, and climate control uses of plants. Students work in graphics skills and develop the ability to produce professional quality plans. (Prerequisites: LAND 102C and LAND 112C)

Learning Outcomes:

- Understand the process of creating a landscape design.
- Understand how plants are used in the landscape for a successful design.
- Select plants for projects based on horticultural needs and use.
- Produce planting plans, details, and specifications necessary for implementing designs.

LAND 225C Landscape Construction Details and Methods

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 2

Credit Hours: 3

A survey of the materials used in landscape constructions, the methods used in assembling the materials into the landscape, and the forces acting on the structures. Included are the characteristics and properties of each of the landscape materials and the relative costs of the materials, including installation. Landscape materials and methods to be studied include site work, various paving materials, various structural materials, and site drainage materials. The student will learn how to read and prepare plans showing construction details including walls, walkways, wooden structures, and water features. (Prerequisite: LAND 112C or permission of the department chair)

Learning Outcomes:

- Understand how landscape characteristics (soil, drainage, human interaction, natural processes) affect landscape installations.
- Investigate and identify landscape drainage and earthwork solutions for improved site access.
- Recommend and select appropriate landscape hardscape elements, materials, and installation methods.
- Interpret, communicate, and draw landscape construction details.
- Develop construction details for newly developed landscape construction elements.
- Develop cost estimates for landscape installations.

LAND 270C Sustainable Landscape Principles and Practices

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 2

Credit Hours: 4

Introduces and examines the principles and practices required to create a sustainable environment. Issues facing communities locally and globally will be examined and discussed. Emphasis will be placed on methods used to create landscapes that improve the environment by conserving resources and reducing chemical application. Students will learn how site design, plant selection, and pest and water management practices influence the sustainability of the designed landscape.

Learning Outcomes:

- Gain and demonstrate an understanding of basic ecological design principles.
- Apply principles to the art and science of landscape design, integrating form, function, feasibility, and fitness of landscape features into a unified and harmonious whole with respect to surrounding natural systems.

- Understand basic ecological and environmental literacy, its implications on site, and reveal such implications in design work and in dialogues.

LAND 290C Senior Project/Internship

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 12 Credit Hours: 4

As the capstone course of the Landscape and Environmental Design curriculum, this course will require the student to demonstrate integration and application of the knowledge and skills from all courses in the program. This may be achieved either through a comprehensive senior design project developed by the student under the guidance of a faculty member or through participation in a field internship with an approved industry partner. Students will be required to provide regular and ongoing documentation of the learning experience to ensure that all course and program goals are met. (Prerequisite: LAND 102C, LAND 112C, LAND 220C with grades of C or higher and the approval of the department chair)

Languages

ASL 104C American Sign Language for Beginners

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Introduces students to basic knowledge and skills of American Sign Language. Students will achieve the beginning levels of fluency in communicating through the use of ASL.

Learning Outcomes:

- Identify key linguistic rules of ASL (Topic and OSV).
- Implement basic ASL and gesture in conversation.
- Identify general social/cultural rules of communication among ASL users.
- Implement limited fingerspelling and numbers.

ASL 105C Advanced American Sign Language

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Teaches students the advanced skills and knowledge of American Sign Language. Students will achieve fluency in communicating through the use of ASL. (Prerequisite: ASL 104C)

Learning Outcomes:

- Identify key linguistic rules of ASL (Topic and OSV) implement basic ASL and gesture in conversation.
- Identify general social/cultural rules of communication among ASL users.
- Implement fingerspelling and numbers.
- Demonstrate advanced ASL fluency.

CHIN 130C Mandarin Chinese I

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

An introductory course for students with no background in the language. Students will learn to speak and understand standard Mandarin and read and write simplified Chinese characters. Students will develop speaking and listening skills through audiovisual media, interactive activities, and pair dialogue practice. Reading skills are developed through graded reading activities. Character writing practice and composing short pieces will develop writing skills. A strong emphasis on grammar provides the necessary framework to communicate clearly and effectively. Short lectures and the reading and sharing of current event news will develop an understanding of Chinese culture, past and present.

Learning Outcomes:

- Identify features of everyday life and culture in multiple countries where the language is spoken.
- Orally communicate short messages and ask questions on a variety of everyday topics with novice-level pronunciation.
- Meet the demands of practical writing situations at a novice level, using basic vocabulary and grammatical structures.
- Identify key words, aural cognates, and formulaic expressions that are highly contextualized.

FREN 121C French I

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

An introduction to basic French language, history, and culture through a balanced four-skills approach to learning through listening, speaking, reading, and writing activities. Multimedia resources, interactive language programs, videos, and the internet will be used. French I is geared toward students who have no previous knowledge of the language.

Learning Outcomes:

- Identify features of everyday life and culture in multiple countries where the language is spoken.
- Orally communicate short messages and ask questions on a variety of everyday topics with novice-level pronunciation.
- Meet the demands of practical writing situations at a novice level, using basic vocabulary and grammatical structures.
- Identify key words, aural cognates, and formulaic expressions that are highly contextualized.

FREN 122C Elementary French II

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

A fully integrated intermediate French course that uses a multimedia approach to emphasize near-complete immersion in the French language and to build on the skills outlined in FREN 121C. French II is intended for students who have one or two years of high school French. (Prerequisite: FREN 121C or equivalent)

Learning Outcomes:

- Identify nuanced features of everyday life and culture in multiple countries where the language is spoken.
- Orally communicate and handle a variety of tasks essential to survival in the target-language culture.
- Meet the demands of practical writing situations using discrete sentences, situational vocabulary, varying syntax, and grammatical structures.
- Accurately identify key phrases, sentences, and paragraphs, including aural cognates and a variety of formulaic and quotidian expressions in multiple social contexts.

GERM 115C Elementary German I

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Designed for beginning German students who are interested and motivated in speaking and learning about the rich German language and culture. It is designed for continued language study, travel, and business purposes. Since a native German speaker will be teaching the course, the emphasis will be in communicative as well as written skills of the living German language. Vocabulary and phonetics studies will be enhanced through visual and auditory means. Dialogue and oral presentations will help students form and develop these skills. For correct usage of the language, a strong grammar foundation will be given through multiple reading, speaking, writing, and listening practices. Current German topics will also be discussed and there will be German guest speakers.

Learning Outcomes:

- Identify features of everyday life and culture in multiple countries where the language is spoken.
- Orally communicate short messages and ask questions on a variety of everyday topics with novice-level pronunciation.
- Meet the demands of practical writing situations at a novice level, using basic vocabulary and grammatical structures.
- Identify key words, aural cognates, and formulaic expressions that are highly contextualized.

SPAN 111C Elementary Spanish I

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

A fully integrated introductory Spanish course. The course is designed for beginning Spanish students whose learning objectives and needs are in any of the following categories: continued language study, business purposes, or travel. The emphasis is to develop proficiency in communicative skills concentrating on the dynamic application of the living language taught through dialog, phonetics, and vocabulary. A strong grammar foundation and other basic language skills are taught through actual phrases and sentences, helping the student develop an instinctive sense of the correct

usage. These objectives will be achieved through the following approaches: speaking, listening, reading, writing, and cultural studies.

Learning Outcomes:

- Identify features of everyday life and culture in multiple countries where the language is spoken.
- Orally communicate short messages and ask questions on a variety of everyday topics with novice-level pronunciation.
- Meet the demands of practical writing situations at a novice level, using basic vocabulary and grammatical structures.
- Identify key words, aural cognates, and formulaic expressions that are highly contextualized.

SPAN 112C Elementary Spanish II

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

A fully integrated intermediate Spanish course. The course is designed for intermediate Spanish students whose learning objectives and needs are in any of the following categories: continued language study, business purposes, or travel. The emphasis is to consolidate and reinforce the language skills acquired in Elementary Spanish I or the equivalent and to continue building communicative skills and cultural appreciation. The course continues to offer a comprehensive review of basic first year grammar structures, while developing proficiency and advancement in communicative skills concentrating on the dynamic application of the living language taught through dialog, phonetics, and vocabulary. A strong grammar foundation and essential language skills are taught through actual phrases and sentences, helping the student develop an instinctive sense of the correct usage. These objectives will be achieved through the following approaches: speaking, listening, reading, writing, and cultural studies. (Prerequisite: SPAN 111C, the equivalent or permission of the department chair)

Learning Outcomes:

- Identify nuanced features of everyday life and culture in multiple countries where the language is spoken.
- Orally communicate and handle a variety of tasks essential to survival in the target-language culture.
- Meet the demands of practical writing situations using discrete sentences, situational vocabulary, varying syntax, and grammatical structures.
- Accurately identify key phrases, sentences, and paragraphs, including aural cognates and a variety of formulaic and quotidian expressions in multiple social contexts.

Learning Support

Individualized learning support courses for students who need structured guidance, applied study skills, and instruction in time management strategies. Students enroll in LLRC courses to help them progress toward independent, self-directed learning and the rigors of college work. LLRC courses must be taken in conjunction with courses being taken for credit, earn institutional credit only, may not be taken as electives to meet graduation requirements, and are not eligible for financial aid. Students in the AGS/AGS programs must either be concurrently enrolled in or have already successfully completed GST 102C.

Students must register with permission of the coordinator of Accessibility Services or the director of the Academic Center for Excellence for any combination of up to three total LLRC courses, not to exceed a maximum of 6 credits toward GPA during enrollment at NHTI. At the conclusion of any LLRC course enrollment, students are encouraged to use the academic supports available to all students, such as Math Lab, Writing Center, and Computer Lab, and/or request a tutor, assistive technology, and computer-aided instruction.

LLRC 111C Learning Skills Support

Lecture Hours: 1

Lab/Practicum/Clinical Hours: 0

Credit Hours: 1

Students complete individual contracts consisting of a total of 15 contact hours. Students can register by Week 7 of the semester.

LLRC 112C Structured Learning Support

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 0

Credit Hours: 2

Students complete individual contracts consisting of a total of 30 contact hours. Students can register by Week 4 of the semester.

LLRC 113C Intensive Learning Support

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

For students who need significantly more time than the typical one to two hours of independent work required for each hour of class time. Academic guidance for those who have not demonstrated successful progress in the past will include addressing reasons for lack of success, such as fit with program requirements, goals, need for additional structure, and formal support. Students complete individual contracts consisting of a total of 45 contact hours. Students can register by Week 3 of the semester.

Legal Nurse Consultant

LGNC 101C Legal Nurse Consulting

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 0 Credit Hours: 1

Provides a comprehensive program for the principles and practices of legal nurse consulting. This course examines issues of healthcare and nursing law, as well as the judicial system. This course utilizes the most current and authoritative textbook in the specialty of legal nurse consulting and presents all facets of the practice.

LGNC 102C Risk Management

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 0 Credit Hours: 1

The student will define and examine risk management as well as be provided with the legal knowledge to assess and reduce risks to patients, visitors, staff, and institution. The student will develop the tools for formulation of plans aimed at reduced risks.

LGNC 103C Administrative Law

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 0 Credit Hours: 1

Covers the delegation of power to agencies, the procedures followed by agencies, and judicial and other oversight of agencies. The power of agencies to promulgate rules, decide individual cases, and conduct investigations is carefully studied.

LGNC 104C Healthcare Law

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 0 Credit Hours: 2

Focuses on issues in the healthcare industry such as organization, treatment, staff requirements, regulatory compliance, and record management. Topics include the delivery of healthcare services, private and public financing of healthcare services, and ethical considerations.

LGNC 105C Legal and Healthcare Ethics

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 0 Credit Hours: 1

Examination of ethical issues. Topics include legal professional ethical rules and healthcare ethical issues with emphasis on skills necessary to guide self and others in the process of ethical decision making.

LGNC 106C LNC Internship

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 9 Credit Hours: 3

Offers the opportunity to combine the theoretical and practical issues of the classroom in the workplace setting. Students are required to complete a specified number of hours in a law-related environment or healthcare setting. Meetings will be held with the internship coordinator to discuss the ongoing experience.

Manufacturing Engineering Technology

MFET 111C Manufacturing and Materials Processing

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 3

Credit Hours: 4

Provides a basic understanding of traditional methods of materials processing used in product manufacturing. Through lectures, demonstrations, and first-hand lab exposure, the student is given the theory and applications of each process. The following are covered: casting, extruding, forging, molding, forming, heat treating, joining, and an introduction to machining methods, both conventional and numerically controlled. A \$20 materials fee will be assessed for all students.

Learning Outcomes:

- Identify basic mechanical properties of typical engineering materials and methods of modifying them.
- Use basic precision measuring equipment and/or tools.
- Read and interpret engineering drawings, including GD&T.
- Be versed in machine shop safety practices and procedures.
- Distinguish between processes, appreciate their advantages/disadvantages, and design basic processing sequences.
- Set up and operate the following machines and demonstrate safe operating procedures: cut-off saw, lathe, vertical milling machine, and conventional surface grinder.
- Produce a sand casting given a simple pattern and related engineering documentation.

MFET 202C Measurement and Control

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 2

Credit Hours: 4

Begins with the study of basic electronics (analog and digital) and electronic components (transistors, op-amps, SCR's). Electromechanical principles are introduced, leading to consideration of sensors and transducers used in production processes. Paralleling this sequence is the development of programming in Visual Basic. These two paths join during the second half of the course where programming logic controllers (PLCs) and relay ladder logic (RLL) are presented. In the lab, students gain hands-on experience with all hardware and software covered in the course. (Prerequisites: PHYS 135C [or basic AC/DC theory] with a grade of C or higher, or permission of the department chair)

Learning Outcomes:

- Learn the function and safe operation of basic electrical and electronics test equipment.
- Review of basic circuit theory.
- Apply electromechanical concepts in design and selection of systems.
- Have working knowledge of computer programming, with emphasis on industrial applications.
- Implement industrial transducers and controllers through the selection, setup, and calibration of measurement instrumentation.
- Conduct and document laboratory experiments.
- Use various software programs to solve engineering problems.

MFET 210C Lean Manufacturing

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

A study of the concept of lean production applied to the manufacturing sector. The course covers the fundamental concepts and philosophy of lean used to achieve operational excellence. Lean concepts such as waste reduction, one-piece flow, pull systems, constant continuous improvement, and development of personnel into leaders. Lean concepts/tools covered will include kaizen, value stream mapping, work standardization, kanban, 5S, 5 why, A3 report, just in time (JIT), and takt time.

Learning Outcomes:

- Describe the difference between Lean manufacturing and traditional mass production systems.
- Identify muda (waste) and its detriments to efficient manufacturing.
- Create and use standards and stability in a lean enterprise.
- Describe and use visual management concepts.
- Identify and implement the 5 S system in a lean environment.
- Understand standardized work in lean production.

- Understand and demonstrate a JIT and kanban system.
- Develop and use a value stream map.
- Develop and use an A3 report.
- Describe the value of the jidoka principle.
- Understand the importance of management involvement in creating a lean culture.
- Describe hoshin planning and its importance in a lean manufacturing system

MFET 220C Manufacturing Processes and Machine Tools

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 3 Credit Hours: 4

A technical study of the theory, equipment, and application of machine tools and metal removal processes. Processes covered include turning, milling, and drilling, with an emphasis on numerical control. Theory is applied through actual machine operation in lab. (Prerequisites: MFET 111C, and MCET 105C or MNFP 105C)

Learning Outcomes:

- Understand the physics and dynamics of the metal cutting process and the various types of chip formation.
- Identify mechanical and physical properties of various cutting tool materials and specify the proper tool material for a specific application.
- Select the proper machining processes required to generate various features for a desired part.
- Understand and describe the operation of various types of machining operations and specify the application and limitations of each of the machines and tooling required.
- Operate CNC machines and create basic Gcode programs.
- Understand the economics of machining and estimate the cost of manufactured items.

MFET 231C Production Systems

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

A study of the organization of the production system as well as the techniques used to control its operation. Topics covered include forecasting, production planning, plant layout, inventory control, work measurement, job sequencing, and operation scheduling. An introduction to lean manufacturing concepts is also provided. (Prerequisite: MFET 111C)

Learning Outcomes:

- Understand operations management tools ,maintenance and reliability, JIT and lean operations, location and layout global challenges strategy, project management techniques, forecasting, quality, design of goods, process strategy/sustainability, human resources and work measurement, and production planning/scheduling in a manufacturing context.

MFET 241C Computer-Integrated Manufacturing

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 3 Credit Hours: 4

A study of flexible industrial automation as it applies to product-producing industry. Particular emphasis is on numerical control, CAD/CAM, and computer-integrated manufacturing. The basic theory and application of these areas are studied. In the lab portion of the course, the student has the opportunity to set up, program, and operate aspects of a computer-controlled manufacturing system. (Prerequisite: MFET 220C.)

Learning Outcomes:

- Understand basic CNC programming techniques using manual G-code programming language.
- Understand CAM software to generate CNC programs (G-code) from CAD modeling data.
- Understand simulation software; these include CNC programming and machine simulation.
- Be familiar with the concepts and components of CNC equipment.
- Produce technical documentation used to build and troubleshoot an advanced manufacturing process.
- Understand procedures on how to plan to produce projects.
- Evaluate the process to produce an efficient outcome.
- Understand the working of 3+1 and 3+2 machining.
- Understand the benefit of using CAM for jigs and tooling.
- Understand the acronyms and abbreviation's used within CAM and controller language.

MFET 252C Quality Control

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 2

Credit Hours: 4

A study of the techniques used to collect, organize, and analyze information that can be used in making decisions regarding quality. The course will begin with a review of the basic principles of statistics and probability and then develop such topics as process capability, process control, acceptance sampling, and reliability. The scope of quality will be expanded to include such topics as reliability, quality costs, product liability, 6-sigma, and quality systems. Activities will provide the student with the opportunity to apply the principles developed in the classroom through the use of computer examples and hands-on exercises. (Prerequisites: MATH 251C)

Learning Outcomes:

- Develop a working knowledge of statistical terminology and symbols.
- Demonstrate an understanding of the basic concepts underlying probability and statistics.
- Construct X, R, p, and C charts and demonstrate knowledge of chart interpretation.
- Use various sampling plans current in industry.
- Use computer software applicable to statistical quality control.
- Understand the relationship between quality and reliability.
- Determine the cost of quality.
- Understand quality systems such as ISO 9000, ISO 14000, and Six Sigma.

Mathematics

MATH 092C Introduction to Algebra

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

A stand-alone preparatory course. Topics include expressions, linear equations and inequalities, linear functions, slope, word problems, systems of linear equations, radicals, polynomials and factoring techniques, rational expressions, quadratic equations, and exponents. Calculator use is allowed in the course. The institutional credits awarded for this course do not count toward graduation requirements but are calculated into GPA. Completion of this course requires a grade of C or higher to advance to a college-level mathematics course. For institutional credit only. (Prerequisite: permission of academic advisor)

Learning Outcomes:

- Apply the properties of real numbers to simplify algebraic expressions.
- Solve algebraic equations in one variable, including formulas and proportions.
- Solve algebraic inequalities in one variable, including single and compound inequalities, and show solutions in interval notation and on a number line.
- Graph points and lines on a coordinate plane.
- Write linear equations from information given about the line.
- Graph and define functions using function notation.
- Solve and graph systems of linear equations, including applications of systems.
- Apply the rules of exponents in simplifying algebraic expressions.
- Perform operations on polynomials.
- Demonstrate the techniques of factoring polynomials.
- Perform operations on rational expressions and express in simplest terms.
- Perform operations on radical expressions and express in simplest terms.
- Solve and graph quadratic equations, including applications of quadratic equations.

MATH 120C Quantitative Reasoning

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

Exposes students to a wide range of general mathematics. Problem solving and critical thinking skills, along with the use of technology, will be emphasized and reinforced throughout the course as the student becomes actively involved in solving applied problems. Topics include number systems, set theory, modeling, finance, geometry, measurement, probability, statistics, and selected subtopics related to the student's major field of study. A graphing calculator is strongly recommended. (Prerequisite: Satisfactory placement test scores as defined by the mathematics faculty or successful completion [with a grade of C or higher] of MATH 092C or by permission of the math department chair.) Students who have received credit for MATH 120C may not also receive credit for MATH 120XC.

Learning Outcomes:

- Solve problems involving percent and proportion.
- Convert between number systems that have different bases.
- Apply finance formulas for simple and compound interest and annuities.
- Convert between standard and metric systems of measurement (area, volume, weight, temperature).
- Calculate perimeter, area, volume, and surface area of two- and three-dimensional objects.
- Apply trigonometric relationships.
- Apply counting methods and fundamentals of probability.
- Calculate measures of central tendency and dispersion.
- Build and interpret frequency distributions and statistical graphs.
- Apply the normal distribution to solve problems.
- Apply, and interpret linear correlation and regression.

MATH 120XC Quantitative Reasoning

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 3

Credit Hours: 4

Exposes students to a wide range of general mathematics. Problem solving and critical thinking skills, along with the use of technology, will be emphasized and reinforced throughout the course as the student becomes actively involved in solving applied problems. Topics include number theory and systems, functions and modeling, finance, geometry, measurement, probability, statistics, and selected subtopics related to the student's major field of study. (Prerequisite: MATH 092C with a grade of C or higher or the high school equivalent with a grade of C or higher) Students who have received credit for MATH 120C may not also receive credit for MATH 120XC.

Learning Outcomes:

- Solve problems involving percent and proportion.
- Convert between number systems that have different bases.
- Apply finance formulas for simple and compound interest and annuities.
- Convert between standard and metric systems of measurement (area, volume, weight, temperature).
- Calculate perimeter, area, volume, and surface area of two- and three-dimensional objects.
- Apply trigonometric relationships.
- Apply counting methods and fundamentals of probability.
- Calculate measures of central tendency and dispersion.
- Build and interpret frequency distributions and statistical graphs.
- Apply the normal distribution to solve problems.
- Apply, and interpret linear correlation and regression.

MATH 124C College Algebra

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

Topics include linear, quadratic and higher degree equations; rational, radical, exponential, and logarithmic equations; graphs of functions; models and applications of functions; systems of linear equations; matrices and conic sections; sequences and series; and trigonometry. A graphing calculator is required. (Prerequisite: successful completion of MATH 092C or high school equivalent with a grade of C or higher, satisfactory placement scores as defined by the mathematics faculty, or by permission of the department chair) Students who have received credit for MATH 124XC may not also receive credit for MATH 124C.

Learning Outcomes:

- Describe key features of the graphs of functions when given tables, equations, or graphs.
- Solve equations including: linear, quadratic, rational, radical, absolute value, exponential, and logarithmic equations.
- Perform transformations and algebraic operations (including composition) on functions
- Solve absolute value inequalities.
- Solve and graph higher order polynomial equations and functions.
- Solve systems of equations in two and three variables.
- Solve right triangles using basic trigonometry.
- Analyze and graph equations of conic sections.
- Convert between lists, equations, and sigma notation in sequences and series.
- Apply function and equation solving skills to real world problems.

MATH 124XC College Algebra

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 3

Credit Hours: 4

Designed for students who need to develop requisite math skills while simultaneously studying advanced algebra topics. During lab sessions, students receive instruction and practice in fundamental skills directly related to the topics presented during lecture. The course emphasizes the use of the graphing calculator as a learning tool and as a means to obtain solutions. Topics include linear, quadratic, and higher-degree equations; rational, radical, exponential, and logarithmic equations; graphs of functions; models and applications of functions; systems of linear equations; matrices and conic sections; sequences and series; and trigonometry. A graphing calculator is required. (Prerequisite: high school Algebra II with a grade of C or higher (or equivalent), MATH 092 with a grade of C or higher, or by recommendation of the Math/Physics Department) Students who have received credit for MATH 124C may not also receive credit for MATH 124XC.

MATH 125C Finite Mathematics

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

Topics include matrices, linear programming, counting techniques, sets, probability, statistics, mathematics of finance, Markov chains, and game theory. Applications will be emphasized. A graphing calculator will be required. (Prerequisite: MATH 124C or MATH 124XC)

Learning Outcomes:

- Use matrix operations to solve applications involving systems of equations, including input-output systems and message encoding.
- Formulate and solve a linear programming problem using graphing or the simplex method.
- Solve problems in finance (simple and compound interest and annuities; amortization tables).
- Perform operations on sets and use Venn diagrams to solve application problems.
- Apply concepts of probability, including conditional probability and Bayes' Theorem.
- Perform calculations involving counting principles and apply to probability problems.
- Solve applications involving the binomial probability distribution.
- Calculate measures of central tendency and variation for a data set or frequency distribution.
- Solve applications involving the normal distribution.
- Use regular or absorbing Markov chains to solve long-term probability problems.
- Calculate payoff and evaluate strategies for applications involving strictly determined or mixed strategy games.

MATH 130C Geometry

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

Introduces the student to college-level Euclidean geometry, including definitions, postulates, and theorems. Topics include reasoning and proofs; parallel and perpendicular lines; triangles and congruence; quadrilaterals; circles; transformations; area; and analytic geometry. The course also introduces concepts in non-Euclidean geometry. The student will complete a required project. A graphing calculator, compass, protractor, and dynamic geometry software are required. (Prerequisite: high school Algebra II with a C or higher [or equivalent] or MATH 092 with a C or higher or by recommendation of the Math/Physics Department)

Learning Outcomes:

- Use axioms, definitions, and given theorems to prove properties of geometry.
- Prove two triangles congruent under varying sets of hypotheses (the traditional SAS, SSS, ASA, AAS proofs).
- Use the inequality theorems for triangles to establish relationships between measures of sides and angles of triangles.
- Explain the difference between Euclidean and Non-Euclidean Geometries as related to the Parallel Postulate.
- Use symmetry and transformations to solve problems.
- Use logical reasoning in geometric proofs.
- Write analytic proofs using properties from algebra and congruence.
- Apply the properties of right triangles, including Pythagorean Theorem and similar right triangles, and trigonometry.
- Apply the properties of circles to solve problems.
- Use geometric formulas to compute the area of plane figures.

MATH 140C Precalculus

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

Topics include, rational functions, polynomial and rational inequalities, right triangle trigonometry, graphs of trigonometric functions, trigonometric identities and equations, oblique triangles, polar coordinates and equations, vectors, systems of equations and inequalities, matrices, rotation of conic sections, counting methods, binomial theorem, and limits. A graphing calculator is required. (Prerequisite: MATH 124C or recommendation of Math Department based on placement testing)

Learning Outcomes:

- Graph and evaluate rational and polynomial functions.
- Solve applied problems involving right triangles and trigonometric functions.
- Compute the values of trigonometric functions for key angles in all quadrants of the unit circle measured in both degrees and radians.
- Analyze and graph trigonometric functions and their transformations.
- Prove trigonometric identities.
- Solve right and oblique triangles.
- Solve trigonometric equations.
- Graph and transform equations in polar coordinates and using parametric equations.
- Perform operations on and graph complex numbers.
- Apply vector operations and use vectors to solve applications.
- Solve systems of equations using matrix methods.
- Graph and solve nonlinear system of equations and inequalities.
- Analyze equations of and graph rotations of conic sections.
- Prove infinite sequences of statements through mathematical induction.
- Evaluate expressions containing factorials with permutations, combinations, and apply to Pascal's triangle.

MATH 151C Introduction to Statistics

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

Learning Outcomes:

- Understand and apply sampling methods.
- Identify, create, and interpret common statistical graphs.
- Calculate basic descriptive statistics.
- Apply basic probability concepts.
- Identify and solve problems involving the binomial probability distribution.
- Identify and solve problems involving the normal distribution.
- Use sampling distributions to make inferences about population parameters.
- Calculate and interpret the linear correlation coefficient.
- Produce a linear regression model to solve an application problem.

MATH 205C Calculus I

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

Includes limits; derivatives of algebraic, trigonometric, exponential and logarithmic functions; antiderivatives; and an introduction to integration. Applications will be stressed throughout the course including velocity, acceleration, curve sketching, optimization, and related rates. A graphing calculator is required. (Prerequisite MATH 140C or satisfactory placement test scores as defined by the mathematics faculty)

Learning Outcomes:

- State, interpret, and apply the definitions, theorems, and properties involving limits, continuity, derivatives, antiderivatives, and definite integrals.
- Evaluate limits and derivatives of many functions and antiderivatives of simple functions.
- Solve problems involving limits, derivatives, and antiderivatives using numerical methods.
- Solve problems involving limits, derivatives, and antiderivatives using graphical methods.
- Construct and solve mathematical models using definite integrals.

MATH 206C Calculus II

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

Topics include indefinite integration, the definite integral, the Fundamental Theorem of Calculus, integrals of elementary transcendental functions, techniques of integration, polar coordinates, and power series including Taylor series. Applications will be stressed throughout the course including area, volumes of revolution, centroids, and moments of inertia. A graphing calculator is required. (Prerequisite: MATH 205C)

Learning Outcomes:

- State, interpret, and apply the definitions, theorems, and properties involving antiderivatives, definite integrals, and series.
- Determine or evaluate antiderivatives or definite integrals involving algebraic or transcendental functions.
- Determine the convergence or divergence of a series.
- Solve problems involving definite integrals and series using numerical methods.
- Solve problems involving antiderivatives and definite integrals using graphical methods.
- Construct and solve mathematical models using definite integrals.

MATH 208C Multivariable Calculus

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

A study of vectors, vector products, vector algebra, and vector-valued functions; motion in space; partial differentiation, gradient, divergence, curl, chain rule, tangent planes, extrema, and Lagrange multipliers; multiple, line, and surface integrals; divergence, and Green's and Stokes' theorems. A graphing calculator is required. (Prerequisite: MATH 206C)

Learning Outcomes:

- State, interpret, and apply the definitions, theorems, and properties involving the algebra and differential and integral calculus of multivariable vector-valued functions, including Green's, Stokes', and divergence theorem.
- Solve problems involving vector algebra and vector products.
- Solve problems involving limits, derivatives, and integrals of multivariable vector-valued functions including those invoking the use of Green's, Stokes', and divergence theorem.
- Approximate the value of a function using the tangent plane approximation.
- Graph cylinders, quadric surfaces, multivariable functions and their level curves, and vector-valued functions.
- Apply vector products to calculate curvature and torsion.
- Solve extremization problems using the second derivative test and the Lagrange multiplier technique.

MATH 210C Differential Equations

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

Topics include methods of solving and applications of ordinary first- and second-order differential equations, Laplace transformations, series solutions, basics of linear algebra, and systems of differential equations. A graphing calculator is required. (Prerequisite: MATH 206C)

Learning Outcomes:

- State, interpret, and apply the definitions, theorems, and properties involving differential equations
- Determine solutions to first-, second-, and higher order differential equations
- Determine solutions to systems of first-order linear differential equations.
- Determine solutions to differential equations using Laplace and Inverse Laplace Transforms
- Determine power series solutions to differential equations about ordinary points
- Construct and solve mathematical models using differential equations

MATH 215C Mathematical Proofs

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

Introduces students to reading and writing mathematical proofs. Topics include sets and logic, methods of proof, equivalence relations, functions, and cardinality, and topics from number theory and calculus. (Prerequisite: MATH 205C)

Learning Outcomes:

- State, interpret, and apply the definitions, theorems, and properties involving sets, divisibility, congruence, the algebra of real numbers, equivalence relations, functions, and cardinality. Communicate mathematical reasoning using appropriate mathematical vocabulary.
- Use logic and methods of proof, including direct proof, proof by contrapositive, proof by cases, proof by contradiction, existence proof, and induction proof, to produce valid mathematical proofs.
- Assess mathematical reasoning, both correct and flawed.
- Generate conjectures and determine their truth value, providing counterexamples or proofs as appropriate.
- Draw Venn diagrams to indicate set operations and to aid in the construction of proofs.

MATH 220C Elementary Linear Algebra

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

Emphasizes techniques of linear algebra with applications. Topics include matrix operations, determinants, solutions of systems of linear equations, linear independence, matrix factorization, linear transformations, vector spaces, orthogonality, inner products and norms, and eigenvalues and eigenvectors. A graphing calculator is required. (Prerequisite: MATH 205C)

Learning Outcomes:

- State, interpret, and apply the definitions, theorems, and properties involving matrices, vector spaces and subspace, eigenvalues and eigenvectors, and linear transformations.
- Use matrices to determine solutions to systems of linear equations.
- Determine different matrix factorizations.
- Determine orthogonality.
- Determine the Least-Squares solution to a nonhomogeneous system of linear equation
- Construct an orthogonal/orthonormal basis to a vector space using the Gram-Schmidt Orthonormal Process.

MATH 251C Statistics

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

Topics include basic measurements of central tendency and variability, frequency distributions, probability; binomial, Poisson, Chi-square, Student t, and normal distributions; sampling distributions, estimation of parameters, hypothesis testing, correlation, and linear regression. A graphing calculator will be required. (Prerequisites: high school Algebra II with a C or higher [or equivalent] or MATH 092 with a C or higher or by recommendation of the Math/Physics Department)

Learning Outcomes:

- Identify types of data and sampling methods.
- Identify, create, and interpret common statistical graphs.
- Calculate basic descriptive statistics (central tendency, variation, and position).
- Apply basic probability concepts (addition rule, multiplication rule, complement).
- Identify and solve problems involving discrete probability distributions.
- Identify and solve problems involving continuous probability distributions.
- Apply the Central Limit Theorem to problems involving sampling distributions.
- Calculate a confidence interval estimate of population mean, proportion, or standard deviation.
- Test a claim concerning a population mean, proportion, or standard deviation.
- Calculate and interpret the linear correlation coefficient.
- Produce a linear regression model to solve an application problem.

MATH 271C Probability and Statistics for Engineers and Scientists

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

Topics include: descriptive statistics; probability and probability distributions; statistical test and confidence intervals for one and two samples; building regression models; designing and analyzing experiments; statistical process control. Includes use of a statistical software package throughout the course. A graphing calculator will be required.* (Prerequisite: MATH 205C.)

Learning Outcomes:

- State, interpret, and apply the definitions, theorems, and properties involving descriptive statistics, the probability of discrete and continuous random variables, statistical intervals, hypothesis tests, ANOVA, factorial experiments, as well as linear regression and correlation.
- Determine measures of location and variability as well as cumulative probability for the binomial, Poisson, normal, exponential, and gamma distributions.
- Determine expected value, covariance, and correlation for jointly distributed random variables.
- Determine measures of location and variability, statistical intervals, test hypotheses for sample data, including data from two or more populations, and perform linear regression.
- Solve probabilistic and statistical problems using a statistical software package.
- Solve problems using the graphing capabilities of a statistical software package.
- Maximize the time of flight of a paper helicopter using a designed experiment involving a screening, steepest ascent, and the response surface methodology phase.

MATH 290C Senior Project/Internship

Lecture Hours: 0

Lab/Practicum/Clinical Hours: 12

Credit Hours: 4

Serves as the capstone course for the Associate in Science in Mathematics Degree, in which the student will demonstrate the application of the knowledge gained throughout the program. This will be achieved either by an independent study investigating mathematics, physics, and/or engineering topics selected by the student with guidance from their program advisor or through participation in an internship with an approved industry partner. The student will submit a written paper and make an oral presentation of the project/internship in a student seminar. (Prerequisites: All MATH courses with grades of C or higher and the approval of the department chair; only offered in the final semester of the Mathematics program)

Learning Outcomes:

- Identify, discuss, and analyze mathematical and physical theories relevant to STEM.
- Demonstrate technical proficiency and effective problem-solving ability in completing mathematical processes.
- Communicate mathematics in both oral and written formats using appropriate mathematical language.
- Use logical reasoning and mathematical proof to justify results.
- Apply mathconcepts to other disciplines including business, economics, social sciences, and natural sciences.

Mechanical Engineering Technology

MCET 105C Engineering Design

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

Introduces students to the fundamentals of engineering design and professional practice through the use of hands-on projects. Students will learn about the design cycle and the necessary steps to complete a successful project as a member of a team. Topics include problem identification, brainstorming, drawing and documentation, reverse engineering, testing and evaluation, and manufacturing. Cost, safety, and environmental issues are considered as well as ethical and professional responsibilities. Students will document designs using industry standard 3-D modeling software and will be required to communicate their designs through written, oral, and graphical presentations. (This course replaces PLTW 101 Introduction to Engineering Design.) A \$10 materials fee will be assessed for all students.

MCET 106C Advanced CAD Modeling

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 2

Credit Hours: 3

Builds on the skills learned in MCET 105C. Advanced features of CAD will be explored and demonstrated in their application to mechanical design. CAD program used is latest version SolidWorks. Skills learned include advanced part features (sweep, loft, and datum curves), design automation techniques (configurations and design tables), advanced assemblies (animation, simulations, and top-down design), and advanced design features (sheet metal and mold design). Participants in the class are eligible to download a student version of SolidWorks and take the Certified SolidWorks Associate CSWA exam. (Prerequisite: MCET 105C with a grade of C or higher, or demonstrated core competency)

Learning Outcomes:

- Be proficient in the following aspects of CAD modeling: sketching, datum features, advanced features, assemblies, detailed and assembly drawings, animations, and top-down design.

MCET 110C Engineering Principles

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

Explores a broad range of topics across multiple disciplines including mechanisms, energy, machine control, fluid power, statics, materials, statistics, and kinematics. Students will develop problem-solving skills and technology literacy as they create solutions to various challenges. The use of industry standard 3-D CAD and Microsoft Office applications is integrated throughout as students document their designs in written and oral formats. (Prerequisite: MCET 105C; corequisites: MATH 124C or MATH 109C)

MCET 150C Statics and Strength of Materials

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 2

Credit Hours: 4

Analysis of external force systems acting on bodies in equilibrium with subsequent treatment of the stresses and strains induced. Lab projects will involve the use of nondestructive and destructive testing equipment to determine the various mechanical properties of materials and their behavior under load. (Prerequisites: MATH 124C and PHYS 133C)

Learning Outcomes:

- Understand engineering mechanics as it applies to statics.
- Define and describe the qualities and types of forces that act on a solid body.
- Determine and analyze the resultants of concurrent, parallel, and nonconcurrent force systems.
- Determine and analyze the moment of a force.
- Develop a free-body diagram for a given body or structural system.
- Analyze forces and perform stress and strain analyses on structures and basic machine elements.
- Identify and analyze reaction forces for concurrent, parallel, and nonconcurrent coplanar force systems using the concepts of equilibrium.
- Analyze trusses, frames, and machines using various methods and the concepts of equilibrium.
- Calculate direct and shear stress on objects as well as determine acceptable design limits based on the allowable and ultimate stresses of a material.
- Determine strain and deformation of objects when subjected to loads and stresses.
- Calculate the location of the centroid of a complex shape
- Calculate the moment of inertia of a composite shape about its centroidal axis.
- Select and understand engineering materials based upon the composition, behavior, physical and mechanical properties.
- Use mechanical test methods to determine material properties.
- Calculate torsional shear stresses due to applied torque.
- Determine the internal shear and bending at any point along the length of a beam

MCET 205C Material Science

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 2

Credit Hours: 4

This course studies the structures, properties, and behavior of engineering materials as well as how they can be altered through mechanical working and heat treating. Materials considered are ferrous and nonferrous metals and their alloys, plastics, and ceramics. Consideration is also given to the selection of these materials to meet manufacturing and design criteria. Lab experiments will complement the classroom presentations. (Prerequisites: CHEM 105C; MCET 150C strongly recommended)

Learning Outcomes:

- Understand the major concepts in the overview of metals, polymers, and ceramics; testing materials; polymers; ceramics; Fe-Fe₃C phase diagram and alloying elements in steel; types of steel; heat treatment of steel; and nonferrous metals.

MCET 229C Thermodynamics

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

The fundamentals of equilibrium thermodynamics will be presented. Topics will include thermodynamic properties, processes, process diagrams, the First and Second laws, entropy, and an introduction to thermodynamic cycles. Energy analysis of both closed and open systems will be performed with considerations to overall system efficiencies. Discussions and examinations of renewable energy technologies is integrated throughout the course and their impact on society is considered. (Prerequisites: MATH 205C and PHYS 133C)

Learning Outcomes:

- Determine its properties of state using formulas, tables and charts as appropriate.
- Determine the interchange of energy as work and heat through application of the first law of thermodynamics.
- Using the Second Law, the student will be able to calculate the limiting efficiencies of simple heat engines and heat pumps.
- Differentiate the difference between open and closed system and apply appropriate analysis techniques a variety of engineering systems such as piston-cylinder devices, mixing tanks, valves, turbines, compressors, pumps, and heat exchangers.

MCET 250C Dynamics and Mechanical Design I

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 2

Credit Hours: 4

A study of the effect of forces acting on rigid and deformable bodies subject to static and dynamic loading and the utilization of this knowledge for the design of mechanical components. Major topics include strength and fatigue, kinematic analysis, power transmission, design methodology, and computer applications. (Prerequisites: ENGL 125C or ENGL 120C, MCET 105C, MCET 150C, and MATH 140C)

Learning Outcomes:

- Understand rational design methods and procedures.
- Perform combined stress analyses.
- Apply theoretical and empirical principles of mechanics in dealing with steady and variable loading.
- Employ the factor of safety method of failure analysis to design and size mechanical components.
- Perform deflection analysis and column stability.
- Size and select power transmission components such as belts and pulleys, chains, and sprockets.
- Select appropriate gear types and design gear trains.
- Use various software programs to solve engineering problems.

MCET 260C Mechanical Design II

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 2

Credit Hours: 4

A continuation of MCET 250C, treating the topics of rigid and elastic fasteners, shafts and bearings, welds, springs, clutches, and brakes. A series of design projects combining several of these elements will be assigned. Computer methods will be employed where appropriate. (Prerequisites: MATH 205C and MCET 250C)

Learning Outcomes:

- Design shafts and axles for power transmission applications.
- Make selections of sliding and roller bearings.
- Specify standard mechanical hardware for use in machine design
- Understand bolted joint mechanics and select fasteners.
- Calculate the strength of simple welded joints and design welded connections.
- Design/specify various types of springs.
- Design simple clutches and brakes.

Medical Coding

MCOD 118C Introduction to Hospital Diagnosis Coding

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

Provides an introduction to hospital diagnosis coding concepts, nomenclature, and ICD-10-CM classification systems. It includes discussion of inpatient reimbursement systems including prospective payment, managed care, and other third-party payers. An introduction to basic current hospital diagnosis coding systems principles in assigning valid diagnostic codes is presented. Official Inpatient Coding Guidelines developed by the American Hospital Association are utilized for

accurate coding assignment of diagnoses. (Prerequisites: HLTH 101C, HLTH 104C, BIOL 120C, and BIOL 122C, each with a grade of C or higher; or permission of the department chair)

Learning Outcomes:

- Explain diagnostic coding concepts and properly locate diagnoses codes.
- Interpret and apply official coding guidelines for inpatients.
- Differentiate between principal and secondary diagnoses in the inpatient setting.
- Evaluate payment reimbursement concepts such as prospective payment, managed care, and other third-party payment systems.
- Describe how coding data is used in Uniform Hospital Discharge Data reporting.

MCOD 119C Introduction to Hospital Procedure Coding

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Provides an introduction to current hospital procedure coding systems principles in assigning valid ICD-10-PCS procedure codes, expanding on and further applying concepts learned in Introduction to Hospital Diagnosis Coding. Official Inpatient Coding Guidelines developed by the American Hospital Association are utilized for accurate selection of principal diagnosis and procedure and determining other diagnoses or procedures that will be coded. (Prerequisite: MCOD 118C with a grade of C or higher or permission of the department chair)

Learning Outcomes:

- Explain procedure coding concepts and properly locate procedure codes.
- Integrate diagnostic coding concepts and codes.
- Accurately interpret and apply official coding guidelines for inpatients.
- Differentiate between principal and secondary diagnoses in the inpatient setting.

MCOD 218C Advanced Hospital Coding

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Provides more complex cases using medical record reports. Students must read and interpret data utilizing prior learned skills from HLTH 101C, BIOL 120C, and BIOL 122C. The 3M computerized encoding and grouping system will be employed to provide experience in utilizing technology to select codes and to calculate DRG payments for prospective payment systems. The student will expand on and apply the principles of reimbursement and coding derived from Introduction to Hospital Diagnosis Coding and Introduction to Hospital Procedure Coding at an advanced level. The student will use the AHA Official Inpatient Coding Guidelines to accurately identify and sequence the principal diagnosis and procedure. Coding discussions will include determining which diagnoses or procedures should be included as secondary. (Prerequisite: MCOD 119C with a grade of C or higher or permission of the department chair)

Learning Outcomes:

- Apply International Classification of Diseases Clinical Modification and Procedure Coding System concepts to inpatient cases.
- Evaluate diagnosis-related groups and relate them to hospital reimbursement.
- Differentiate between principal and secondary diagnoses and procedures in the inpatient setting.
- Calculate case mix indexes and explain how they are used by hospital administration in determining resource allocation and statistically predicting outcomes.
- Describe the present on admission indicators and their impact on diagnosis related groups calculation.

MCOD 219C Ambulatory Coding

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

Presents hospital ambulatory coding using CPT coding systems for procedures and ICD-10-CM coding system for diagnoses. Ambulatory reimbursement and payment systems are presented including prospective payment system and regulatory compliance issues. The course will include an introduction to ambulatory coding and applying the principles to medical record documentation. The 3M computerized encoding and grouping system will be employed to provide experience in utilizing technology to select codes and to calculate payments for prospective payment systems. (Prerequisite: MCOD 218C with a grade of C or higher or permission of the department chair)

Learning Outcomes:

- Accurately locate and apply current procedural terminology codes and modifiers.
- Apply clinical modification diagnosis coding concepts to ambulatory case scenarios.
- Calculate ambulatory patient classification and relate to hospital reimbursement.
- Describe Medicare Outpatient Prospective Payment System.
- Identify ambulatory diagnoses based on official outpatient coding guidelines.
- Connect diagnosis/condition to current procedural terminology codes.

Mental Health

MHTH 187C The Helping Relationship: Interpersonal Communication Skills for Today's Professional

Lecture Hours: 4 Lab/Practicum/Clinical Hours: 0 Credit Hours: 4

Knowledge, skills, and personal characteristics that are needed in today's professional world of helping careers will be examined. Students will learn the purpose and skill of interpersonal communication techniques through various didactic and experiential methods. Coverage will include documentation and verbal and non-verbal communications, along with time management, self-management, and successful work practices. Dynamics of human behavior, culture, and specific needs seen in the workplace will be explored.

Learning Outcomes:

- Discuss interviewing, counseling, and psychotherapy and the requirements for each helping professional working in these skill areas.
- Understand intentionality and cultural intentionality as skills as well as therapeutic processes and how each will assist you in your profession when working with a wide variety of clients.
- Demonstrate your understanding on how to adapt your attending, listening, and responding skills to adapt to clients with diverse cultural backgrounds.
- Respond to ethical dilemmas facing them while working with clients.
- Communicate the connection between stress, brain activity, neuroscience, and the helping connection of attending, listening, and responding.
- Communicate the knowledge of each level of skill on the Microskill Hierarchy and how to apply these skills in a counseling session.

MHTH 195C Mental Health Practicum I

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 8 Credit Hours: 4

The student will work in an approved mental health setting under the supervision of an approved professional. Periodic conferences between the supervisor and practicum coordinator are planned to evaluate the student's progress. At the close of the semester, the student will submit documentation of the practicum activities/experience and demonstrate the ability to relate theory to practice in the chosen field of experience. The student will complete a total of 125 hours of field experience. (Prerequisites: HSV 111C, HSV 242C, MHTH 187C, PSYC 105C, and PYSC 283C, each with a grade of C or higher, and permission of the department chair)

MHTH 298C Mental Health Practicum II

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 8 Credit Hours: 4

The student will continue field experience work in an approved mental health setting under the supervision of an approved professional. Skills, knowledge, and personal characteristics are built on and integrated into the learning and supervision of this course, as well as second-year coursework including ethics, individual counseling, and conflict resolution. Periodic conferences between the supervisor and practicum coordinator are planned to evaluate the student's progress. At the close of the semester, the student will submit documentation of the practicum activities/experience and demonstrate the ability to relate theory to practice in the chosen field of experience. The student will complete a total of 125 hours of field experience. (Prerequisites: MHTH 195C, HSV 111C, HSV 242C, MHTH 187C, PSYC 105C, and PYSC 283C, each with a grade of C or higher, and permission of the department chair)

The student will also complete an interview with the practicum advisor the semester prior to the first scheduled practicum. Special requests regarding practicum entrance may be brought to the department chair by the student. Review of the requests will be made by the department faculty and special exemptions may be made for entrance into the practicum.

Nursing

All nursing courses integrate theory and clinical experience. Failure to receive a satisfactory grade in either theory or the clinical experience portion of the course will result in a failing grade. All Nursing major field courses must be passed before proceeding to the next level. A grade of C or higher is required in BIOL 195C, BIOL 196C, BIOL 202C, and a math elective (MATH 120C or higher) to enter or progress in the nursing courses.

NURS 115C Nursing I

Lecture Hours: 5

Lab/Practicum/Clinical Hours: 9

Credit Hours: 8

Introduces the student to the role of the associate degree nurse and the concepts of nursing knowledge and caring within the self-care framework. The emphasis of the course is on assessment of the universal self-care requirements, which include air, food, activity and rest, elimination, water, solitude, and social interaction. Promotion of normalcy and prevention of hazards will be addressed within the universal self-care requirements. The focus is on the use of the educative/supportive nursing system and effective therapeutic communication to care for patients with selected self-care deficits. Professional, ethical, and legal standards of nursing practice are introduced to provide culturally-sensitive nursing care. Opportunities for application of nursing knowledge to clinical practice are provided through the Clinical Resource Center experiences and patient care assignments in various settings. To facilitate the teaching/learning process, ongoing evaluations occur through interactions between student and faculty. Students enrolled in this course will be charged a \$500 per semester clinical surcharge. Students enrolled in the course will be charged a \$125 nursing lab supply kit fee. (Corequisites: BIOL 195C, ENGL 101C, and PSYC 105C.) Clinical sites are in medical/surgical settings.

Learning Outcomes:

- Describe the nursing process as a problem-solving tool in planning nursing care to meet specific Universal Self-Care Requirements for the patient.
- Identify principles and concepts of nursing knowledge using critical thinking and information technology skills.
- Understand effective therapeutic communication when interacting with the patient.
- Provide nursing care for the patient with selected self-care deficits.
- Identify components in the environment that impact patient safety.
- Demonstrate knowledge of the concept of caring to provide culturally-sensitive nursing care.
- Identify professional, ethical, and legal standards within nursing.

NURS 116C Nursing IIA

Lecture Hours: 6

Lab/Practicum/Clinical Hours: 15

Credit Hours: 11

Expands on the concepts of nursing knowledge and caring to support growth and development over the life cycle. The emphasis of the course is on universal, developmental, and/or health deviation self-care requirements. The student focuses on the educative/supportive and partially compensatory nursing systems and employs effective therapeutic communication to care for patients with selected self-care deficits throughout the life cycle. Professional, ethical, and legal standards of nursing practice are utilized to provide holistic and culturally-sensitive nursing care throughout the life cycle. Planned learning experiences provide the student with the opportunity to coordinate environmental and technological resources in the delivery of patient care. Opportunities for analysis of principles and concepts of nursing knowledge are provided through Clinical Resource Center experiences and patient care assignments in various settings. To facilitate the teaching/learning process, ongoing evaluations occur through interactions between student and faculty. Students enrolled in this course will be charged a \$500 per semester clinical surcharge. Students enrolled in this course will be charged \$285 to help cover the costs associated with ATI online practice and proctored assessments and tutorials, detailed individualized remediation plans, and end-of-program testing to prepare them for the NCLEX-RN licensure exam. (Prerequisites, semester 2: NURS 115C, ENGL 101C, PSYC 105C, a minimum grade C in BIOL 195C; corequisites: BIOL 196C and PSYC 220C. Prerequisites, semester 3: PSYC 220C, a minimum of grade of C in BIOL 195C and BIOL 196C; corequisites: BIOL 202C and MATH 120C or higher level math, MATH 251C strongly recommended) Clinical sites include maternal/child, pediatrics, and gerontology settings.

Learning Outcomes:

- Analyze principles and concepts of nursing knowledge using critical thinking, clinical reasoning, and information technology skills.
- Organize and provide for the self-care deficits of the patient throughout the lifecycle with a focus on educative/supportive and partially compensatory nursing systems.

- Employ effective therapeutic communication when interacting with the patient and health care team.
- Organize nursing care for the patient with a range of self-care deficits throughout the life cycle.
- Coordinate resources to assist the patient in maintaining a safe and supportive environment.
- Provide holistic and culturally-sensitive nursing care to the patient throughout the life cycle.
- Apply professional, ethical, and legal standards that support individual practice within nursing.

NURS 117C Nursing IIB

Lecture Hours: 6

Lab/Practicum/Clinical Hours: 15

Credit Hours: 11

Expands on the concepts of nursing knowledge and caring to support growth and development over the life cycle. The emphasis of the course is on universal, developmental, and/or health deviation self-care requirements. The student focuses on the educative/supportive and partially compensatory nursing systems and employs effective therapeutic communication to care for patients with selected self-care deficits throughout the life cycle. Professional, ethical, and legal standards of nursing practice are utilized to provide holistic and culturally-sensitive nursing care throughout the life cycle. Planned learning experiences provide the student with the opportunity to coordinate environmental and technological resources in the delivery of patient care. Opportunities for analysis of principles and concepts of nursing knowledge are provided through Clinical Resource Center experiences and patient care assignments in various settings. To facilitate the teaching/learning process, ongoing evaluations occur through interactions between student and faculty. Students enrolled in this course will be charged a \$500 per semester clinical surcharge. Students enrolled in this course will be charged \$285 to help cover the costs associated with ATI online practice and proctored assessments and tutorials, detailed individualized remediation plans, and end-of-program testing to prepare them for the NCLEX-RN licensure exam. (Prerequisites, semester 2: NURS 115C, ENGL 101C, PSYC 105C, and a minimum grade of C in BIOL 195C; corequisites: BIOL196C and PSYC 220C. Prerequisites, semester 3: PSYC 220C, a minimum of grade of C in BIOL 195C and BIOL 196C; corequisites: BIOL 202C, MATH 120C or higher level math, MATH 251C strongly recommended) Clinical sites include mental health and medical/surgical settings.

Learning Outcomes:

- Analyze principles and concepts of nursing knowledge using critical thinking, clinical reasoning, and information technology skills.
- Organize and provide for the self-care deficits of the patient throughout the lifecycle with a focus on educative/supportive and partially compensatory nursing systems.
- Employ effective therapeutic communication when interacting with the patient and health care team.
- Organize nursing care for the patient with a range of self-care deficits throughout the life cycle.
- Coordinate resources to assist the patient in maintaining a safe and supportive environment.
- Provide holistic and culturally-sensitive nursing care to the patient throughout the life cycle.
- Apply professional, ethical, and legal standards that support individual practice within nursing.

NURS 178C LPN-RN Completion

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 10

Credit Hours: 7

Introduces the student to the advanced role of the associate degree nurse and the concepts of nursing knowledge and caring within the self-care framework. The course expands on the concepts of nursing knowledge and caring to support growth and development over the life cycle. The emphasis of the course is on universal, developmental, and/or health deviation self-care requirements. The student focuses on the educative/supportive and partially compensatory nursing systems and employs effective therapeutic communication to care for patients with selected self-care deficits throughout the life cycle. Professional, ethical, and legal standards of nursing practice are utilized to provide holistic and culturally-sensitive nursing care throughout the life cycle. Planned learning experiences provide the student with the opportunity to coordinate environmental and technological resources in the delivery of patient care. Opportunities for analysis of principles and concepts of nursing knowledge are provided through Clinical Resource Center experiences and patient care assignments in various settings. To facilitate the teaching/learning process, ongoing evaluations occur through interactions between student and faculty. Clinical sites include mental health and medical/surgical settings. Students enrolled in this course will be charged a \$500 per semester clinical surcharge. Students enrolled in this course will be charged \$285 to help cover the costs associated with ATI online practice and proctored assessments and tutorials, detailed individualized remediation plans, and end-of-program testing to prepare students for the NCLEX-RN licensure exam.

Learning Outcomes:

- Analyze principles and concepts of nursing knowledge using critical thinking, clinical reasoning, and information technology skills.
- Organize and provide for the self-care deficits of the patient throughout the lifecycle with a focus on educative/supportive and partially compensatory nursing systems.
- Employ effective therapeutic communication when interacting with the patient and health care team.
- Organize nursing care for the patient with a range of self-care deficits throughout the life cycle.
- Coordinate resources to assist the patient in maintaining a safe and supportive environment.
- Provide holistic and culturally-sensitive nursing care to the patient throughout the life cycle.
- Apply professional, ethical, and legal standards that support individual practice within nursing.

NURS 215C Nursing III

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 15

Credit Hours: 9

Incorporates principles and concepts from nursing knowledge and liberal arts education. The emphasis of the course is on the patient with commonly occurring illnesses. The student focuses on the wholly compensatory nursing system and evaluates effective therapeutic and collegial communication to enhance health outcomes. Planned learning experiences provide the student with the opportunity to utilize microsystem resources, evidence-based practice, quality improvement processes, and safety standards in the delivery of patient care. The student demonstrates accountability for the professional, ethical, and legal standards of nursing practice to provide holistic and culturally-sensitive nursing care throughout the life cycle. Opportunities to utilize critical thinking, clinical reasoning, and humanistic values are provided through Clinical Resource Center experiences and patient care assignments in various settings. To facilitate the teaching/learning process, ongoing evaluations occur through interactions between student and faculty. Students enrolled in this course will be charged a \$500 per semester clinical surcharge. Students enrolled in this course will be charged \$615 to help cover the costs associated with ATI online practice and proctored assessments and tutorials, detailed individualized remediation plans, and end-of-program testing to prepare students for the NCLEX-RN licensure exam. (Prerequisites: NURS 116C, NURS 117C, a minimum grade of C or higher in MATH 120C or higher level math or MATH 251C strongly recommended; corequisites: ENGL xxxC and Humanities/Fine Art/Language XXXC) Clinical sites are in medical/surgical settings.

Learning Outcomes:

- Use the nursing process, clinical reasoning, and evidence-based practice to design, implement, and evaluate care focusing on the self-care requirements for the patient with commonly occurring illnesses.
- Use critical thinking, clinical reasoning, clinical judgment, and humanistic values.
- Design and implement a plan of care in collaboration with the patient and health care team with a focus on the wholly compensatory nursing system.
- Evaluate effective therapeutic and collegial communication needed to enhance health outcomes.
- Manage nursing care directly and/or through delegation for the patient with a range of self-care deficits throughout the life cycle.
- Create an optimal environment for the patient utilizing microsystem resources, evidence-based practice, quality improvement processes, and patient safety standards.
- Establish a caring relationship with the patient to provide holistic and culturally-sensitive nursing care throughout the life cycle.
- Demonstrate accountability for standard-based nursing care given by self and delegated to others adhering to professional, ethical and legal standards within nursing.

Orthopaedic Technology

ORTH 101C Orthopaedic Anatomy and Physiology I

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

An introduction to the anatomy and physiology of the musculoskeletal system and related structures. Attention will be directed toward structural make-up, group composition, relationships, and location of each bone. Common fractures and treatments will be discussed in detail. Also covered will be normal and abnormal growth and development and the response to injury and disease, as well as the response of related structures to the mechanisms of injury and disease.

Learning Outcomes:

- List the classifications of bones and the functions of the axial and appendicular skeletal systems.

- Describe the formation of blood cells, bone and cartilage.
- Identify common fractures, orthopaedic disorders, sprains, and strains.
- Identify all bones of the vertebral column, thoracic cage, pectoral girdle, upper and lower extremity, and all joints.

ORTH 102C Orthopaedic Anatomy and Physiology II

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

A continuation of Orthopaedic Anatomy and Physiology I with a focus on common orthopaedic injuries and conditions of muscles, ligaments, tendons, and nerves, and their treatments. Also covered will be the disruption to continuity to the musculoskeletal system and related structures resulting from congenital, emergent, or opportunistic diseases and trauma and their treatments. (Prerequisite: ORTH 101C)

Learning Outcomes:

- Discuss the functions of the Musculoskeletal system.
- Differentiate all types of muscle within the body.
- Assess the function of muscles, tendons, and nerves.
- Identify all the muscles, tendons, and nerves of the head and neck.
- Identify all muscles, tendons, and nerves of the vertebral column, pectoral girdle, upper extremities and lower extremities.
- Label the different structures associated with joints in the human body.
- Compare and contrast human muscle, tendon and nerve disorders.

ORTH 103C Basic Radiology Interpretation

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Covers the history of radiology and gives the student the basics of radiographic image production. Students will be introduced to the viewing and interpretation of plain orthopaedic radiographs, MRIs, and other types of permanent imaging relating to orthopaedics and terminology relating directly to the skeletal system and fracture healing and describing a fracture as it relates to the radiographic image.

Learning Outcomes:

- Discuss the history of x-rays.
- Understand how a radiographic image is produced and the danger of radiation.
- Identify common fractures on x-ray image.
- Identify abnormalities on vertebral column, thoracic cage, upper and lower extremity, pelvic girdle, and pectoral girdle x-rays.
- Identify abnormalities on joint x-rays.

ORTH 104C Physical Assessment of the Orthopaedic Patient

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 2

Credit Hours: 4

Provides integration of knowledge and terminology utilized for orthopaedic patient physical assessment. Included are lifespan differences and assessment of acute and chronic patient orthopaedic problems. Lab time covering the application and use of various orthopaedic devices, their complications, and contraindications is an intrinsic part of this course, allowing students hands-on experience with these products. Students will learn how to do custom measurements along with brace fitting techniques. Braces will be matched up with their commonly used diagnoses for better conceptual understanding of how these devices affect patient outcomes. Medical coding and reimbursement procedures will also be discussed. (Prerequisites: ORTH 101C, ORTH 103C, ORTH 108C, ORTH 109C, ORTH 113C)

Learning Outcomes:

- Understand how to take a proper patient medical history
- Identify how to do a proper physical assessment exam for orthopaedic cervical problems, upper extremity problems, thoracic and lumbar problems, and lower extremity problems and understand the correct diagnostic testing that should be done.
- Understand proper diagnostic testing to help identify diseases and conditions related to orthopaedic problems.

ORTH 108C Casting and Splinting I

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 4

Credit Hours: 4

This area is an integral part of the practice of an orthopaedic technologist. Topics to be covered will include the types, application, functions, and materials of the various casts and splints, as well as basic terminology related to the subject. Students will acquire a working knowledge of anatomy specifically relating to casting and splinting, the proper use of external aide devices commonly associated with casting and splinting – such as crutches, canes and walkers – and transfer of patients from wheelchairs and beds. Attention will be given to the removal of casts and splints, as well as the skills associated with providing patient instructions. Students enrolled in this course will be charged a \$750 specialty supplies fee.

Learning Outcomes:

- Apply, adjust, and remove upper and lower extremity casts, splints, and DME.
- Remove sutures, staples, Steinman pins, and K-wires.
- Instruct patient in proper cast care.
- Identify proper treatment of different fractures.
- Understand bone morphology, bone classifications, and functions.

ORTH 109C Introduction to Orthopaedics

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 1

Credit Hours: 2

Introduces the world of orthopaedics. Students will get an in depth look into diverse orthopaedic settings and learn appropriate social skills and how to communicate effectively with orthopaedic surgeons, patients, and colleagues. They will also learn time management, stress relief, geriatric care, pediatric care, patient awareness, and ethical diversity. Students enrolled in this course will be charged a \$750 specialty supplies fee. (Corequisites: ORTH 101C, ORTH 103C, ORTH 108C, ORTH 113C)

Learning Outcomes:

- Understand the purpose, principles, and functions of orthopaedic healthcare.
- Compare and contrast the different of types of orthopaedic healthcare.
- Compare and contrast methods and techniques of orthopaedic healthcare.
- Provide basic assessments, planning and implementation of orthopaedic healthcare plans
- Identify different orthopaedic diagnoses.

ORTH 112C Traction

Lecture Hours: 1

Lab/Practicum/Clinical Hours: 2

Credit Hours: 2

Students will learn the basic terminology and basic bio-mechanical principles of orthopaedic traction, different types of traction, traction set-up and application, necessary equipment needed for orthopaedic traction, complications, and contraindications. Students will also learn various custom orthopaedic devices, positioning of the patient, complications and contraindications of custom back bracing, and different brace-fitting techniques. Modifying, customizing, and fitting of braces will be discussed. Medical coding for reimbursement for these devises will also be discussed. (Prerequisites: ORTH 101C, ORTH 102C, ORTH 103C, ORTH 104C, ORTH 108C, ORTH 109C, ORTH 113C, ORTH 150C, ORTH 208C; corequisites: ORTH 220C)

Learning Outcomes:

- Explain the purpose of traction using proper medical terminology.
- Apply the different of types of traction.
- Provide basic assessments, planning, and implementation of traction for patients.
- Identify different diagnoses in the traction patient.

ORTH 113C Orthopaedic Patient Care

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 2

Credit Hours: 3

Introduces patient care in an orthopaedic environment. Topics will include communication skills, practical skills associated with assisting the orthopaedic surgeon, an understanding of surgical procedures, aseptic techniques, surgical instrumentation, OSHA standards, medications, patient safety, patient transfers, and patient education. In the lab setting, students will learn to take blood pressure, pulse, and BMI measurements, as well as wound care and routine

and emergency procedures. Students will be assigned to orthopaedic surgical suites for observation of procedures. (Prerequisite: ORTH 101C, ORTH 103C, ORTH 105C, ORTH 109C)

Learning Outcomes:

- Communicate with patients, their families, and other team members associated with their care.
- Take vital signs, properly care for wounds, remove sutures/staples, and provide crutch training.
- Understand how to properly triage a patient and record patient history in EMR systems.
- Explain surgical procedures and educate the patient and their families on recovery.
- Assist the surgeon by prepping injections, ordering proper tests, and understanding medications prescribed and their usage.

ORTH 150C Spring Externship

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 12 Credit Hours: 2

Provides students with initial concentrated clinical experience in an orthopaedic office or hospital setting. Students will practice the skills they have learned in the classroom and lab on real orthopaedic patients under the direct supervision of an orthopaedic clinical supervisor and orthopaedic provider. Clinical placement will be provided by the program coordinator. Students enrolled in this course will be charged an \$89 fee covering the cost of the radiation badge, which is required per state/national law and accreditation to monitor student rations dose. (Prerequisites: ORTH 101C, ORTH 103C, ORTH 108C, ORTH 109C, ORTH 113C, each with a grade of C or higher, and permission of the program coordinator; corequisites: ORTH 102C, ORTH 104C, ORTH 150C, ORTH 208C)

ORTH 208C Casting and Splinting II

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 4 Credit Hours: 4

Students will learn advances casting techniques along with windowing of a cast, protection of pins, and external hardware, pin care, and wound care. Custom bracing and DME applications will be reviewed along with proper use of wheelchairs and Hoyer lifts. Students will learn how to accommodate patients who are in wheelchairs, beds, and traction. Students enrolled in this course will be charged a \$750 specialty supplies fee. (Prerequisites ORTH 101C, ORTH 103C, ORTH 108C, ORTH 109C, ORTH 113C; corequisites: ORTH 102C, ORTH 104C, ORTH 150C)

Learning Outcomes:

- Apply, adjust, and remove upper and lower extremity casts and splints.
- Remove sutures, staples, Steinman pins, and K-wires.
- Identify different types of fractures on an x-ray.
- Identify proper treatment of different fractures.
- Apply, adjust, and remove upper and lower extremity braces and DME products.

ORTH 220C Senior Externship and Capstone Experience

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 16 Credit Hours: 6

Provides students concentrated clinical experience in an orthopaedic office or hospital setting, in which students will practice the skills they have learned in the classroom and lab on real orthopaedic patients under the direct supervision of an orthopaedic clinical supervisor and orthopaedic provider. Clinical placement will be provided by the program coordinator. In addition, students will be required to work in small groups to make a presentation to the class on an advanced topic related to the field of orthopaedic technology. Lecture hours also include a review for the national licensure exam in orthopaedic technology. Students enrolled in this course will be charged a \$350 clinical surcharge. (Prerequisites: Successful completion of all other courses in the Orthopaedic Technology Program and permission of the program coordinator)

Paralegal Studies

PLGL 101C Foundations of Paralegal Studies

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 0 Credit Hours: 2

Comprises two sections: the introduction to the legal profession and a pre-employment seminar. The first part covers in detail the legal systems of the U.S. in both the federal courts and the N.H. state courts. Students will be introduced to

the federal and N.H. constitutions, to the legislative processes, and to a "how to" approach to the law. Practical experience in drafting court documents, conducting initial client interviews, and investigating cases will be gained. Ethical rules and regulations governing lawyers and paralegals will also be covered. The second part includes writing a resume, drafting a cover letter, refining interview techniques, and conducting an independent job search.

PLGL 103C Causes of Action in Contract and Tort

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 0 Credit Hours: 2

A "cause of action" here is defined as a right the law gives and will enforce for one to recover something from another. It is the legal foundation from which the plaintiff derives the right of action against a defendant. This course is limited to the elements and defenses of various causes of action in contract and tort; it does not address remedies. (Prerequisites: PLGL 101C or permission of the department chair)

PLGL 104C Legal Research

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

The paralegal will be able to assist in most aspects of legal research in support of the drafting of clear and concise legal writings. Functional skills acquired in this course include a working knowledge of federal and state statutory research including legislative history, federal and state case law reporter systems, the hierarchy of the federal and state court systems, legal form books, law digests, case and statutory citators, legal treaties, legal periodicals, legal encyclopedia, and both local and national standards of citation used in legal writing. An introduction to the use of LEXIS will also be included. Students enrolled in this course will be charged a \$125 fee to cover costs associated with ABA dues, Lexis/Nexis, and UNH Franklin Pierce School of Law Library. (Prerequisites: PLGL 101C or permission of the department chair)

PLGL 106C Introduction to Legal Studies

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Covers in detail the legal systems of the U.S. in both the federal courts and the N.H. state courts. Students will be introduced to an overview of substantive and procedural law, legal research, and interviewing and investigative skills. Ethical rules and regulations governing lawyers and paralegals will also be covered.

PLGL 107C Contracts and Torts

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

The contract portion of the course will cover contract law from formation, defenses, and remedies for breach. Likewise, various civil wrongs in which the victim is entitled to a remedy in the form of damages, including negligence, product liability, trespass, and defamation are addressed in the Torts section. (Prerequisites: PLGL 106C or permission of the department chair)

PLGL 110C Litigation and Trial Preparation

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

The student will be able to assist in virtually all phases of litigation. Functional skills acquired include preparing and maintaining the file, gathering information through client interviews, drafting pleadings, organizing and indexing documents, tracing evidence, examining public records, and preparing briefs and memoranda. (Prerequisite: PLGL 106C and PLGL 107C, or permission of the department chair)

PLGL 221C Real Estate

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

The student will be able to assist in virtually all phases of transactions in real property. Functional skills acquired include conducting title searches; assisting in preparation and drafting of deeds, contracts of sale, leases and abstracts of title; gathering and reviewing documentation necessary in mortgage transactions; recording deeds and mortgages; and organizing and witnessing documents at the closing. (Prerequisites: PLGL 106C, PLGL 107C, or permission of the department chair)

PLGL 225C Legal Research and Writing

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 2 Credit Hours: 4

The paralegal will be able to assist in most aspects of legal research in support of the drafting of clear and concise legal writings. Functional skills acquired in this course will include a working knowledge of federal and state statutory research including legislative history, federal and state case law reporter systems, the court systems, legal form books, law digest, case and statutory citators, legal treaties, and legal periodicals. In addition, an introduction to the use of LEXIS will be included. The student will develop the specific writing skills necessary for the paralegal. Preparation of trial memorandum and appellate court briefs will also be covered. Emphasis will be on brevity, clarity, and precision of expression together with the refinement of editing skills. Students enrolled in this course will be charged a \$125 fee to cover costs associated with ABA dues, Lexis/Nexis, and UNH Franklin Pierce School of Law Library. (Prerequisites: PLGL 106C, PLGL 107C, and PLGL 110C or permission of the department chair)

PLGL 231C Business Organizations and Bankruptcy

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

The student will be able to assist in the formation, daily administration, reorganization, and dissolution of a corporate entity. Functional skills acquired include preparing articles of incorporation, satisfying state filing requirements, taking minutes at meetings of board of directors, preparing registration materials for regulatory agencies, and preparing bankruptcy petitions, claims, and other documents. (Prerequisites: PLGL 106C, PLGL 107C, or permission of the department chair)

PLGL 241C Family Law

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 0 Credit Hours: 1

The student will examine the substantive and procedural law and the legal ethics relating to marriage, divorce, support, and custody issues and will be prepared to assist the attorney in drafting pleadings and completing preliminary research relative to these aspects of family law. (Prerequisites: All PLGL courses at 100 level or permission of the department chair)

PLGL 242C Domestic Relations Law

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

The student will examine the substantive and procedural law and the legal ethics relating to marriage, divorce, and custody issues and will be prepared to assist the attorney in drafting pleadings and completing preliminary research relative to these aspects of domestic relations Law. (Prerequisites: PLGL 106C and PLGL 107C, or permission of the department chair)

PLGL 251C Probate Estates and Trusts

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

The student will be able to assist in the planning and administration of the decedent's estate. Functional skills acquired include assisting with estate planning, collecting assets, notifying beneficiaries, assisting in preparation of federal and state estate tax returns, submitting documentation to the probate court, transferring securities, drawing checks for the executor's signature, and maintaining account records. (Prerequisites: PLGL 106C, PLGL 107C or PLGL 101C, PLGL 103C or permission of the department chair)

PLGL 261C Criminal Process

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 0 Credit Hours: 1

The student will examine the various elements of N.H. criminal practice and procedure and will trace the steps by which the process is completed from the initial interview through the post-trial procedure. (Prerequisites: All PLGL courses at 100 level or permission of the department chair)

PLGL 262C Criminal Law and Procedures for the Paralegal

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

The student will examine the various elements of N.H. criminal practice and procedure and will trace the steps by which the process is completed from the initial interview through the post-trial procedure. (Prerequisites: PLGL 106C, PLGL 107C, and PLGL 110C or permission of the department chair)

PLGL 270C Internship

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 9 Credit Hours: 3

Offers the opportunity to combine the theoretical and practical issues of the classroom in the workplace setting. Students are required to complete a specified number of hours in a law office or law-related environment. Weekly meetings will be held with the internship coordinator to discuss the ongoing experience. (Prerequisite: All 100 level PLGL courses or permission of the department chair)

PLGL 271C Legal Writing

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 0 Credit Hours: 1

Focuses on the specific writing skills necessary for the paralegal. The assignments involve practical examples of paralegals' work products as demonstrated in the areas covered in the certificate curriculum. Preparation of a trial court memorandum and an appellate court brief will also be covered. Emphasis will be put on brevity, clarity, and precision of expression together with a refinement of editing skills. (Prerequisites: All other 100 level PLGL courses or permission of the department chair; corequisite: PLGL 110C)

Paramedic Emergency Medicine

PEM 111C Paramedic Procedures

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 3 Credit Hours: 2

Focuses on the broad spectrum of paramedic procedures. Students will perform technical skills drawn from Advanced Trauma, Advanced Cardiology, Medical Emergencies, Special Populations, and Pharmacology courses. Emphasis will be placed on skill-competencies making students eligible for advanced hospital and field clinic rotations. (Prerequisites: all fall PEM courses; co-requisites: PEM 126C, PEM 135C, and PEM 244C)

Learning Outcomes:

- Demonstrate appropriate body substance isolation techniques.
- Demonstrate successful performance of all skills, procedures, and use of associated equipment (listed in the course schedule) in a time efficient manner.
- Demonstrate mastery of knowledge as required by the National EMS Educational Standards.

PEM 117C Physical Assessment

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 0 Credit Hours: 2

Provides integration of knowledge and terminology utilized for physical assessment. Included are life-span differences as well as the assessment of acute and chronic patients who present with medical problems. (Co-requisites: PEM 142C, PEM 150C, and PEM 161C.) Any failure in PEM 117C, PEM 150C, or PEM 142C will trigger a failure in PEM 161C (even if a passing grade in PEM 161C has been achieved).

Learning Outcomes:

- Demonstrate problem-orientated and comprehensive health histories.
- Integrate the principles of history taking and the techniques of physical exam to perform a patient assessment.
- Explain the pathophysiological significance of physical exam findings.
- Integrate physiological, psychological, and sociological changes throughout human development with assessment and communication strategies for patients of all ages.
- Demonstrate mastery of knowledge as required by the National EMS Educational Standards.

PEM 126C Pharmacology

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Covering pharmacologic theory and practice as it relates to paramedicine. Includes cardiovascular, respiratory, analgesic, gastrointestinal, antibiotic, and CNS medications. (Prerequisites: all fall PEM courses; co-requisites: PEM 111C, PEM 135C, and PEM 244C). Any failure in PEM 126C, PEM 135C, or PEM 244C will trigger a failure in PEM 162C (even if a passing grade in PEM 162C has been achieved).

Learning Outcomes:

- Demonstrate knowledge (including dosage, use, side effects, and potential interactions) of medications in the EMS protocols and those prescribed for common diseases.
- Consistently model best practices with medication administration, handling of sharps, communication, and patient advocacy.
- Demonstrate mastery of knowledge as required by the National EMS Educational Standards.

PEM 135C Medical Emergencies

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 0

Credit Hours: 2

Includes the pathophysiology and management of medical emergencies in all body systems. Critical thinking and problem solving will be emphasized using a scenario-based approach. (Prerequisites: all fall PEM courses; co-requisites: PEM 111C, PEM 126CE, and PEM 244C). Any failure in PEM 126C, PEM 135C, or PEM 244C will trigger a failure in PEM 162C (even if a passing grade in PEM 162C has been achieved).

Learning Outcomes:

- Demonstrate understanding of the normal anatomy and pathophysiology for each body system as they relate to medical emergencies.
- Demonstrate assessment approaches to identify and appropriately manage patients' illnesses.
- Understand signs and symptoms of each medical emergency and demonstrate an understanding of the probable pathology related to each situation.
- Demonstrate mastery of knowledge as required by the National EMS Educational Standards.

PEM 142C Cardiology I

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 0

Credit Hours: 2

Focuses on the conduction system of the heart, electrocardiography, as well as interpretation and the treatment of cardiac arrhythmias. (Co-requisites: PEM 117C, PEM 150C, and PEM 161C). Any failure in PEM 117C, PEM 150C, or PEM 142C will trigger a failure in PEM 161C (even if a passing grade in PEM 161C has been achieved).

Learning Outcomes:

- Demonstrate understanding of the anatomy and physiology of the cardiovascular system.
- Explain the pathophysiology, defining characteristics, clinical presentation, and management of cardiac rhythms and dysrhythmias.
- Discuss the principles of electrophysiology by describing ECG lead placement and ECG monitor utilization in various clinical situations (including 4-lead and 12-lead).
- Demonstrate mastery of knowledge as required by the National EMS Educational Standards.

PEM 150C Advanced Trauma

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 0

Credit Hours: 2

Covers the assessment, pathophysiology and management of trauma including: head, spinal, chest, abdominal, soft tissue, and musculoskeletal trauma. MCI, environmental emergencies, and HAZMAT are also covered. Critical thinking and problem solving will be emphasized using a scenario-based approach. (Co-requisites: PEM 117C, PEM 142C, and PEM 161C). Any failure in PEM 117C, PEM 150C, or PEM 142C will trigger a failure in PEM 161C (even if a passing grade in PEM 161C has been achieved).

Learning Outcomes:

- Demonstrate an understanding normal human anatomy, as well as changes with age and pregnancy, in regard to traumatic emergencies.

- Demonstrate an understanding of the signs and symptoms for each type of traumatic emergency, for each body system, and demonstrate an understanding of the probable related pathologies.
- Demonstrate an assessment approach that identifies an understanding/diagnosis of the presenting problem and appropriate management of the patient and injury.
- Demonstrate mastery of knowledge as required by the National EMS Educational Standards.

PEM 161C Integration Lab I

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 4 Credit Hours: 2

Formative, scenario-driven course designed to develop team leadership skills and clinical decision-making. Emphasis will be placed on paramedic assessment skills, and treatment aims/outcomes. Students will draw from the knowledge and interventions learned in Cardiology, Medical Emergencies, and Physical Assessment. (Co-requisites: PEM 117C, PEM 142C, and PEM 150C). Any failure in PEM 117C, PEM 150C, or PEM 142C will trigger a failure in this lab course, which includes the practical portion of the above listed courses.

Learning Outcomes:

- Demonstrate history taking and physical exam techniques.
- Demonstrate the techniques of cardiac monitoring and cardiac rhythm identification.
- Demonstrate assessment, formulation of field diagnosis, and management of various traumatic conditions.
- Demonstrate an appropriate affect when interacting with faculty, staff, peers, and simulated patients.
- Demonstrate mastery of knowledge as required by the National EMS Educational Standards.

PEM 162C Integration Lab II

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 4 Credit Hours: 2

Formative, scenario-driven course designed to develop team leadership skills and clinical decision-making. Emphasis will be placed on paramedic assessment, diagnostic skills, and treatment aims/outcomes. Students will draw from the knowledge and interventions learned in Advanced Cardiology, Medical Emergencies, Advanced Trauma, and Pharmacology courses. (Prerequisites: all freshman-fall PEM courses; co-requisites: PEM 126C, PEM 135C, and PEM 244C). Any failure in PM 126, PM 135, or PM 244 will trigger a failure in this lab course, which includes the practical portion of the above listed courses.

Learning Outcomes:

- Demonstrate a working knowledge of the assessment, recognition, and prehospital management (including pharmacological treatment modalities) of medical emergencies.
- Develop decision-making skills necessary, as a team leader, for the safe treatment and transport of all case-based patients.
- Demonstrate assessment techniques, diagnosis, and emergency management of cardiac patients in line with Advanced Cardiac Life Support.
- Deliver concise and pertinent simulated radio transmissions for each scenario.
- Demonstrate a working knowledge of pharmacology including proper medication administration.
- Demonstrate an appropriate affect when interacting with faculty, staff, peers, and simulated patients.
- Demonstrate mastery of knowledge as required by the National EMS Educational Standards.

PEM 163C Integration Lab III

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 4 Credit Hours: 2

Summative, scenario-driven course designed to challenge team leadership skills and solidify clinical decision-making. Emphasis will be placed on paramedic assessment, diagnostic skills, and treatment aims/outcomes. Students will draw from the knowledge and interventions learned in Special Populations. (Prerequisites: all first year PEM courses; co-requisite: PEM 201C)

Learning Outcomes:

- Demonstrate the assessment, formulation of field diagnosis, development of treatment plans, and the implementation of EMS-related procedures/interventions across the spectrum of special populations.
- Demonstrate successful performance of the National Registry Oral Station relating to special populations.
- Successfully obtain AHA Pediatric Advanced Life Support certification.
- Demonstrate an appropriate affect when interacting with faculty, staff, peers, and simulated patients.

- Demonstrate mastery of knowledge as required by the National EMS Educational Standards.

PEM 164C Integration Lab IV

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 4 Credit Hours: 2

Summative, scenario-driven course designed to challenge team leadership skills and solidify clinical decision-making. Emphasis will be placed on paramedic assessment, diagnostic skills, and treatment aims/outcomes. Students will draw from knowledge and interventions learned in Field Operations and Advanced Paramedic Practice. (Prerequisites: all senior-fall PEM courses; co-requisites: PEM 210C and PEM 278C)

Learning Outcomes:

- Demonstrate the necessary cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains to keep in line program goals and to prepare students for the NREMT Paramedic Psychomotor Exams.
- Identify the components of a thorough paramedic assessment related to medical, traumatic, obstetrical, and psychological scenarios for geriatric, adult, and pediatric patients.
- Identify priorities in patient care and management during scenario training.
- Demonstrate leadership skills and situational awareness as the primary care provider in diverse EMS scenarios.
- Demonstrate an appropriate affect when interacting with faculty, staff, peers, and simulated patients.
- Demonstrate mastery of knowledge as required by the National EMS Educational Standards.

PEM 190C Introduction to the Clinical Environment

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 0 Credit Hours: 1

Prepares students up success within a variety of clinical systems. Emphasis will be placed on topics such as universal precautions, body mechanics, fire procedures, incident prevention, clinical protocols and procedures, as well as a review of the patient-populations which the students will encounter in PEM 194C. Interpersonal and communication skills will also part of the course and students will gain an understanding of the clinical documentation systems. (Prerequisites: all first year PEM courses; co-requisite: PEM 194C)

Learning Outcomes:

- Understand the evaluation and history-taking for the special population groups of Ob/Gyn, neonatal, pediatric, geriatric, and psychiatric.
- Demonstrate understanding of how to be successful and safe in the hospital-clinic environment.
- Demonstrate understanding of the requirements for the course PEM-194.

PEM 194C Hospital Clinical

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 18 Credit Hours: 5

Comprehensive hospital experience that focuses on medical theory, patient assessments, treatment modalities (skills), and affective behaviors expected of a paramedic. A minimum of 224 hospital hours is required. (Prerequisites: all first year PEM courses; co-requisite: PEM 190C)

Learning Outcomes:

- Evaluate all required patient populations (ages and pathologies) as listed in the course materials.
- Show competence with all required hospital-based skills, as listed in the course materials.
- Demonstrate an appropriate affect when interacting with faculty, staff, preceptors, patients, and patient-families.

PEM 201C Special Populations

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 0 Credit Hours: 2

Advanced-level course including assessment, paramedic diagnosis, and treatment for all special populations including: ob/gyn, pediatric, geriatric, psychiatric, chronic disease, patients with special needs. Pediatric Advanced Life Support certification (PALS) is an integral part of the course. (Prerequisites: all first year PEM courses; co-requisite: PEM 163C)

Learning Outcomes:

- Discuss the assessment, recognition, and management of common OB/GYN emergencies, childbirth, and care of the newly born.

- Describe the prehospital assessment, recognition, and management of common pediatric emergencies consistent with Pediatric Advanced Life Support.
- Describe the patterns of emergencies and pathologies in the geriatric population.
- Discuss the special considerations and EMS strategies for managing patients with issues related to hearing, vision, speech, mobility, and obesity.
- Describe the EMS approach to caring for patients with the chronic care diseases of cancer, traumatic brain injury, renal failure, and hospice or homecare patients.
- Recognize and manage patients experiencing psychiatric and behavioral emergencies and those experiencing abuse and/or neglect.
- Demonstrate mastery of knowledge as required by the National EMS Educational Standards.

PEM 210C Field Operations

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 0 Credit Hours: 2

Covers all aspects of field practice including: roles and responsibilities, medical control, written/oral communications, occupational stress, safety and legal considerations, MCI. Protocol interpretation and introduction to research design are covered. (Co-requisites: PEM 164C and PEM 278C)

Learning Outcomes:

- Demonstrate an understanding of the roles and responsibilities of the paramedic in multiple settings/incidents.
- Demonstrate an understanding of the history of emergency medical services – especially as it relates to EMS system design, the role of medical control, protocol development and implementation.
- Demonstrate an understanding of EMS research and how to interpret research findings.
- Discuss legal considerations when assessing and treating patients.
- Safety considerations involved in the EMS profession, including dangers related to working around hazardous materials.

PEM 244C Advanced Cardiology

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 0 Credit Hours: 2

Includes the pathophysiology, clinical manifestations, and treatment of cardiovascular emergencies. Advanced Cardiac Life Support certification (ACLS) is an integral part of the course. (Prerequisites: all fall PEM courses; co-requisites: PEM 126C, PEM 135C, and PEM 162C) Any failure in PEM 126C, PEM 135C or PEM 244C will trigger a failure in PEM 162C (even if a passing grade in PEM 162C has been achieved).

Learning Outcomes:

- Synthesize patient history, assessment findings, and ECG analysis to form a treating diagnosis for the patient with a cardiac complaint.
- Describe the incidence, morbidity, and mortality of vascular disorders.
- Understand the pathophysiology of, and identify the risk factors for, coronary artery disease,
- Describe the pathophysiology, signs and symptoms, and pre-hospital management (including drug therapy) for each of the types of cardiac rhythms,
- Identify and administer the supportive measures for delivery of Advanced Cardiac Life Support.

PEM 278C Advanced Paramedic Practice

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 0 Credit Hours: 2

Integrates paramedic knowledge, skills, and behaviors through practice and lecture. Students will hone leadership skills in the management of medical, traumatic, and psychological problems. Emphasis is placed on National Registry written exam preparation as well as career opportunities, affective behaviors, and preparation for entry into the EMS job market. Mental, physical, and financial health will also be discussed. (Co-requisites: PEM 210C and PEM 164C)

Learning Outcomes:

- Develop a resume and cover letter targeted for the entry-level paramedic position.
- Describe and display the professional behaviors that lead to successful job interviews,
- Recognize the importance of career planning and describe opportunities for professional development and career advancement,

- Draw from previous knowledge of diverse medical, traumatic, obstetrical, pediatric, geriatric and psychological problems to identify areas of strength and weakness .
- Describe the prehospital assessment, recognition and management of common cardiac emergencies consistent with the American Heart Association’s Advanced Cardiac Life Support .and Pediatric Advanced Life Support.
- Develop and present a multimedia presentation

PEM 290C Field Clinic Primer

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 6 Credit Hours: 2

An optional/assigned formative field experience where a student will ride 100 hours with an ALS service. This clinic can be utilized any semester a student needs additional ALS time. The same clinical manual and grading criteria will be used as in the other field clinicals. This course may not be taken more than twice. Students electing to enroll in PEM 290 must receive a passing grade before progressing in the program. (Prerequisites: successful completion of PEM 194C and all first-year courses)

Learning Outcomes:

- Demonstrate an appropriate affect when interacting with faculty, staff, preceptors, patients, and patient-families.

PEM 292C 12 Lead EKG Interpretation/Difficult Airway Seminar

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 0 Credit Hours: 2

Primary certification in the interpretation of 12 lead EKGs including injury and ischemia patterns, normal and abnormal findings, and the 12 lead as a diagnostic tool will be covered. Principles of ACS diagnosis/management will be an integral part of the course. The difficult airway portion of the course will include: RSI, adjunctive airways, difficult and failed airways, and the airway decision process. (Corequisites: PEM 163C, PEM 196C, PEM 201C, and BIOL 222C)

Learning Outcomes:

- Demonstrate basic and advanced 12-lead interpretation skills, clinical decision-making, and recognition of acute coronary syndromes (ACS) as well as ACS-imitators.
- Differentiate between ST-Elevation Myocardial Infarction and Non-ST-Elevation Myocardial Infarction.
- Recognize effects different electrolytes have on a 12-lead ECG and identify/understand the heart’s axis.
- Identify the settings in which rapid sequence intubation (RSI) is needed and the medications used.
- Identify a potentially difficult airway.
- Identify and manage a failed airway – including the use advanced adjuncts and procedures that can be utilized if the difficult airway.
- Demonstrate mastery of knowledge as required by the National EMS Educational Standards.

PEM 296C Field Clinical I

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 9 Credit Hours: 3

Formative field experience where the student will log at least 150 hours with an ALS service. Successful completion will include minimum hours, preceptor endorsement, completed documentation, a successful mid-semester performance appraisal, a completed end-semester clinic evaluation, and 15 team-leader experiences. (Prerequisite: all previous PEM courses, PEM 194C; co-requisite: all senior fall PEM courses)

Learning Outcomes:

- Evaluate all required patient populations (ages and pathologies) as listed in the course materials.
- Show competence with all required ambulance-based skills, as listed in the course materials.
- Demonstrate an appropriate affect when interacting with faculty, staff, preceptors, patients, and patient-families.

PEM 297C Field Clinical II

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 7 Credit Hours: 3

Summative field experience where the student will log at least 120 hours with an ALS service. Successful completion will include minimum hours, preceptor endorsement, completed documentation, a successful mid-semester performance

appraisal, a completed end-semester clinic evaluation, and 20 team-leader experiences. (Prerequisite: All previous PEM courses, PEM 194C, PEM 296C; co-requisite: all senior spring PEM courses)

Learning Outcomes:

- Evaluate all required patient populations (ages and pathologies) as listed in the course materials.
- Show competence with all required ambulance-based skills, as listed in the course materials.
- Demonstrate an appropriate affect when interacting with faculty, staff, preceptors, patients, and patient-families.

PEM 298C Field Clinical III

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 2 Credit Hours: 1

Summative field experience and program capstone where the student will log at least 50 hours with an ALS service. Successful completion will include minimum hours, at least 18 of 20 successful team leads, preceptor endorsement as a competent entry-level paramedic, completed documentation, and a completed end-semester summative evaluation. (Prerequisite: all previous PEM courses, PEM 194C, PEM 296C, PEM 297C; co-requisite: all senior spring PEM courses)

Learning Outcomes:

- Demonstrate an appropriate affect when interacting with faculty, staff, preceptors, patients, and patient-families

Philosophy

PHIL 110C Introduction to Philosophy

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

questions raised in regard to reality, truth, morality, power, meaning, purpose, and valid reasoning. Topics to be considered include the basis for beliefs concerning the nature and existence of God, experience and reason in the development of knowledge, the mind and its place in nature, freedom and determinism, and the basis and nature of morality.

Learning Outcomes:

- Understand and answer: What is philosophical thinking? Are all persons at heart egoistic? How can truth be established? Are there causal determinants of choice? How does one find purpose and meaning in life?
- Explain classic arguments which illustrate basic philosophical principles.
- Critically discuss the texts in philosophy.
- Write analytically about topics in philosophy.
- Demonstrate knowledge of classic and influential arguments concerning the structures of knowledge.
- Show evidence of their reflection on beliefs and values.
- Critically question several interpretations of basic philosophical positions.

PHIL 112C Beginning Logic

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Explores the principles of reasoning and development of symbolic techniques for evaluating arguments. The main components of deductive symbolic logic are introduced, and students gain skill using these techniques, which are used in mathematics, logic, computer science, statistics, and linguistics. Introduction to symbolic logic, including sentential and predicate logic, is taught with a focus on translating English statements into symbolic notation and evaluating arguments for validity using formal proof techniques. Students are able to distinguish types of arguments, consequences of claims, inconsistency, and the relationship between truth and logic, and detect and avoid ambiguities in language.

Learning Outcomes:

- Represent the logical structure of statements and arguments.
- Apply basic concepts of logic, such as formal reasoning, and the relationships of the concepts.
- Demonstrate an introductory knowledge of decidability.
- Provide logical arguments and find errors in incorrect arguments.
- Express the basic concepts of logic and their relevance for fields, including mathematics, computer science, linguistics, and statistics.

- Assess arguments for validity, using deductive reasoning and other methods.
- Apply these methods to real-world arguments.

PHIL 226AC Comparative World Religions

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Examines major questions or issues addressed by religion in general. It also examines major representative systems of religious beliefs including the practices, historical development, and sociological development and context. The religious systems will be analyzed via specific doctrines and writings of each. Different aspects of religious beliefs and practice such as the absolute, the human problem, the human solution, rituals, the meaning of history, life after death, community and ethics, and attitudes toward other religions will be explored.

Learning Outcomes:

- Demonstrate knowledge of, and familiarity with at least 10 religious traditions, including Hinduism, Buddhism, The Jains and Sikhs, Confucianism, Shintoism, Zoroastrianism, Judaism, Islam, and Christianity.
- Demonstrate understanding of the tenets of the world's major religions and explain their value to individuals.
- Demonstrate skill in engaging in critical discussion/discourse regarding issues of diversity, particularly as they relate to religious practices throughout the world.
- Provide evidence of a "global consciousness" as it relates to understanding and appreciating religious traditions.

PHIL 242C Contemporary Ethical Issues

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

This course is a philosophical examination of major contemporary ethical issues. Topics may include biomedical ethics, business ethics, environmental ethics, human sexuality, and ethics related to life-and-death decisions. The emphasis is on acquiring the philosophical skills necessary to guide self and others in the process of ethical decision making. Cases are used for study and discussion. Available in honors format.

Learning Outcomes:

- Explain the basic meaning of morality and the importance of moral reasoning in society.
- Identify, describe, and differentiate major ethical theories and moral philosophies.
- Demonstrate an understanding of the principles and functions of moral arguments, recognition of invalid arguments, and the benefits to be gained from respectful engagement of those with differing views.
- Apply ethical theories to contemporary issues on a social and personal level.

Physics

PHYS 133C Physics I (Algebra-Based)

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 2

Credit Hours: 4

This is a study of classical physics. Topics include linear and projectile motion, vectors, Newton's Laws of Motion, work, energy, momentum, collisions, rotational kinematics and dynamics, translational and rotational equilibrium, and gravity. A graphing calculator will be required. (Prerequisite or corequisite: MATH 124C or MATH 124XC)

Learning Outcomes:

- State, interpret, and apply the definitions of physical quantities related to kinematics, dynamics, energy, momentum, rotational motion, and gravitation.
- Set up and solve problems, including word problems, in classical mechanics analytically using algebra and trigonometry.
- Solve problems in classical mechanics using numerical methods.
- Solve problems in classical mechanics using graphical methods including the use of position, velocity, and acceleration vs time graphs, graphical vector addition, and free body diagrams.
- Set up laboratory equipment safely and efficiently, plan and carry out experimental procedures, identify and reduce sources of error, analyze and interpret data, and summarize findings in a laboratory report.

PHYS 135C Physics II (Algebra-Based)

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 2

Credit Hours: 4

This is a study of classical physics. Topics include oscillations, mechanical waves and sound, fluids, heat, electrostatics, Ohm's law, D.C. circuits, electromagnetism, and geometrical optics. A graphing calculator will be required. (Prerequisites: PHYS 133C and MATH 124C or MATH 124XC)

Learning Outcomes:

- State, interpret, and apply the definitions of physical quantities related to fluids, thermodynamics, oscillations, waves and sound, electricity and magnetism, and geometrical optics.
- Set up and solve problems, including word problems, analytically using algebra and trigonometry.
- Solve problems using numerical methods.
- Solve problems using graphical methods, including problems in geometrical optics.
- Set up laboratory equipment safely and efficiently, plan and carry out experimental procedures, identify and reduce sources of error, analyze and interpret data, and summarize findings in a laboratory report.

PHYS 231C Physics I (Calculus-Based)

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 3

Credit Hours: 4

This is a study of classical mechanics. Topics include linear and rotational motion, forces, momentum, energy, gravitation, and oscillations. A graphing calculator will be required. (Co/prerequisite: MATH 205C)

Learning Outcomes:

- State, interpret, and apply the definitions of physical quantities related to kinematics, dynamics, momentum, energy, rotational motion, gravitation, and oscillations.
- Set up and solve problems, including word problems, in classical mechanics analytically using algebra, trigonometry, and calculus.
- Solve problems in classical mechanics using numerical methods including numerical extremization problems.
- Solve problems in classical mechanics using graphical methods including the use of motion diagrams, position, velocity, and acceleration vs time graphs, graphical vector addition, free body diagrams, and interaction diagrams.
- Set up laboratory equipment safely and efficiently, plan and carry out experimental procedures, identify and reduce sources of error, analyze and interpret data, propagate error, and summarize findings in a formal laboratory report.

PHYS 232C Physics II (Calculus-Based)

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 3

Credit Hours: 4

The second course studying classical physics. Topics include fluids, elasticity, thermodynamics, electricity, and magnetism. A graphing calculator will be required. (Prerequisites: PHYS 231C and MATH 205C)

Learning Outcomes:

- State, interpret, and apply the definitions of physical quantities related to fluids, thermodynamics, and electricity and magnetism.
- Set up and solve problems, including word problems, in fluids, thermodynamics, and electricity and magnetism analytically using algebra, trigonometry, and calculus.
- Solve problems in fluids, thermodynamics, and electricity and magnetism using numerical and graphical methods.
- Set up laboratory equipment safely and efficiently, plan and carry out experimental procedures, identify and reduce sources of error, analyze and interpret data, propagate error, and summarize findings in a formal laboratory report.

PHYS 233C Physics III (Calculus-Based)

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 3

Credit Hours: 4

Topics include sound, optics, electromagnetic waves, relativity, introduction to quantum mechanics, atomic physics, and nuclear physics. A graphing calculator is required. (Prerequisite: PHYS 232C)

Learning Outcomes:

- State, interpret, and apply the definitions of physical quantities related to sound, optics, electromagnetic waves, relativity, quantum mechanics, and atomic and nuclear physics.
- Set up and solve problems, including word problems, in modern physics analytically using algebra, trigonometry, and calculus.
- Solve problems in modern physics using numerical and graphical methods.
- Set up laboratory equipment safely and efficiently, plan and carry out experimental procedures, identify and reduce sources of error, analyze and interpret data, propagate error, summarize findings in a formal laboratory report, and maintain a laboratory notebook.

Political Science

POLS 110C American Government

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Introduces the basic structures of the political process in the U.S. It combines attention to political activity at both the national (federal) and the state and local levels. The topics covered include analyses of the federal and states' constitutions, the American political economy, state/federal relationships, inter-branch matters between the Executive, Legislature and Judiciary branches, the elective process, activities of the public and interest groups, and the governments' handling of the public purse.

Learning Outcomes:

- Understand the origins and the evolution of federal and state constitutions, describing the origins of the U.S. Constitution and discussing the ways in which the application of the U.S. Constitution has changed.
- Explain the value of the participatory dimension in American government and provide examples of what it means to have sovereignty rest with the people.
- Understand the impact of American pluralism on the vote and of outside influences on government functions.
- Describe how executive, legislative, and judicial branches interact, along with the respective roles of the three branches of government.
- Identify the major issues of current American government.

POLS 150C The New Hampshire Primary

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Explores the changing role and nature of the presidential primary election held in N.H from its first implementation in 1916 to the present. Through a combination of readings, taped and live-streamed presentations, archival footage, classroom presentations and interviews, and group activities, students will experience the primary as it takes shape throughout the fall. The goal of the course is not merely to help students understand the nature of the N.H. presidential primary, but to engage students in the process. Just as the presidential primary is an example of direct democracy, this course is an exercise in civic engagement. Course content will cover, but not be limited to, an understanding of the origins of primary elections in American politics, the laws governing the N.H. primary, the role of media in the process, the changing demographics of N.H. the evolving nature of the N.H. electorate, and the impact of the "first in the nation" primary.

Learning Outcomes:

- Understand the concept and forms of direct democracy (e.g., primary elections, referenda, recalls), the rationale for its adoption, and the changing roles of political parties and interest groups.
- Demonstrate knowledge of the role, evolution, and changing importance of the presidential primary elections in the nation and New Hampshire.
- Identify changes in New Hampshire from 1916 to the present, including regional differences and the importance of rural, urban, and industrial areas.
- Recognize and differentiate the issues presented in presidential primary elections.
- Analyze the changing role played by media in presidential primaries.
- Identify the interests and the related interest groups that participate in the New Hampshire presidential primary.
- Express the value of the various ways voters can become involved in primary campaigns.

POLS 220C Public Administration

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Discusses the growth of the public sector and the methods by which this sector can be managed. Topics include public management techniques, effective decision-making, civil service, budgeting, public organizations, and the politics of public sector administration.

Psychology

PSYC 105C Introduction to Psychology

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Focuses on the fundamental facts and principles of psychology within the broader context of contemporary personal and social concerns. Topics may include the historical development of the discipline, scientific methodology, human development, motivational theory, consciousness, sensation and perception, learning, thinking, memory, emotions, biological basis of behavior, personality theory, psychopathology, sexuality, and measurements and statistics. Available in honors format.

PSYC 205C Crisis Intervention

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Focuses on the emotional aspects of individuals involved in a crisis situation. Coverage is given to the theory and management of specific situations such as stress, death and dying, drug abuse, suicide, sexual assault, disasters, and violence. Consideration is also given to the functions and legalities of the mental health system. (Prerequisite: PSYC 105C)

PSYC 210C Abnormal Psychology

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

An overview of abnormal behavior using the Diagnostic and Statistical Manual of Mental Disorders, 5th ed. Research and issues relating to the nomenclature, incidence, etiology, and treatment of the disorders will be covered. Consideration will be given to physiological, behavioral, social, cultural, and cognitive variables that contribute to each condition. (Prerequisite: PSYC 105C)

Learning Outcomes:

- Understand the historical and conceptual perspectives underlying abnormal psychology.
- Compare and contrast the following perspectives of understanding and treating abnormal behavior: biological, psychodynamic, behavioral, cognitive, humanistic-existential, and community-cultural.
- Understand personal, familial, social, and cultural concepts related to abnormal behavior.
- Understand assessment, classification and therapeutic approaches in dealing with abnormal behavior.
- Describe and demonstrate skill in using the DSM-V, including purpose, organization, and the multi-axial approach of classifying behavior.
- Demonstrate knowledge of eight major categories of abnormal behavior, including describing the dimensions/classification criteria, comparing and contrasting incidence and prevalence, evaluating current etiological understanding, and differentiating between treatment approaches.

PSYC 220C Human Growth and Development: The Life Span

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

A study of the psychological implications of the growth and development of the human person with a special emphasis on the physical, cognitive, social, emotional, and ethical dimension in infancy, childhood, adolescence, and adulthood. Available in honors format. (Prerequisite: PSYC 105C)

Learning Outcomes:

- Describe human development and the life span approach, contrasting the biosocial, cognitive, and psychosocial contexts of development and explaining how development relates to continuity and change.
- Demonstrate knowledge of the major theoretical perspectives of human development.
- Explain the impact of nature and nurture on human development throughout the life span.

- Explain how various types of research contribute to an understanding of human development by describing commonly used methods in research on human development and evaluating the strengths and weaknesses of longitudinal versus cross-sectional research.
- Demonstrate critical thinking skills through examination, reflection, and questioning aspects of human development from childhood through the aging process to death and dying.

PSYC 225C Social Psychology

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Offers an overview to the field of social psychology, a branch of psychology that focuses on how an individual's thoughts, feelings, and behavior are influenced by and influence other people. These reciprocal influences include attention to the social and cultural environment. Predominant themes for the course include individual interpretation and social cognition, the influence and power of situations on individuals, and social relationships. Gender and cultural influences are examined from a variety of perspectives as well. Specific topics that will be studied include social cognition and perception, self-knowledge and self-esteem, attitudes, social influence, conformity, obedience, aggression, prejudice, interpersonal attraction, and prosocial behavior. (Prerequisite: PSYC 105C)

Learning Outcomes:

- Demonstrate understanding of the historical and conceptual perspectives underlying social psychology.
- Explain central concepts related to social thinking including social cognition, social perception, self-knowledge, the need to maintain a stable self-view, and attitudes and attitude change.
- Analyze issues related to social influence, including concepts related to obedience, conformity, and processes and influences of social groups.
- Demonstrate understanding of concepts related to social relations including attraction, prosocial behavior, aggression, and prejudice.

PSYC 226AC Sport and Exercise Psychology

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Examines theory and research of psychology as applied to athletics. Students review the history of sport psychology as well as its application in both individual and team sports. Concepts to be discussed include individual philosophies of sports, motivation, personality of coaches and athletes, training and learning principles, mind-body relationships, and the effects anxiety, motivation, arousal, and relaxation have on performance of athletes at the professional, amateur, and youth levels. The sport psychology techniques used by elite athletes to improve sport performance will also be explored. Students will be asked to apply their psychological knowledge and critical thinking abilities through class participation and open discussions on professional, amateur, and youth sports. Outside observations of sports from youth to professional levels will also be required. (Prerequisites: PSYC 105C, SOCI 105C, or other social science course with a grade of C or higher)

Learning Outcomes:

- Demonstrate an understanding of the field of sport psychology, including its history, definition, and how it can be applied to improve athletic performance.
- Demonstrate an understanding of how personality as well as thoughts, values, and beliefs influence an individual's participation and performance in sports.
- Demonstrate knowledge of a variety of psychological concepts as they relate to sport.
- Apply a variety of skills, strategies, and practices that can be used to enhance performance.
- Explain psychological concepts and techniques, such as motivation, concentration, relaxation, and mindfulness, related to coaching and the ways in which they relate to individual and team performance.

PSYC 280C Individual Counseling: Theory and Practice

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Discussion of the most widely used theories of counseling offering students the opportunity to integrate the theories within their own value systems. Counseling practice will consist of peer counseling process, audio and video recording critiques and role-playing in a seminar setting. (Prerequisites: MHTH 187C and PSYC 105C)

Learning Outcomes:

- Describe effective counselor communication skills, including both verbal and non-verbal.

- List and describe the 12 Human Service Skill Standards related to the field of counseling along with the role of each in the counseling process.
- Describe and differentiate among the major theoretical approaches in the field of counseling.
- Understand of how major theoretical approaches are utilized in various treatment areas.
- Understand of adapting the counseling process to specific populations, services and service providers.
- Understand of the application of ethics and professional principles in the counseling process.
- Work in a team environment cooperatively and effectively with interpersonal communication skills and tasks.
- Integrate collective knowledge within the course and its requirements.

PSYC 283C Group Counseling

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

A study of therapeutic intervention as carried out in and through a group. The course design includes academic discussion of group processes and participation in a concomitant lab experience. (Prerequisites: MHTH 187C and PSYC 105C)

Learning Outcomes:

- Communicate personal strengths/challenges and professional knowledge/skills and translate to group leadership.
- Recognize cultural value system with emphasis on how these impact work as a group leader.
- Identify and describe the stages of group work and all aspects involved including leader and member participation.
- Describe the different types of groups used in the profession with accuracy on the purpose.
- Identify the professional organizations for counselors.
- Recognize aspects of cultural competency as this relates to group work.
- Associate mindfulness towards the work as a group leader.

Radiation Therapy

RDTH 101C Introduction to Radiation Therapy

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Provides an overview of the foundations of radiation therapy and the practitioner's role in the healthcare delivery system. Principles, practices, and policies of the educational program, healthcare organizations, principles of radiation and health safety and professional responsibilities, and ethics, law, and medical terminology of the radiation therapist will be discussed and examined.

Learning Outcomes:

- Incorporate current medical terminology in the field of radiation therapy.
- Describe the positional infrastructure with the radiation oncology department.
- Analyze the ethical and legal issues present in the radiation oncology clinic.
- Compare and contrast the four modalities used for treatment of cancer.

RDTH 110C Principles and Practice of Radiation Therapy I

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 2

Credit Hours: 4

Provides an overview of cancer and the specialty of radiation therapy. The medical, biological, pathological, physical, and technical aspects will be discussed. The roles and responsibilities of the radiation therapist, the treatment prescription, the documentation of treatment parameters, and delivery will also be discussed.

Learning Outcomes:

- Describe historical treatment methods in radiation therapy and compare to current treatment methods.
- Discuss a simulation plan for a tumor, including necessary steps before, during and after the procedure.
- Explain the patient care process to include side effects, modifications, and patient education.
- Analyze and evaluate the procedure for radiation treatment delivery.
- Discuss tumor classification based on histology pathogenesis and tumor characteristics.

RDTH 115C Patient Care

Lecture Hours: 1

Lab/Practicum/Clinical Hours: 0

Credit Hours: 1

Provides the student with foundation concepts and competencies in assessment and evaluation of the patient for service delivery. Psychological and physical needs and factors affecting treatment outcome will be presented and examined. Routine and emergency care procedures will be presented.

Learning Outcomes:

- Explain the dynamics of communicating with the cancer patient and family.
- Recognize medical emergencies and complications and select appropriate medical intervention.
- Assess the physical condition of the patient before, during, and after treatment delivery.
- Assess the nutritional status of the cancer patient to provide nutritional education or intervention.
- Provide appropriate patient education following patient assessment.

RDTH 150C Medical Imaging and Processing

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 0

Credit Hours: 2

Establishes a knowledge base in factors that govern and influence the production and recording of radiographic images for patient simulation, treatment planning, and treatment verification in radiation oncology. Radiation oncology imaging equipment and related devices will be emphasized. Content will also include quality management programs and continuing quality improvements in radiation oncology. (Prerequisites: RDTH 101C and RDTH 110C)

Learning Outcomes:

- Discuss fundamentals of digital imaging, distinguishing between cassette and cassetteless systems.
- Analyze relationships of technical factors affecting image contrast, density, and resolution to determine optimal image quality.
- Describe the components and the operation of a simulator, to include the radiographic, fluoroscopic and CT units.
- Explain the basic principles of image formation for each of the following modalities: CT, MRI, ultrasound, nuclear medicine, PET, fusion imaging, and hybrid imaging.

RDTH 180C Radiation Physics for the Radiation Therapist

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 0

Credit Hours: 2

Establishes a basic knowledge of physics pertinent to developing an understanding of radiation use in the clinical setting. Fundamental physical units, measurements, principles, atomic structure, and types of radiation are emphasized. Also presented are the fundamentals of x-ray generating equipment, x-ray production, and interaction with matter.

Learning Outcomes:

- Discuss the properties implemented for radiation protection.
- Explain the process of electricity and its relationship to electromagnetism.
- Discuss electrical current and electrification.
- Identify properties of photons and their interactions with matter.

RDTH 190C Clinical Practice I

Lecture Hours: 0

Lab/Practicum/Clinical Hours: 16

Credit Hours: 3

Provides sequential development, application, analysis, integration, synthesis, and evaluation of concepts and theories in radiation therapy. Through structured sequential assignments in clinical facilities, concepts of team practice, patient-centered clinical practice, and professional development will be discussed, examined, and evaluated. All students enrolled in this course will be charged a \$500 per semester clinical surcharge. (Prerequisites: RDTH 101C and RDTH 110C)

Learning Outcomes:

- Perform simulation, localization, and therapeutic radiation therapy procedures in accordance with national patient safety standards.
- Deliver patient-centered care.
- Demonstrate the principles of radiation protection.

- Construct and prepare immobilization, beam alignment, and beam modification devices.
- Evaluate and verify treatment plan prior to treatment delivery.
- Demonstrate appropriate and effective written, oral, and nonverbal communication with patients and other members of the healthcare team.
- Execute approved treatment plan in accordance with prescription.
- Assess patient side effects and complications to create and interdisciplinary management strategy that fosters prevention, healing, and comfort.
- Perform quality assurance procedures for all treatment delivery equipment, accessories, and treatment room doors.

RDTH 195C Clinical Practice II

Lecture Hours: 0

Lab/Practicum/Clinical Hours: 18

Credit Hours: 3

Requires two 8-hour days of clinical over 11 weeks to provide sequential development, application, analysis, integration, synthesis, and evaluation of concepts and theories in radiation therapy. Through structured sequential assignments in clinical facilities, concepts of team practice, patient-centered clinical practice, and professional development will be discussed, examined, and evaluated. All students enrolled in this course will be charged a \$500 per semester clinical surcharge. (Prerequisite: RDTH 190C)

Learning Outcomes:

- Perform simulation, localization, and therapeutic radiation therapy procedures in accordance with national patient safety standards.
- Deliver patient-centered care.
- Demonstrate the principles of radiation protection.
- Construct and prepare immobilization, beam alignment, and beam modification devices.
- Evaluate and verify treatment plan prior to treatment delivery.
- Demonstrate appropriate and effective written, oral, and nonverbal communication with patients and other members of the healthcare team.
- Execute approved treatment plan in accordance with prescription.
- Assess patient side effects and complications to create and interdisciplinary management strategy that fosters prevention, healing, and comfort.
- Perform quality assurance procedures for all treatment delivery equipment, accessories, and treatment room doors.

RDTH 200C Radiation Protection and Biology

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Presents basic principles of radiation protection and safety for the radiation therapist. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies, and healthcare organizations are incorporated. Specific responsibilities of the radiation therapist are discussed, examined, performed, and evaluated. Content also includes basic concepts and principles of radiation biology. The interactions of radiation with cells, tissues and the body as a whole, and resultant biophysical events will be presented. Discussion of the theories and principles of tolerance dose, time dose relationships, fractionation schemes, and the relationship to the clinical practice of radiation therapy will be discussed, examined, and evaluated. (Prerequisites: RDTH 101C, RADT 180C, and RDTH 150C)

Learning Outcomes:

- Identify all components of a cell discussing the radiosensitivities of each.
- Discuss the early and late effects of radiation on the cells and tissues.
- Compare somatic and genetic effects of radiation.
- Compare the relationship of time, dose, fractionation, volume, and site to radiation effects.
- Evaluate the principles of radiation protection for the occupational worker.

RDTH 205C Treatment Planning

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Establishes factors that influence and govern clinical planning of patient treatment. Encompassed are isodose descriptions, patient contouring, radiobiologic considerations, dosimetric calculations, compensation, and clinical

application of treatment beams. Optimal treatment planning is emphasized along with particle beams. Stereotactic and emerging technologies are presented. (Prerequisites: RDTH 101C and RDTH 110C)

Learning Outcomes:

- Describe influencing factors of radiation.
- Perform dosimetric calculations.
- Describe moving beam techniques.
- Discuss the importance of preventing overdose and underdose and the techniques used to do so.
- Evaluate and assess a treatment plan.

RDTH 210C Principles and Practice of Radiation Therapy II

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 2

Credit Hours: 4

Examines and evaluates the management of neoplastic disease using knowledge in arts and sciences while promoting critical thinking and the basis of ethical clinical decision making. The epidemiology, etiology, detection, diagnosis, patient condition, treatment, and prognosis of neoplastic disease will be presented, discussed, and evaluated in relationship to histology, anatomical site, and patterns of spread. The radiation therapist's responsibility in the management of neoplastic disease will be examined and linked to the skills required to analyze complex issues and make informed decisions while appreciating the character of the profession. (Prerequisites: RDTH 101C and RDTH 110C; corequisite: RDTH 290C)

Learning Outcomes:

- Discuss the clinical presentation for each anatomic neoplastic site.
- Explain preventative methods and screening tools associated with each neoplastic site.
- Explain detection, diagnosis, grading, and staging systems for each neoplastic site.
- Discuss the role of radiation therapy in the management of oncology emergencies.

RDTH 215C Sectional Anatomy and Pathology

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Studies normal sectional anatomy via diagrams and radiologic images. The pathology content is broken into two parts: general pathology and neoplasia. General pathology introduces basic disease concepts, theories of disease causation, and system-by-system pathophysiologic disorders most frequently encountered in clinical practice. Neoplasia provides an in-depth study of new and abnormal development of cells. The processes involved in the development and classification of both benign and malignant tumors and site-specific information on malignant tumors is presented. (Prerequisites: BIOL 195C with a grade of C or higher; corequisite: BIOL 196C)

Learning Outcomes:

- Identify the pros and cons, image formation and image orientation of CT, MR, PET, and ultrasound.
- Identify and discuss the use of topographic anatomy and sectional anatomy with regard to radiation oncology, of the head and neck, chest, abdomen, pelvis, spine, and extremities.
- Identify basic structures and common abnormalities.
- Discuss pathology in relation to cancer presence in the head, neck, chest, abdomen, pelvis, spine, and extremities.

RDTH 220C Radiation Therapy Physics

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Reviews and expands concepts and theories in the radiation physics course. Detailed analysis of the structure of matter, properties of radiation, nuclear transformations, x-ray production, and interactions of ionizing radiation are emphasized. Also presented are treatment units used in external radiation therapy, measurement and quality of ionizing radiation produced, absorbed dose measurement, dose distribution, and scatter analysis. (Prerequisites: RADT 180C and RDTH 150C; corequisite: RDTH 293C)

Learning Outcomes:

- Describe atomic structure and composition among the elements, including but not limited to particles (their location, energy level and charge), atomic number and mass.
- Explain nuclear stability and types of radioactive decay.

- Describe x-ray production for linear accelerators including the factors that influence production and output.
- Compare the characteristics of betatron, cyclotron, microtron, and other accelerated particles.
- Explain charged particle interactions with matter, describing dose deposition, energy loss, and shielding requirements.

RDTH 280C Registry Review

Lecture Hours: 1 Lab/Practicum/Clinical Hours: 0 Credit Hours: 1

Prepares the radiation therapy student to take the national certification examination through the American Registry of Radiologic Technologists. Various topics will be addressed each week with a practice registry exam given to complete the program. (Prerequisites: RDTH 220C and RDTH 210C)

Learning Outcomes:

- Present and discuss current therapy topic to the professional community.
- Prepare and distribute a professional resume

RDTH 290C Clinical Practice III

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 24 Credit Hours: 4

Provides sequential development, application, analysis, integration, synthesis, and evaluation of concepts and theories in radiation therapy. Through structured sequential assignments in clinical facilities, concepts of team practice, patient-centered clinical practice, and professional development will be discussed, examined, and evaluated. All students enrolled in this course will be charged a \$500 per semester clinical surcharge. (Prerequisites: RDTH 190C and RDTH 195C, or admission to the Radiation Therapy Certificate program)

Learning Outcomes:

- Perform simulation, localization, and therapeutic radiation therapy procedures in accordance with national patient safety standards.
- Deliver patient-centered care.
- Demonstrate the principles of radiation protection.
- Construct and prepare immobilization, beam alignment, and beam modification devices.
- Evaluate and verify treatment plan prior to treatment delivery.
- Demonstrate appropriate and effective written, oral, and nonverbal communication with patients and other members of the healthcare team.
- Execute approved treatment plan in accordance with prescription.
- Assess patient side effects and complications to create and interdisciplinary management strategy that fosters prevention, healing and comfort.
- Perform quality assurance procedures for all treatment delivery equipment, accessories, and treatment room doors.

RDTH 293C Clinical Practice IV

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 24 Credit Hours: 4

Builds on the sequential development, application, analysis, integration, synthesis, and evaluation of concepts and theories in radiation therapy. Through structured sequential assignments in clinical facilities, concepts of team practice, patient-centered clinical practice, and professional development will be discussed, examined, and evaluated. All students enrolled in this course will be charged a \$500 per semester clinical surcharge. (Prerequisite: RDTH 290C)

Learning Outcomes:

- Perform simulation, localization, and therapeutic radiation therapy procedures in accordance with national patient safety standards.
- Deliver patient-centered care.
- Demonstrate the principles of radiation protection.
- Construct and prepare immobilization, beam alignment, and beam modification devices.
- Evaluate and verify treatment plan prior to treatment delivery.
- Demonstrate appropriate and effective written, oral, and nonverbal communication with patients and other members of the healthcare team.
- Execute approved treatment plan in accordance with prescription.

- Assess patient side effects and complications to create and interdisciplinary management strategy that fosters prevention, healing, and comfort.
- Perform quality assurance procedures for all treatment delivery equipment, accessories, and treatment room doors.

RDTH 295C Clinical Practice V

Lecture Hours: 0

Lab/Practicum/Clinical Hours: 23

Credit Hours: 4

Requires 32 hours per week over 11 weeks and builds on the sequential development, application, analysis, integration, synthesis, and evaluation of concepts and theories in radiation therapy. Through structured sequential assignments in clinical facilities, concepts of team practice, patient-centered clinical practice, and professional development will be discussed, examined, and evaluated. All students enrolled in this course will be charged a \$500 per semester clinical surcharge. (Prerequisite: RDTH 293C.)

Learning Outcomes:

- Perform simulation, localization, and therapeutic radiation therapy procedures in accordance with national patient safety standards.
- Deliver patient-centered care.
- Demonstrate the principles of radiation protection.
- Construct and prepare immobilization, beam alignment, and beam modification devices.
- Evaluate and verify treatment plan prior to treatment delivery.
- Demonstrate appropriate and effective written, oral, and nonverbal communication with patients and other members of the healthcare team.
- Execute approved treatment plan in accordance with prescription.
- Assess patient side effects and complications to create and interdisciplinary management strategy that fosters prevention, healing and comfort.
- Perform quality assurance procedures for all treatment delivery equipment, accessories, and treatment room doors.

RDTH 296C Clinical Practice VI

Lecture Hours: 0

Lab/Practicum/Clinical Hours: 32

Credit Hours: 6

Designed to perfect the content of the previous didactic and clinical courses. The content is designed to provide sequential development, application, analysis, integration, synthesis, and evaluation of concepts and theories in radiation therapy. Through structured sequential assignments in clinical facilities, concepts of team practice, patient-centered clinical practice, and professional development will be discussed, examined, and evaluated. All students enrolled in this course will be charged a \$500 per semester clinical surcharge. (Prerequisite: RDTH 295C)

Learning Outcomes:

- Perform simulation, localization, and therapeutic radiation therapy procedures in accordance with national patient safety standards.
- Deliver patient-centered care.
- Demonstrate the principles of radiation protection.
- Construct and prepare immobilization, beam alignment, and beam modification devices.
- Evaluate and verify treatment plan prior to treatment delivery.
- Demonstrate appropriate and effective written, oral, and nonverbal communication with patients and other members of the healthcare team.
- Execute approved treatment plan in accordance with prescription.
- Assess patient side effects and complications to create and interdisciplinary management strategy that fosters prevention, healing and comfort.
- Perform quality assurance procedures for all treatment delivery equipment, accessories, and treatment room doors.

Radiologic Technology

RADT 103C Radiographic Positioning I

Lecture Hours: 1

Lab/Practicum/Clinical Hours: 2

Credit Hours: 2

Introduces the student to the principles of radiography, radiographic terminology, and radiation protection. This course covers the anatomy and radiographic positioning of the thoracic and abdominal viscera. (Corequisite: RADT 109C and RADT 180C)

Learning Outcomes (Clinical Portion):

- Define general radiographic and anatomic relational terminology; define and apply various positioning principles in hypothetical clinical situation.
- Describe image quality factors in digital radiography; describe basic radiation protection methods to reduce exposure to the patient and imaging personnel; explain the patient dose terminology for specific regions of the body.
- Demonstrate the routine and special projections for chest radiography and upper airway.
- Evaluate chest radiographs based on established radiographic criteria.

RADT 109C Introduction to Healthcare in Radiologic Technology

Lecture Hours: 1

Lab/Practicum/Clinical Hours: 0

Credit Hours: 1

A series of continuous focused lectures pertinent to each clinical semester. Radiologic science, patient care, image critiques, and imaging methods will be presented and discussed. (Corequisites: RADT 103C, RADT 180C)

Learning Outcomes:

- Demonstrate patient transfer and safety techniques.
- Identify characteristics of human diversity and adapt to their needs.
- Identify critical-thinking and problem-solving strategies.
- Understand confidentiality in regards to HIPAA.
- Understand the ARRT Standard of Ethics.

RADT 116C Radiographic Imaging Technology I

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 2

Credit Hours: 3

A discussion of the principles leading to the production of the manifest image. The general design of the x-ray tube as well as x-ray production and emission. Tube rating charts, factors affecting radiographic quality, grids, and accessories as well as fluoroscopy will be covered. (Prerequisites: RADT 103C, RADT 109C, RADT 180C; corequisites: RADT 159C, RADT 151C)

Learning Outcomes:

- Describe the photoelectric effect, Compton effect, their occurrence, and their impact upon the latent image carried by the remnant beam.
- Identify the visibility and geometric components of image quality (brightness, contrast, noise, sharpness, magnification, and shape distortion), and the variables that affect them (kVp, mAs, SID, OID, beam alignment, motion, grids, collimation).
- Describe what mAs and kVp control in the X-ray beam, and why mAs is considered the primary control for beam quantity and kVp is the primary control for beam quality.
- Describe the anode heel effect and the line focus principle and how they relate to visibility qualities of the image.
- Discuss all of the variables affecting exposure level, subject contrast, image noise, sharpness of detail, magnification, and shape distortion at the image receptor.

RADT 123C Radiation Protection

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Topics covered in this course include radiation quantities and units; interaction of radiation with the body tissues; molecular, and cellular radiation biology; dose limits; equipment design for radiation protection; early and late effects of radiation; management of patient and imaging personnel doses during diagnostic x-ray procedures; and methods of monitoring. (Prerequisites: RADT 180C, RADT 151C, RADT 116C, and RADT 203C; corequisite: RADT 294C)

Learning Outcomes (Clinical Portion):

- Discuss ionizing radiation in the healing arts, justification and responsibility for imaging procedures, and patient education. List different forms of ionizing radiation and identify the units of measurement. Explain how ionizing radiation can cause biologic damage in body tissue.
- Describe the process of absorption of ionizing radiation and explain the events that occur when ionizing radiation passes through matter. List x-ray photon interactions with matter and describe the effect of kVp on image quality and patient dose. Describe the radiation quantities and units used to measure and limit radiation exposure.
- Describe the various monitoring devices and their functions. Discuss the importance of cell biology and the effects of ionizing radiation on the human body. Discuss the effects of ionizing radiation on living systems and the sequence of events occurring after the absorption of energy from ionizing radiation; the action of the living system to compensate for consequence of x-ray absorption and the injury to the living system that may occur from irradiation.
- List the early tissue reactions, stochastic effects and late tissue reactions of radiation and their effects on organ systems. Discuss and explain dose limits for exposure to ionizing radiation in order to limit the stochastic and late tissue reactions of ionizing radiation exposure.
- Describe the radiographic equipment design and how they can optimize image quality and reduce radiation exposure to the patient. Identify ways to manage patient and imaging personnel radiation dose during diagnostic x-ray procedures. List the special considerations on radiation safety in computed tomography and x-ray breast imaging.

RADT 151C Patient Care for the Radiographer

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 0

Credit Hours: 2

Discusses the proper handling of sick, injured, and infectious patients along with the proper care and use of medical equipment and supplies. Pharmacology, medical ethics, and the medicolegal aspects of radiologic technology will be discussed. (Prerequisites: RADT 109C, RADT 103C; corequisites: RADT 159C)

Learning Outcomes:

- Identify the needs of various types of patients according to age group, status, and patient type; and how to appropriately interact and communicate with those patients and their families.
- Describe the role of the radiographer in taking patient history and the skills necessary to obtain an appropriate patient history.
- Discuss the establishment of infectious disease and factors involved in the spread of disease and chain of infection.
- Describe standard precautions and relate types of transmission-based precautions with clinical situations.
- Differentiate between systems of ethics, law, and morals, and explain ethics of the radiologic technology profession.

RADT 159C Radiographic Positioning II and Clinical Procedures I

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 26

Credit Hours: 9

Examines the radiographic positioning of the osseous system. Topics in this course include positioning, radiographic exposure factors, medical terminology, pathology, radiographic anatomy, radiation protection, and special considerations for the pediatric and geriatric patients. The clinical experience is an extension of the classroom where the student will develop the theory into practical skills through instruction, application, critique, and evaluation on common procedures. All students enrolled in in this course will be charged a \$500 per semester clinical surcharge. (Prerequisites: RADT 151C, RADT 180C; corequisite: RADT 116C)

Learning Outcomes (Clinical Portion):

- Demonstrate effective interpersonal skills, including the ability to identify the impact of non-verbal communication.
- Identify patient appropriately and review clinical history, while maintaining patient confidentiality and dignity in all interactions.
- Adhere to concepts that focus on organization theories, roles of team members, and conflict resolution.

Learning Outcomes (Didactic Portion):

- Identify the anatomy and topographic landmarks of the abdomen, upper limb, shoulder girdle, lower limb, hip, pelvis, ribs, sternum, and sternoclavicular joints.

- Explain all radiographic positioning considerations and clinical indications for abdominal, upper limb, shoulder girdle, lower limb, hip, pelvis, ribs, sternum, and sternoclavicular joints.
- Demonstrate the routine and special projections for abdominal, upper limb, shoulder girdle, lower limb, hip, pelvis, ribs, sternum, and sternoclavicular joint radiography.
- Evaluate abdominal, upper limb, shoulder girdle, lower limb, hip, pelvis, ribs, sternum, and sternoclavicular joint radiographs based on established radiographic criteria.

RADT 164C Radiographic Positioning III and Clinical Procedures II

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 26

Credit Hours: 9

Examines the radiographic positioning of the cervical, thoracic, and lumbar spine along with routine positioning of the biliary tract, upper and lower gastrointestinal system, urinary system, and the study of radiographic contrast media. Topics in this course include positioning, radiographic exposure factors, medical terminology, radiation protection, and special considerations for the pediatric and geriatric patients. Clinical experience is continued in this course. All students enrolled in this course will be charged a \$500 per semester clinical surcharge. (Prerequisites: RADT 109C, RADT 103C, RADT 116C, RADT 180C, RADT 151C, and RADT 159C; corequisite: RADT 220C)

Learning Outcomes (Clinical Portion):

- Demonstrate comprehensive and didactic knowledge of concepts needed to produce quality radiographs in line with the didactic component of the course.
- Comprehend verbal and written instructions to correctly perform procedures within the clinical setting.
- Use critical thinking skills for problem solving.
- Display awareness of and sensitivity to diverse population of peers, hospital staff, and medical personnel.

Learning Outcomes (Didactic Portion):

- Identify the structures demonstrated on routine radiographic and/or fluoroscopic images of the cervical spine, thoracic spine, lumbar spine, sacrum, coccyx, urinary system, biliary tract, upper gastrointestinal system, and lower gastrointestinal system and identify the specific structures, radiographic topographic landmarks, reference points, sutures, and positioning lines of the 8 cranial bones and 14 facial bones.
- Explain the patient preparation necessary for contrast studies of the urinary system, biliary tract, upper gastrointestinal system, and lower gastrointestinal system.
- Explain the routine and special positions and projections for all radiographic and/or fluoroscopic procedures of the cervical spine, thoracic spine, lumbar spine, sacrum, coccyx, urinary system, biliary tract, upper gastrointestinal system, and lower gastrointestinal system.
- Explain the purpose for the use of contrast media for the urinary system, biliary tract, upper gastrointestinal system, and lower gastrointestinal system.
- Evaluate images for the positioning, centering, appropriate anatomy and overall image quality for radiographic procedures of the cervical spine, thoracic spine, lumbar spine, sacrum, coccyx, urinary system, biliary tract, upper gastrointestinal system, and lower gastrointestinal system.

RADT 165C Radiographic Clinical Procedures III

Lecture Hours: 0

Lab/Practicum/Clinical Hours: 23

Credit Hours: 5

A continuation of the clinical component of RADT 164C. Students will complete their first clinical assignment and build on the procedures taught in previous courses. Four 8-hour clinical days per week over 11 weeks is required. All students enrolled in this course will be charged a \$500 per semester clinical surcharge. (Prerequisite: RADT 109C, RADT 103C, RADT 116C, RADT 151C, RADT 159C, RADT 164C, and RADT 180C; corequisite: RADT 203C)

Learning Outcomes:

- Use critical thinking skills for problem solving.
- Demonstrate patient advocacy for a diverse patient population.
- Recognize the impact of non-verbal communication and emotional responses during interactions and modify behavior based on these interactions.

RADT 180C Radiographic Physics

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

A basic review of the physical principles of matter, leading to tube production of electricity with its ramifications pertinent to the field of radiologic technology. Basic radiation producing circuitry is discussed including closed circuit television along with digital radiography. (Corequisites: RADT 103C, RADT 109C)

Learning Outcomes:

- Explain the basic characteristics of the atom, subatomic particles and discuss ionization and the emission of alpha, beta, and gamma radiation, and their effects on the nucleus.
- Define the characteristics of waves, with particular attention to electromagnetic waves, their electrical and magnetic components, and magnetism and electrostatics.
- Define electrical current, circuits, power, and frequency; and distinguish between AC and DC waveforms, and describe electromagnetic induction and transformers.
- Describe the basic layout of an X-ray machine circuit and explain the various components of the circuit, to include the materials, components, and function of the X-ray tube including the cathode, high speed rotating anode, glass envelope, and induction motor, and explain the process of thermionic emission and the creation of the space charge.
- Describe the Bremsstrahlung and characteristic interactions, their effects on the X-ray beam spectrum and impact on the image, and describe the effects of target material, mAs, filtration, kVp, and the type of generator used on the X-ray beam spectrum.

RADT 203C Advanced Radiographic Procedures

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

A continuation of RADT 159C and examines the radiographic positioning of the cranium, facial bones, and paranasal sinuses. Other topics include trauma, mobile and surgical radiography, pediatric radiography, venipuncture, arthrography, biliary duct procedures, hysterosalpingography, myelography, orthoroentgenography, and conventional tomography. (Prerequisites: RADT 103C, RADT 109C, RADT 159C, RADT 164C; corequisites: RADT 165C)

Learning Outcomes:

- Identify the anatomy and topographic landmarks of the abdomen, upper limb, shoulder girdle, lower limb, hip, pelvis, ribs, sternum, and sternoclavicular joints
- Explain all radiographic positioning considerations and clinical indications for abdominal, upper limb, shoulder girdle, lower limb, hip, pelvis, ribs, sternum, and sternoclavicular joints.
- Demonstrate the routine and special projections for abdominal, upper limb, shoulder girdle, lower limb, hip, pelvis, ribs, sternum, and sternoclavicular joint radiography
- Evaluate abdominal, upper limb, shoulder girdle, lower limb, hip, pelvis, ribs, sternum, and sternoclavicular joint radiographs based on established radiographic criteria

RADT 209C Pathology and Cross-Sectional Anatomy

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Introduces concepts related to disease with etiological considerations. Included in this course is the understanding of how the disease process works and recognizing the radiographic appearance of specific diseases. Gross anatomical structures will be located and identified in axial (transverse), sagittal, coronal, and orthogonal (oblique) planes. (Prerequisites: successful completion of all previous RADT courses; corequisite: RADT 295C)

Learning Outcomes:

- Differentiate pathologic conditions affecting the respiratory system, skeletal system, gastrointestinal system, urinary system, nervous system, endocrine system, and reproductive system.
- Explain the changes in technical factors required for obtaining optimal quality radiographs in patients with various underlying pathologic conditions.
- Discuss the stages of disease: pathological, traumatic, surgical, healing, complications, and genetic versus heredity.
- Classify the more common disease in terms of their attenuation of x-rays.

RADT 220C Digital Processing and Computerized Tomography

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 2

Credit Hours: 3

An understanding of the components, principles, and operation of digital imaging systems found in diagnostic radiology. Factors that impact image acquisition, display, archiving, and retrieval are discussed as well as quality assurance and maintenance. Also included in this course are concepts designed to provide entry-level radiography students with a basic understanding of the operation of a computed tomography device. (Prerequisite: RADT 116C, RADT 180C; corequisite: RADT 164C)

Learning Outcomes:

- Discuss and explain different types of image receptors.
- Describe the parts of a digital fluoroscopy system and their functions.
- Define and discuss the components and function of the PACS, RIS, and HIS, and the DICOM standard.
- Explain the characteristics of digital images, specifically image matrix, bit depth, and dynamic range, and the application of preprocessing and postprocessing to the digital image.
- Explain the construction of the image histogram, general types of histogram analysis, and why they must be matched to the actual acquired histogram.

RADT 294C Radiographic Clinical Procedures IV

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 16 Credit Hours: 4

Students will be required to rotate through a second clinical affiliate for the purpose of learning other procedures, protocols, and technology. All students enrolled in this course will be charged a \$500 per semester clinical surcharge. (Prerequisites: RADT 109C, RADT 103C, RADT 164C, RADT 165C, and RADT 203C; corequisite: RADT 123C)

Learning Outcomes:

- Build upon comprehensive and didactic knowledge of concepts needed to produce quality radiographs.
- Display awareness of and sensitivity to diverse population of peers, hospital staff, and medical personnel.
- Display organization of work; seen with the ability to coordinate positions in sequence for proper protocol, utilize equipment fluently, and maintain and organized clinical binder.
- Understand and communicate hospital protocol through performance of exams, processing of images, documenting of information in radiology information systems and other pertinent information by demonstrating sound reasoning and logic independently.

RADT 295C Radiographic Clinical Procedures V

Lecture Hours: 0 Lab/Practicum/Clinical Hours: 16 Credit Hours: 4

Students will refine their skills in preparation for the workplace and complete all required clinical competencies for the program. All students enrolled in this course will be charged a \$500 per semester clinical surcharge. (Prerequisite: RADT 294C; corequisite: RADT 209C)

Learning Outcomes:

- Use critical thinking skills for problem solving.
- Identify patient appropriately and review clinical history, while maintaining patient confidentiality and dignity.
- Communicate with patients and family members through appropriate oral and nonverbal communication.
- Display awareness of and sensitivity to diverse population of peers, hospital staff and medical personnel.

Recreation and Wellness

RECR 101C Introduction to Recreation and Leisure Studies

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Discusses the theories of leisure, play, and recreation, emphasizing the role leisure plays in modern society. Students will concentrate on psychological aspects of recreation and how it impacts one's quality of life. Cultural, economic, and social factors about leisure participation will be explored. Community leisure services will be addressed. Career opportunities in a variety of settings will be explored.

Robotics and Automation Engineering Technology

RAET 205C PLC Programming

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 3

Credit Hours: 3

Students will develop a thorough understanding of modern, industry-standard PLC hardware and software to enable them to use PLCs effectively. Topics include the PLC as a task specific computer, program scan, relay ladder logic, digital and analog, sequencers/drums, functions and function blocks, RLL, SCL, FBD, human machine interface, and other industry related topics. Numerous industry examples will be explored and discussed. Labs will emphasize program organization, documentation, audience awareness, maintainability, robustness, fault tolerance, and debugging. (Prerequisites: MATH 124C with a grade of C or higher, CPET 107C and ELET 101C, each with a grade of C or higher, or permission of the department chair)

Learning Outcomes:

- Describe PLC architecture.
- Describe PLC input/output wiring.
- Use descriptive tags and comments.
- Write code in relay ladder logic, graph programming, statement list, and function block diagrams.
- Effectively use timers and counters to solve programming problems.
- Understand and use PLC memory and registers.
- Describe and use a PID loop.
- Describe and use a master control relay.
- Effectively use functions and function blocks.
- Write clear and easy to understand code.
- Describe and use edge trigger contacts.
- Understand and use the binary, hexadecimal, octal number systems.
- Use analog input/output.
- Setup and use a human machine interface.

RAET 210C Robotics and Automation I

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 4

Credit Hours: 4

Introduces fixed and flexible automation equipment. An emphasis is placed on flexible equipment components such as the industrial robot. Robot topics include history, geometric configuration, component subsystems, robot safety, basic programming and operation, and end effector design. Lab work includes the use of industrial robot arms to perform various independent functions such as assembly and material handling processes. Other equipment studied includes motion control devices, such as motors and sensors, conveyors and parts feeder mechanisms, and use of vision systems and other automation equipment used in manufacturing. Students enrolled in this course will be charged a \$50 materials fee. (Prerequisites: MATH 140C and MFET 111C, each with a grade of C or higher, CPET 107C with a grade of C or higher or permission of the department chair)

Learning Outcomes:

- Briefly trace the historical evolution of the industrial robot.
- Define the term industrial robot.
- Describe the characteristics of robots that make them an important part of industrial automation.
- Describe the following robotic system components: controller, manipulator, power supply, and end effector.
- List and describe the basic robot motion configurations.
- Define the term degrees of freedom as applied to industrial robots.
- Describe the most common robotic work envelope configurations and match these work envelopes with specific robot applications.
- Describe basic programming methods used with industrial robots.
- Program an industrial robot to perform a prescribed task and demonstrate.
- List industrial applications where teach pendant programming and off-line programming are most commonly used.
- Describe pneumatics as used with industrial robots.
- Design and build an end effector.
- Describe machine vision systems and give examples of their uses with robots.
- Describe these applications of industrial robots: die casting, spray painting, welding, assembly, finishing, inspection, loading and unloading, service applications, and automated guided vehicles.

- Describe important safety considerations when applying robots in industry.
- List factors to consider when selecting robots for industrial applications.
- Describe and demonstrate a pneumatic and hydraulic fluid power system.
- List the advantages and disadvantages of preventive maintenance.
- Discuss the implications of robotics technology on society to include job displacement, retraining of workers, and the need for computer literacy.

RAET 220C Robotics and Automation II

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 4

Credit Hours: 4

Covers advanced topics that include the integration of robots and CNC machines into manufacturing cells. The integration of automation equipment such as PLCs, motion control devices, and vision systems is also covered. The lab work includes the use of PLCs, robots, CNC machines, and other automation equipment. Students enrolled in this course will be charged a \$50 materials fee. (Prerequisites: RAET 205C and RAET 210C, each with a grade of C or higher)

Learning Outcomes:

- Discuss the use of electromechanical systems with robots.
- Explain the function of control systems used with robots.
- Describe the type of motion that rotary electric actuators produce.
- Discuss image processing functions of acquisition, preprocessing, analysis, and interpretation used with machine vision systems.
- Discuss the implications of robotics technology on society to include job displacement, retraining of workers, and the need for computer literacy.
- Describe and perform the integration of robots and CNC machines into manufacturing cells.
- Describe and use motion control devices, such as motors and sensors, conveyors and parts feeder mechanisms
- Set up and use of vision systems as well as other automation equipment used in manufacturing.
- Demonstrate and integration of automation equipment such as PLCs, motion control devices, and vision systems.

Science

SCI 104C Astronomy and Space

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 2

Credit Hours: 4

Acquaints students with the complexities of the universe. The theoretical portion of the course is divided into four topics: the history of astronomy and telescopes; the planets and moons of our solar system; the birth, life, and death of stars; and galaxies and the large-scale structure of the universe. The lab portion of the course consists of in-class activities, outdoor observations during class, and independent labs in which the student makes observations of objects in the night sky. (High school Algebra I or equivalent recommended)

Learning Outcomes:

- Describe Earth's place in the solar system, the Milky Way galaxy and the universe.
- Be able to explain the tides, seasons, eclipses and the phases of the moon.
- Identify the main characteristics of each planet and some of the moons revolving around them.
- Demonstrate an understanding of the Big Bang Theory.
- Demonstrate an understanding of the formation of the solar system.
- Distinguish among various aspects of the universe: galaxies, black holes, dark matter, etc.
- Describe the process that powers the stars.
- Explain the various characteristics of stars and their life cycles.
- Identify the major constellations and develop a familiarity with the night sky.
- Demonstrate an understanding of comets, meteors, asteroids and auroras.
- Identify those scientists who have contributed major research information to our ideas of the universe.
- Explain the history, difficulties and rewards of the space program.

SCI 107C Introduction to Meteorology

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 2

Credit Hours: 4

Introduces the fundamentals of weather and climate. Topics include observing weather, physical properties and processes of the atmosphere, weather systems, hazardous weather (thunderstorms, tornadoes, and hurricanes), basics of forecasting, clouds, air pollution, and climate change. The lab component consists of group exercises, hands-on experiments, and use of the internet to explore the topics of weather. This course requires regular student access to the internet.

Learning Outcomes:

- Describe, measure, and interpret the basic physical properties of the atmosphere, and relate them to observed weather phenomena.
- Understand daily and seasonal weather changes and the daily weather reports and forecasts provided by the media.
- Analyze, interpret, and evaluate numerical weather data, maps of surface, upper-air and forecast weather, and satellite and radar images.
- Understand that apparently random weather conditions are related to organized weather systems that develop and move in ways that can be understood and predicted.
- Compare and contrast the structure and development of basic weather systems, and relate them to associated weather conditions.
- Describe forms of severe weather, articulate the hazards associated with each, and prescribe safety practices to protect life and property.
- Relate the science of meteorology to real-life experiences.
- Discuss the intricacies and limitations of weather forecasting.
- Discuss and appreciate the complexity of Earth's climate system and uncertainties regarding global climate change.

Sociology

SOCI 105C Introduction to Sociology

Introduces the concepts, principles, and applications of the social science method in general and of sociology in particular. A review of some of the crucial sociological problems of today, involving the relationship of the individual to society and groups of individuals to one another. Some topics included are culture, race, class, social mobility, and social change. Reference is made to the historical and economic forces in the U.S. that are responsible for some of these problems. Available in honors format.

Learning Outcomes:

- Explain the value of the sociological perspective and the new and different ways of looking at familiar worlds, including through symbolic interactionism, functional analysis, and conflict theory.
- Demonstrate an understanding of culture and its formation as well as an appreciation of what one culture can learn from the other, including its material and nonmaterial component and the importance of cultural relativism how it helps to avoid an ethnocentric approach to understanding other cultures.
- Explain the importance of the socialization process and the role interaction plays in the social construction of the individual and society.
- Analyze the social structure (society's framework) and social interaction (face-to-face/personal space) in defining the nature of the human experience, differentiating between macro-sociological and micro-sociological approaches to understanding social life.
- Demonstrate knowledge of social stratification and social inequalities and the ways in which they impact relationships between nations and an individual's life chances.
- Provide examples of the significance of the sweeping changes in society brought about by the social evolutionary process of technology, capitalism, globalization, and other catalysts.

SOCI 180C Environment and Society

Society and the natural environment are vitally linked in a number of ways. In this course, students will explore these connections at various levels from the local to the global, but with a focus on the students' lives and local communities as important case studies. This course focuses on the social causes of environmental problems, the social consequences of environmental degradation, and social responses to environmental issues. The course is designed to provide students with the sociological tools and hands-on experiences that will help them gain a better understanding of local

and global earth systems related to food, energy transportation housing, waste, and water, as well as the qualities of ecological integrity, social and racial justice, resilient communities, and economic well-being.

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Learning Outcomes:

- Explain the value of a social ecological perspective and the new and different ways of looking at familiar worlds.
- Demonstrate an understanding of the role institutions and human actions play in shaping relationships with the non-human environment.
- Explain the importance of key environmental sociology concepts and terms to develop and understanding of social/environmental issues, defining the importance of place and community, sustainability, consumption and production, externalities, social construction of nature, and environmental justice.
- Evaluate the importance of the social structure (society's framework) and social interaction (face-to-face/personal space) in defining the nature of the human experience and the relationship to the natural world.
- Demonstrate understanding of the significance of the sweeping changes in society and the environment brought about by the social evolutionary process of technology, capitalism, globalization, and other catalysts.

SOCI 214C Race and Ethnic Relations

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Examines social and historical experiences of the major minority groups to better understand their social, cultural, and economic status, and group relations in the U.S. Contemporary topics will include diversity, assimilation, ethnic identity, prejudice, discrimination, racism, class, gender, immigration, inequality, and poverty. This course provides an opportunity to examine ideas relating to such diverse issues as the relationship between attitudes and behaviors, the complexity of class, power, and conflict, and the interplay between economic and political systems. (SOCI 105C recommended)

Learning Outcomes:

- Distinguish between the meaning of race and ethnicity as well as the ideology of racism, the social construction of race and ethnicity, and their roles in multiracial and multiethnic society.
- Analyze majority/minority relations from a sociological perspective as socially constructed concepts.
- Demonstrate an understanding of the role of power and the way dominant group status is created and maintained.
- Analyze the importance of racial and ethnic diversity to contemporary American society.
- Explain how social, cultural, and economic conditions and experiences affect racial and ethnic minority groups in the U.S.

SOCI 240C Marriage, Family, and Personal Relationships

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Examines concepts and issues associated with family life and personal relationships. A variety of social problems that impact personal relationships, marriage, and the family will be addressed that have resulted from social, cultural, political, and economic changes in society. Such issues as gender role socialization, diversity of family forms, men and women in cross-cultural perspective, men and women in the workplace, poverty and families, reproductive and parenting rights, sexuality, mate selection, the internal dynamics of relationships, domestic violence, marital dissolution, and future family trends will be examined throughout the semester. Altogether, such changes in the world outside the family have profound impact on what happens inside the family. Such changes have profound consequences on how individuals conduct their personal and social lives together. The questions that this course will raise and attempt to answer will hopefully enable us to live together in adulthood with considerably more ease than most currently experience. (An introductory sociology or psychology course is recommended.)

Learning Outcomes:

- Explain the value of the sociological perspective as it applies to the socially constructed meaning of families.
- Demonstrate an understanding of why an analysis of gender is critical to the sociological study of families.
- Explain the importance of how race and ethnicity can play powerful roles in people's family experiences.
- Evaluate the importance and influence of broad economic forces on family dynamics, access to important resources and life chances, and structure across the economic spectrum in respect to class distinctions.

- Demonstrate an understanding of the personal and cultural development of intimate relationships and the role of love, sexuality, and attraction in marriage and cohabitation.
- Demonstrate the understanding of the cultural importance of parenthood and the cultural and historical context of the transition to parenthood.
- Evaluate the significance of sweeping social changes in society on the future of families.

SOCI 250C Conflict Resolution in Modern Society

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Provides an overview of theories and research concerning the nature of conflict and methods for resolving conflict. The foundation of the course is social systems theory; the course examines conflicts among social institutions and conflicts among diverse populations. The effects of conflict on the individual are considered. The course provides the student/practitioner with the theoretical framework for analyzing and resolving conflict. This course does not meet the minimum Social Science requirement for NHTI's associate degrees or professional certificate programs.

SOCI 298C Travel/Study Abroad Experience

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Students will learn about another country through on-site study that may include visitation to historic sites, libraries, archives, cultural events, and museums. The history, culture, economy, and politics of the host country will be examined. Students will increase their cultural awareness and cross-cultural sensitivity through exposure to people from different countries and cultures. As a school-sponsored travel abroad experience (at student's expense), this course combines the equivalent of 3 credits of classroom and field experience. A project is required to document the learning experience. (Prerequisite: PSYC 105C, SOCI 105C, or permission of the department chair) May be repeated for credit with permission of the department chair.)

Learning Outcomes:

- Identify personal learning goals associated with the culture and area they will be visiting. Describe specific issues related to traveling to the specific country of the trip. Demonstrate familiarity with the basics of intercultural communication and identify problems that could arise. Explain the relationship between the U.S. and host country.
- Demonstrate awareness of how ethnocentrism influences attitudes and openness to new experiences. Demonstrate and appreciate diversity in the culture, politics, and belief systems of the host country.

Sports Management

SPTS 101C Introduction to Sports Management

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Emphasizes basic management principles as they relate to the sports-related enterprises. A variety of management techniques and approaches are analyzed to broaden students' background in this area and to better allow them to develop effective and comprehensive sports management plans.

Learning Outcomes:

- Understand market forces creating need for sound sport marketing strategy.
- Understand obstacles to sport marketing strategy.
- Recognize components of sport product and sport industry.
- Learn what makes sport marketing unique.

SPTS 170C Sports and Recreation Marketing

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Focuses on marketing issues as they relate to sports-related enterprises. A variety of marketing techniques and approaches are analyzed to broaden students' backgrounds in this area and to better allow them to develop effective and comprehensive sports marketing plans.

Learning Outcomes:

- Understand market forces creating need for sound sport marketing strategy.
- Understand obstacles to sport marketing strategy.
- Recognize components of sport product and sport industry.
- Learn what makes sport marketing unique.

SPTS 180C Public Relations and Advertising for the Sports Industry

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Provides a cross-disciplinary approach to a variety of promotional issues that sport managers routinely confront. Public relations and advertising professionals offer insights into how sports-related endeavors and businesses can raise public awareness about products and services. (Prerequisites: SPTS 101C and ENGL 101C)

SPTS 195C/HSTM 195C Sports Tourism

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Examines the relationship between sport travel and the tourism industry. As more people choose to travel to attend or participate in sporting events, a branch of the hospitality and tourism industry has developed to focus on the needs of these clients. Youth sport tourism, for example, has become a \$7 billion industry in the U.S. alone. The study of sports tourism draws on the disciplines of management, finance, economics, event planning, and marketing.

Learning Outcomes:

- Identify the interrelationships between sport and tourism.
- Explain the interdisciplinary program of study of sport and tourism.
- Identify the relationship between sport and tourism.
- Identify the infra-structure needed for sporting events.
- Identify the various methods to estimate sport tourism economic impact on the local/regional/state.
- List the planning steps to bid to host a sport tourism event.
- Identify the role marketing plays in planning a sporting event.
- Ability to prepare and plan a sporting event.
- Write a site inspection on sport/convention facilities.
- Identify career opportunities in sports tourism.

SPTS 210C Sports and Fitness Facilities Management

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Exposes students to the many elements and dynamics associated with managing a sports or fitness facility. Students will visit a variety of structures, arenas, and facilities and will gain an understanding of what is required to develop and successfully administer and market such facilities.

Learning Outcomes:

- Create budgets for sport and fitness facilities.
- Develop job descriptions for positions within sports and fitness facilities and on sports-related projects and create staffing schedules.
- Discuss concepts and principles of facility design, management, and construction.
- Explain risk management concerns related to sports and fitness facilities and projects.
- Identify revenue streams, and revenue opportunities, for sports and fitness facilities.
- Demonstrate best practices in event booking for various types of indoor and outdoor facilities.

SPTS 220C Sports Communications

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Provides the student with an appreciation of the unique dynamics associated with the sports communication field. Students will better understand the expectations associated with developing a sports story, a sports news release, and/or a sports opinion piece, via traditional print media or electronic media - radio, television, and/or the internet. A review of journalistic ethics will be included. Students will gain first-hand experience with regard to producing television and radio broadcasts of live sporting events. (Prerequisites: ENGL 101C and ENGL 120C; SPTS 101C strongly recommended)

SPTS 225C Sports and Recreation Law

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Focuses on the legal issues unique to the sports world and to sport managers. Numerous case studies and precedents are examined, as well as how they relate to current situations involving professional, intercollegiate, interscholastic, and community sports and athletic activities.

SPTS 250C Sports and Society

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

Raises awareness with regard to the sociology of sport and how cultural practices in the world of sport can have significant social, economic, and political consequences. Discussion and research should give future sport managers a broader understanding of how sport impacts different groups of people in different ways throughout this country and beyond.

SPTS 290C Sports Management Internship

Lecture Hours: 0

Lab/Practicum/Clinical Hours: 9

Credit Hours: 3

Allows students to experience real-life sports management situations in the field. Internships are cooperatively sponsored by participating partners. The course approach and content can be designed to match the needs of the sponsor with the desires of the student, as the student gets hands-on opportunities to participate in the practical application of the sports management concepts and principles studied in the classroom. Students have completed successful internships with the Whittemore Center, Verizon Center, Planet Fitness, New Hampshire International Speedway, Concord Boys and Girls Club, Concord YMCA, and many other local or regional facilities or organizations that are sports businesses.

Teacher Education Conversion Program

TECP 70C - TECP 92C are professional preparation courses for Teacher Education Conversion Program (TECP) candidates only.

TECP 50C Introduction to Exceptionalities

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Introduces the exceptionalities and related topics in the field of special education including definitions, prevalence, assessment, and intervention. It includes discussion of strategies for facilitating students' independence, learning, social connections, and self-advocacy skills. Curriculum emphasizes the philosophical and practical applications of valuing students' abilities and diversity and collaborating with educators and families. It will explore curriculum modifications and accommodations, problem-solving strategies, and transition issues. Ten hours of field work are required in this course. A \$25 fee will be assessed to all students to cover the cost of clinical practice.

Learning Outcomes:

- Identify children with diverse learning needs and the effects of diverse learning needs on children and families.
- Explain the principles of inclusion and integration of children in the school environment.
- Demonstrate an understanding of the federal and state laws governing services for students with diverse learning needs including the Individuals with Disabilities Education Act; Sections 504 and 508 of the Rehabilitation Act; and Americans with Disabilities Act.
- Identify appropriate strategies to respond to children with diverse learning needs.
- Demonstrate an understanding of how learners develop, recognizing that patterns of learning and development vary individually within and across the personal, physical, social, and academic dimensions.
- Demonstrate an understanding of learner differences as demonstrated by an understanding of individual differences and diverse cultures and communities
- Demonstrate an understanding of collaboration as demonstrated by collaborating as a member of the larger learning community with learners, families, colleagues, other professionals, and community members to leverage resources that contribute to student growth and development, learning, and well being.

TECP 51C Foundations of Education

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Investigates the philosophical, historical, and social/cultural character of education in the U.S. It is intended to be an examination of how schools function organizationally. Discussions will include the role of education, system philosophy, and trends that have shaped contemporary education; field observations are included. This course is a concentration requirement for both Special Education and Education Associate Degree programs. It is intended to be the first in a series of learning experiences for those interested in careers as teachers. Ten hours of classroom observation required. A \$25 fee will be assessed to all students to cover the cost of clinical practice.

Learning Outcomes:

- Discuss current issues and their implications in education.
- Describe how historical, philosophical, social, and cultural perspectives influence educational practice.
- Identify ways in which the larger community works collaboratively to leverage resources that contribute to student growth, development, learning, and well being.
- Describe personal learning and teaching styles and preferences and educational philosophy.
- Present as a professional demonstrating appropriate demeanor and communication skills.
- Conduct focused classroom observations analyzing the effectiveness of instructional methods.
- Identify the roles and functions of schools, school systems, the local, state, and federal governments, and other agencies in public education.
- Discuss ethical and legal issues in education including teacher and student rights and the professional code of ethics.
- Identify the roles of curriculum, standards, and assessment in student learning.

TECP 60C Supporting Students with Challenging Behaviors

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

This course will focus on the knowledge and skills necessary for supporting students with challenging behaviors in various learning environments, using the framework of positive behavioral supports. Students will gain knowledge of the basic assumptions about the context, function, and role of behavior. Students will learn to use a variety of positive behavior intervention techniques to control targeted behavior, support learning, and maintain the attention of students. Ten hours of field observation required. A \$25 fee will be assessed to all students to cover the cost of clinical practice.

Learning Outcomes:

- Demonstrate an understanding of the complex nature of children's behavior and create plans for a positive learning environment; establish supportive relationships with children, and design, implement, and evaluate strategies, including positive behavioral supports and interventions.
- Demonstrate ways to promote children's independence and self-advocacy, respecting family and cultural norms.
- Demonstrate an understanding of the impact of children's health status (e.g. medications, nutrition, fitness) on learning and behavior and takes these factors into account all aspects of educational programming.
- Develop ways to work with learners to create and access learning environments that support self-directed individual and collaborative learning, based on each learner's interests and passions.

TECP 61C Legal and Ethical Issues in Education

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Predicated on legislative requirements such as the Individuals with Disabilities Education Act, this course considers theories and issues in the context of inclusive instructional settings. Students will develop an understanding of the various legal and ethical requirements as well as effective instructional strategies for curriculum adaptation and delivery within the context of federal and N.H. state special education and education laws and procedures. (Prerequisite: EDU 104C/TECP51C or permission of the department chair)

Learning Outcomes:

- Understand collaboration as a member of the larger learning community, with learners, families, colleagues, other professionals, and community members to leverage resources that contribute to student growth and development, learning, and well-being.
- Understand the American legal system, the role of the government and the pertinent legislative and legal and ethical requirements regarding education.

TECP 62C Teaching Strategies for Diverse Learners

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Focuses on practical instructional strategies for designing developmentally appropriate and challenging learning experiences based on the unique needs of individual learners. Students use differentiated instruction and universal design for learning as frameworks for designing lessons that meet the needs of diverse learners. Methods for adapting instruction and supporting students through modifications, accommodations, and assistive technology are explored. Students will collect a repertoire of evidence-based strategies for identifying and addressing the reading, writing, math, and study skills of students with disabilities. Through field experience, students have the opportunity to observe in the classroom and gain practical experience planning, delivering, adapting, and reflecting on a series of individualized lessons. Ten hours of field work are required. Ten hours of field observation required. A \$25 fee will be assessed to all students to cover the cost of clinical practice.

Learning Outcomes:

- Facilitate developmentally appropriate and challenging learning experiences based on the unique needs of each learner.
- Ensure inclusive learning environments that allow each learner to reach his or her full potential.
- Employ universal design principles and ability to work with learners to create and access learning environments that support self-directed individual and collaborative learning, based on each learner's interests and passions.
- Understand how to use multiple methods of assessment to: engage learners in their own growth; document learner progress; provide learner feedback; and inform the educator's ongoing planning and instructional practices.
- Use a diverse range of students' approaches to learning and the range of modifications and accommodations that can be used to support learning.
- Create and use lesson plans that demonstrate a repertoire of evidence-based instructional strategies to individualize instruction for students with disabilities.
- Identify reading, writing, math, and study skills of students with disabilities and address those learning needs.
- Use instructional methods to strengthen and compensate for deficits in perception, comprehension, and memory.

TECP 63C Instructional Technology

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Presents the theory and strategies for effective integration of technology resources and technology-based methods of instruction and assistive technology designed for students with disabilities. A background of mediated instruction will be provided along with a review of the qualities and benefits of technology options, including assistive technology, available to instructional settings. Opportunities to apply instructional delivery using common forms of media, multimedia, computers, and specialized programs for students with disabilities will be integral to this course, in addition to contemplation of future issues of integration of technology and matters of time and place of the learning experience. (Prerequisite: EDU 104C or permission of the department chair)

Learning Outcomes:

- Prepare an instructional design and lesson plan that demonstrates the effective use of technology in instruction based on national standards.
- Identify and use the hardware and software appropriate to an educational environment.
- Evaluate the effectiveness of educational software.
- Describe and demonstrate the application of key Internet and Web 2.0 resources in teaching and learning.
- Understand the critical educational, ethical, and social issues relating to technology in instruction.
- Identify and describe how key emerging technologies are likely to have impact on education.

TECP 66C Curriculum and Assessment

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

Focuses on designing appropriately challenging learning experiences based on curriculum standards and individual needs. Students will learn strategies for direct and indirect instruction, supporting self-directed and collaborative learning, and promoting critical thinking and problem solving through questioning. Classroom management strategies that promote student engagement and a positive learning climate will be explored. Students will learn how to select,

design, conduct, interpret, and use the results of formative and summative assessments. Use of the common core state standards in the planning, instruction, and evaluation process will be examined. 10 hours of classroom observation are required. (Prerequisites: EDU 104C/TECP 51C or EDU 101C/TECP 50C or permission of the department chair) A \$25 fee will be assessed to all students to cover the cost of clinical practice.

Learning Outcomes:

- Understand and apply instructional modalities and educational delivery systems.
- Develop behavioral objectives based on standards and compose instructional plans for lessons.
- Design an interdisciplinary unit.
- Identify the prior knowledge and sub skills necessary for learning new information or skills.
- Describe how the classroom environment, routines and procedures engage students and encourage appropriate behavior and develop a classroom management plan.
- Use formative and summative assessments to make instructional decisions.
- Interpret data and standardized test scores to make informed instructional decisions.
- Identify sources for research-based instructional strategies and professional learning.

TECP 67C Reading and Language Development

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Focuses on assessing and addressing student literacy skills. Students will learn about the language development process and demonstrate their ability to use a variety of assessments to identify the language skills and needs of individual learners. Using data driven, collaborative decision making, students will plan appropriate interventions. Research-based methods for teaching phonics, vocabulary, spelling, fluency, reading comprehension, and writing will be explored. Students will learn how to guide readers and writers in developing effective strategies for reading, writing, speaking, and listening. Authentic, evidence-based, differentiated instruction linked to the common core standards will be emphasized. (Prerequisites: EDU 104C/TECP 51C)

Learning Outcomes:

- Administer and interpret informal reading and spelling inventories.
- Identify strengths and weaknesses in writing, word identification, and comprehension skills and strategies based on reading conferences, running records, and writing samples.
- Use knowledge of language development, text level, assessment data, and standards to set individualized literacy goals and plan appropriate instruction for children in grades K-6.
- Identify the knowledge, skills, and strategies utilized in the reading and writing processes.
- Understand research-based strategies for teaching phonics, high frequency words, and fluency.
- Understand knowledge of research-based strategies for teaching reading comprehension and vocabulary.
- Understand knowledge of organizational models of instruction and intervention and the role of collaboration and family literacy.

TECP 68C Content Literacy

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Focuses on methods for integrating explicit instruction of effective reading comprehension strategies into content area teaching. Before, during, and after reading strategies that will help students to comprehend challenging content area reading material will be introduced and practiced. Mentor texts will be used to demonstrate text structure and make the connection between reading and writing in the content areas. Students will learn strategies for motivating and engaging students with reading, modeling effective reading and writing strategies, guiding comprehension, facilitating metacognitive discussions, and teaching vocabulary and study skills. Methods for assessing and developing skills in reading, writing, listening, and speaking will be explored. Methods for differentiating and accommodating for struggling readers and writers including the use of assistive technology will also be explored. (Prerequisites: EDU 104C/TECP 51C)

Learning Outcomes:

- Model metacognitive reading strategies through think-alouds.
- Demonstrate knowledge of research-based methods for teaching reading comprehension strategies.
- Demonstrate knowledge of research-based methods for teaching vocabulary.
- Facilitate construction of knowledge and critical thinking through discussion of reading content.

- Identify the knowledge, skills, and strategies used in content specific reading and writing processes.
- Analyze the demands of complex texts.
- Identify the academic language demands of learning tasks and design instruction to promote academic language development.
- Employ universal design principles, differentiated instruction, and assistive technology to meet the needs of struggling readers.

TECP 69C Cross-Cultural Education Seminar

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 0 Credit Hours: 2

Offers candidates a professional forum for researching, reviewing, and discussing socio-cultural contexts and topics in language teaching and education. In the course candidates will develop a broad-based understanding of cross-cultural education and discover appropriate practices and techniques for the multi-cultural classroom. The course is a requirement for all education and TECP candidates.

Learning Outcomes:

- Engage in research, observation, and discussion related to sociocultural contexts of language teaching.
- Converse on issues related to current cross-cultural education best practice and bilingual and ESOL education.
- Use terms and concepts in sociology and linguistics to advocate for their ESOL students.
- Analyze current readings and research pertinent to language learning and acquisition.
- Demonstrate cultural competence necessary to communicate with colleagues and community on behalf of language students.

TECP 70C Special Education Assessment

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Prepares pre-service and in-service teachers to assess the achievement of students with special needs. It examines various assessment strategies. It includes the examination of the N.H. state curriculum frameworks, N.H. rules for students with disabilities, IDEIA regulations, and informal and formal assessment methods. Students will apply the assessment techniques in a case study format. They will utilize the assessment results to implement successful teaching/learning strategies in education settings for students with disabilities. This course addresses specific N.H. state standards for certification in the area of general special education. (Prerequisites: acceptance in the General Special Education Conversion program or approval of TECP director)

Learning Outcomes:

- Collect and use data to assess student achievement, student learning strengths and weaknesses, and learning style.
- Administer formal and informal assessments and use assessment information for developing and evaluating individual education plans.
- Use knowledge of those federal, state, and local laws, regulations, and policies and procedures that govern the education assessment of persons with disabilities up to the age of 21.
- Demonstrate an understanding of assessment terminology.
- Demonstrate skills necessary in the completion of an entire assessment procedure including test administration, scoring, report writing, and report presentation.

TECP 71C Consultation/Collaboration and Individual Education Plans

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

An examination of the collaborative/consultative model in education and the skills necessary for that approach. It focuses on the state curriculum frameworks, the N.H. state rules for students with disabilities, and federal and local guidelines regarding the education of students with special needs. This course includes examination of the concepts and skills necessary for IEP and team development such as, the development of student profiles, goals, objectives, communication and collaboration skills, leadership skills, and knowledge of the theories of change. This course addresses specific N.H. state standards for certification in the area of general special education. (Prerequisites: acceptance in the General Special Education Conversion program, EDU 101C, EDU 200C, EDU 203C and/or approval of TECP director)

Learning Outcomes:

- Demonstrate the understanding of the functions of schools, school systems, and other agencies and their relationships to general and special education.
- Describe the similarities and differences in human development of students with and without disabilities within and across cognitive, social, emotional, and physical areas and the impact and educational implications of the disability.
- Understand learning differences and use the diverse range of students' approaches to learning and the range of modifications and accommodations to support learning; demonstrate the understanding of students with disabilities within the broader context of their families, cultural backgrounds, socioeconomic classes, languages, communities, and peer and social groups. Understand a student's learning differences in the development of the IEP and transition needs; and how information processing skills can impact student learning.
- Demonstrate an understanding of legal policies and ethical principles of assessment related to the special education process and the range of formal assessment instruments and their purposes in the special education process.
- Use instructional planning and strategies, co-teaching, and planning for for students with special needs.
- Demonstrate the knowledge of all stages of the IEP process including the N.H. state rules for students with disabilities, and federal and local guidelines regarding the education of students with special needs.
- Understand the collaborative/consultative model in special education and the skills necessary for that approach.

TECP 73C Field Experience in Education

Lecture Hours: 1

Lab/Practicum/Clinical Hours: 12

Credit Hours: 5

Provides opportunities for the practical application of teaching skills and dispositions. Observation, analysis, and guided interaction of the teaching/learning experience within elementary, middle, and/or secondary or post-secondary educational settings. Students are assigned to observe and perform specific teaching duties within a variety educational settings. Psychological, philosophical, and historic educational theories are analyzed in light of current best practice as they occur in contemporary educational environments. Students are required to complete 60 hours of assigned field work during the semester. (Prerequisites: interview and permission of the department chair)

Learning Outcomes:

- Demonstrate the skills and dispositions necessary for observation, analysis, and guided interaction of teaching and learning experience.
- Demonstrate an understanding of the existence of various instructional modalities and educational delivery systems.
- Develop knowledge about various learning styles as it applies to the students in the field placement.
- Develop learning goals and objectives as it applies to the lessons to be delivered in the field placement.
- Compose instructional plans for a unit and lesson.
- Demonstrate familiarity with the importance of managing the learning environment.
- Recognize the various methods for assessing learners.

TECP 80C Methods/Student Teaching for Middle/Secondary School Mathematics

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 30

Credit Hours: 12

Prepares prospective teachers with the methods for teaching mathematics at the middle/secondary school level. Developmentally appropriate content, strategies, and methods of instruction will be discussed with emphasis on the implementation in student teaching placement. This course requires a full-time placement in an educational setting appropriate for the intended certification area. Students work toward mastery of attitudes, techniques, and professional practice for successful teaching. Supervision is provided a by college supervisor and a field-based professional. This course addresses specific N.H. state standards for certification in the following content areas: Mathematics 5-8 and Secondary Mathematics 7-12 and Professional Education Standards (N.H. Standard Ed 610). (Prerequisite: permission of TECP Director)

Learning Outcomes:

- Demonstrate strategies used to make mathematics accessible to students.
- Support students in learning to read, write, and use academic language in mathematics.
- Analyze the strategies used to connect students with the mathematics content.
- Examine the effects of instructional design and teaching practices on student learning with attention to students' diverse cultural, language, and socio-economic backgrounds and learning needs.

TECP 81C Methods/Student Teaching for Middle/Secondary School Science Teachers

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 30

Credit Hours: 12

Prepares prospective teachers for teaching science at the middle/secondary school level. Developmentally appropriate content, strategies, and methods of instruction will be discussed with emphasis on the implementation in the student teaching placement. This course also requires a full-time placement in an educational setting appropriate for the intended certification area. Students work toward mastery of attitudes, techniques, and professional practices for successful teaching. A college supervisor and a field-based professional provide supervision. This course addresses specific N.H. state standards for certification in the following content areas: Biology, Chemistry, General Science, Earth Science, Physical Science, Physics, and Professional Education Standards (N.H. Standard Ed 610). (Prerequisite: completion of previous coursework in TECP and permission of TECP director)

Learning Outcomes:

- Plan for learning facilitation, drawing upon knowledge of content area standards, cross- disciplinary skills, learners, the community, and appropriate pedagogy to plan learning experiences in science.
- Apply central concepts, tools of inquiry, and the structure of the discipline of science teaching.
- Ensure an inclusive Science learning environment that allows each learner to reach his or her full potential.
- Use multiple methods of assessment to engage learners in their own growth, document learner progress, provide learner feedback, and inform the educator's ongoing planning and instructional practices.
- Understand learning facilitation strategies by using of a variety of strategies and tools to encourage learners to develop deep understanding of the content areas and their connections to other disciplines.
- Reflect on professional practice as demonstrated by being a practitioner using evidence to continually evaluate his or her practice.

TECP 82C Methods and Practicum in General Special Education

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 15

Credit Hours: 7

Prepares prospective teachers for teaching in general special education K-12. Developmentally appropriate content, strategies, and methods of instruction will be discussed with emphasis on the implementation in the student teaching placement. This course also requires a semester-long placement in an educational setting appropriate for the intended general special education area. Students work toward mastery of attitudes, techniques, and professional practices for successful teaching. A college supervisor and a field-based professional provide supervision. Students document a minimum of 300 hours of work in the schools, including referral, observations, teaching, assessment, remediation, aiding with transition issues, IEP development and implementation, consultation, collaboration, and designing and implementing behavioral programs. Seminars meet weekly throughout the semester. This course addresses specific N.H. state standards for certification in the area of general special education. (Prerequisites: acceptance in the General Special Education Conversion program, completion of previous general special education coursework, acceptance into student teaching, and approval of TECP director)

Learning Outcomes:

- Understand the functions of schools, school systems, and other agencies and their relationships to general and special education.
- Describe the similarities and differences in human development of students with and without disabilities within and across cognitive, social, emotional, and physical areas and the impact and educational implications of the disability.
- Use the diverse range of students' approaches to learning and the range of modifications and accommodations that can be used to support learning; demonstrate the understanding of students with disabilities within the broader context of their families, cultural backgrounds, socioeconomic classes, languages, communities, and peer and social groups; and understand a student's learning differences in the development of the IEP and transition needs and how information processing skills can impact student learning.
- Design learning environments to meet student's needs based on abilities and disabilities.
- Understand legal policies and ethical principles of assessment related to the special education process.
- Administer and write a report for a formal academic assessment instrument, and demonstrate the understanding and use of assessment tools for making educational decisions and the impact on learning and state assessment.
- Use instructional planning and strategies to co-teach and plan for instruction-appropriate education for students with special needs.

- Understand the effect of language development on academic and social development.
- Demonstrate educational practice within the code of ethics, including confidentiality and other standards of the profession.
- Understand the federal law, state law, local policies, and New Hampshire Standards for the Education and apply that to assessment, IEP development, and instructional practice.
- Collaborate with families, school personnel, agencies, and community members in culturally responsive ways to facilitate access for students with disabilities in a variety of settings.

TECP 83C Methods and Student Teaching in General Special Education

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 30

Credit Hours: 12

Prepares prospective teachers for teaching in general special education K-12. Developmentally appropriate content, strategies, and methods of instruction will be discussed with emphasis on the implementation in the student teaching placement. This course also requires a full time, semester-long placement in an educational setting appropriate for the intended general special education area. Students work toward mastery of attitudes, techniques, and professional practices for successful teaching. A college supervisor and a field-based professional provide supervision. Students document the hours of work in the schools, including referral, observations, teaching, assessment, remediation, aiding with transition issues, IEP development and implementation, consultation, collaboration, and designing and implementing behavioral programs. Seminars meet weekly throughout the semester. This course addresses specific N.H. state standards for certification in the area of general special education. (Prerequisites: acceptance in the General Special Education Conversion program, completion of previous general special education coursework, acceptance into student teaching, and approval of TECP director)

Learning Outcomes:

- Understand the functions of schools, school systems, and other agencies and their relationships to general and special education.
- Describe the similarities and differences in human development of students with and without disabilities within and across cognitive, social, emotional, and physical areas and the impact and educational implications of the disability.
- Use the diverse range of students' approaches to learning and the range of modifications and accommodations that can be used to support learning; demonstrate the understanding of students with disabilities within the broader context of their families, cultural backgrounds, socioeconomic classes, languages, communities, and peer and social groups; and understand a student's learning differences in the development of the IEP and transition needs and how information processing skills can impact student learning.
- Design learning environments to meet student's needs based on abilities and disabilities.
- Understand legal policies and ethical principles of assessment related to the special education process.
- Administer and write a report for a formal academic assessment instrument, and demonstrate the understanding and use of assessment tools for making educational decisions and the impact on learning and state assessment.
- Use instructional planning and strategies to co-teach and plan for instruction-appropriate education for students with special needs.
- Understand the effect of language development on academic and social development.
- Demonstrate educational practice within the code of ethics, including confidentiality and other standards of the profession.
- Understand the federal law, state law, local policies, and New Hampshire Standards for the Education and apply that to assessment, IEP development, and instructional practice.
- Collaborate with families, school personnel, agencies, and community members in culturally responsive ways to facilitate access for students with disabilities in a variety of settings.
- Demonstrate the understanding of curriculum planning and assessment.

TECP 84C Practicum and Methods for Teaching Middle/Secondary School Mathematics

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 15

Credit Hours: 7

Prepares prospective teachers for teaching mathematics at the middle/secondary school level. Developmentally appropriate content, strategies, and methods of instruction will be discussed with emphasis on the implementation in the teaching placement. This course also requires placement in an educational setting appropriate for the intended certification area. Students work toward mastery of attitudes, techniques, and professional practices for successful teaching. A college supervisor and a field-based professional provide supervision. This course addresses specific N.H.

state standards for certification in the following content areas: Mathematics grades 5-8 and mathematics grades 7-12 and Professional Education Standards (N.H. Standard Ed 610). (Prerequisite: completion of previous coursework in TECP and permission of TECP director.)

Learning Outcomes:

- Demonstrate strategies used to make mathematics accessible to students.
- Support students in learning to read, write, and use academic language in mathematics.
- Analyze the strategies used to connect students with the mathematics content.
- Examine the effects of one's instructional design and teaching practices on student learning with attention to students' diverse cultural, language and socio-economic backgrounds and learning needs.

TECP 85C Practicum and Methods of Teaching Middle/Secondary School Science

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 15

Credit Hours: 7

Prepare prospective teachers for teaching science at the middle/secondary school level. Developmentally appropriate content, strategies, and methods of instruction will be discussed with emphasis on the implementation in the teaching placement. This course also requires placement in an educational setting appropriate for the intended certification area. Students work toward mastery of attitudes, techniques, and professional practices for successful teaching. A college supervisor and a field-based professional provide supervision. This course addresses specific N.H. state standards for certification in the following content areas: Life Sciences, Chemistry, General Science, Earth/Space Science, Physics and Professional Education Standards (N.H. Standard Ed 610). (Prerequisite: completion of previous coursework in TECP and permission of TECP director.)

Learning Outcomes:

- Plan for learning facilitation, drawing upon knowledge of content area standards, cross-disciplinary skills, learners, the community, and appropriate pedagogy.
- Demonstrate content knowledge by applying the central concepts, tools of inquiry, and the structure of the discipline of science teaching.
- Ensure an inclusive Science learning environment that allows each learner to reach his or her full potential.
- Use of multiple methods of assessment to engage learners in their own growth, document learner progress, provide learner feedback, and inform the educator's ongoing planning and instructional practices.
- Employ learning facilitation strategies by using of a variety of strategies and tools to encourage learners to develop deep understanding of the content areas and their connections to other disciplines.
- Reflect on professional practice and evaluate the effects of choices and actions on students, families, and other professionals in the learning community.

TECP 86C/ENGL 286C Introduction to Linguistics

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Focuses on linguistics, the scientific study of language. We will explore the properties of language and the linguistic challenges faced by English language learners. The course will expand on the subfields within linguistics: phonetics and phonology, morphology and syntax, and semantics and pragmatics. Concepts relevant to teaching English will be taught: pronunciation, grammar, and vocabulary. Language variation and written discourse will also be addressed as well as how to apply this knowledge to the English language classroom. Linguistic principles and features of both English and other languages will be examined to promote familiarity with the language experiences of English language learners. A native speaker of a world language will act as a "grammar text" as we decipher an unknown grammar in a field methods format. This course is required for those in the TECP: ESOL certification program. (Prerequisites: ENGL 101C, minimum of B average)

Learning Outcomes:

- Use the major theories and research related to the structure and acquisition of language to provide ELs the skills to become proficient in language and literacy to achieve in the content areas.
- Demonstrate the metalinguistic knowledge of language as a system, including phonology, morphology, syntax, semantics, sociolinguistics, and pragmatics for ELs to develop oral, aural, reading, and writing skills in English.
- Demonstrate the knowledge of the historical development of the English language.
- Relate knowledge of English to languages spoken by students in their communities.
- Demonstrate ability to build on similarities between English and the student's home language and to anticipate any difficulties that learners may have with English.

TECP 87C Language, Reading, and Literacy in ESOL

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Designed to assist student educators in constructing a favorable learning environment for their English language learners with regard to reading and literacy in the content area. Appropriate literacy strategies, instruction and assessments will be evaluated, and various aspects of first and second language acquisition will be examined. All aspects of second language development will be considered such as phonemic awareness, vocabulary, fluency, comprehension, and writing. Approaches for assisting young and older learners with reading comprehension will be addressed, and students will learn to adjust language instruction to meet the developmental literacy needs of the language learners from various socio-cultural, educational, and linguistic backgrounds. Students will have weekly opportunities to work as one-on-one content tutors with English language learning needs to develop an understanding of language-learning needs and to increase educator effectiveness in improving student skills. Assessing and tracking English language learner progress will be explored. There will be a 20-hour service learning component wherein students will support ESOL learners and their community. This course is required for those in the TECP: ESOL Certification programs. Others must have permission from the TECP director or the director of cross-cultural education. A \$25 fee will be assessed to all students to cover the cost of clinical practice.

Learning Outcomes:

- Apply concepts and theories of first and second language acquisition to facilitate ELs' development of social and academic English language.
- Demonstrate the uses of major theories and research related to the nature and role of culture in instruction and social awareness.
- Understand how cultural groups and individual cultural identities affect language learning and school achievement by identifying and using the major principles, theories, and research related to the nature and role of culture on language learning, school achievement, and acculturation.
- Understand the nature and role of culture to construct learning environments to support ELs' cultural identities and academic needs, demonstrating the understanding of how cultural groups in the community, including the majority group, affect language learning, social adjustment, school achievement and acculturation.
- Use evidence-based practices and strategies to plan, implement, and manage standards-based ESOL and content instruction.
- Use performance-based assessment tools and techniques to inform instruction for classroom assessment.
- Demonstrate knowledge of history, research, and educational public policy.

TECP 88C Curriculum and Design and Assessment in ESOL

Lecture Hours: 4

Lab/Practicum/Clinical Hours: 0

Credit Hours: 4

Presents theories, tools, techniques, and materials in the development of curricula that address the language and content needs of English language learners. The methodology for teaching such learners will be covered as well as how to plan and implement an adapted or differentiated curriculum to meet student need. Strategies that promote student success such as scaffolding and that create an effective learning environment for both the language and content classroom will be examined. Additionally, students will work with authentic formal and informal pre- and post-instructional assessments and will explore methods by which language proficiency, acculturation, and content may be measured. Student will create, judge, and adapt their own assessment tools as questions regarding standardized assessments will be raised. Appropriate testing accommodations for English language learners will also be considered. The role the N.H. Department of Education plays in ensuring that schools maintain legal compliance and equitable, accessible education for English language learners will be discussed as well as the rights and responsibility of NHTI's ESOL programs under Title III funding and No Child Left Behind. The state's K-12 language placement screening, W-APTTM, and its proficiency test, ACCESS for ELLs®, as well as how the ESOL teacher becomes a certified W-APTTM or ACCESS for ELLs® test administrator will be outlined. The state's adoptions of WIDE® English Language Proficiency Standards and its curriculum will be explored. This course is required for those in the TECP: ESOL certification program. Others must have permission from the director of TECP or the director of cross-cultural education. This course requires 10 hours of field work. A \$25 fee will be assessed to all students to cover the cost of clinical practice.

Learning Outcomes:

- Demonstrate how to construct learning environments that support ESOL students' language and literacy development and academic achievement.

- Use scientifically-based practices and strategies related to planning, implementing, and managing ESOL and content instruction.
- Apply concepts, research, and best practices to plan instruction in a supportive learning environment, including knowledge of how to construct effective lessons for diverse multilevel groups of ESOL students.
- Select and adapt resources, design original lessons for ESOL instruction, modify mainstream content lessons, and align ESOL curricula with standards-based content curricula.
- Implement standards-based teaching strategies and techniques for integrating English listening, speaking, reading, and writing into the core curriculum.
- Use a wide range of standards-based materials, resources, and technologies.
- Use diagnostic, language proficiency, and academic evaluations for ESOL students.
- Assist colleagues in distinguishing among normal second language development, language differences, and learning problems in procedures for special needs, monitoring, and classroom evaluations.
- Use a variety of standards-based language proficiency instruments to inform instruction and for identification, placement, and demonstration of language growth of ESOL students
- Use a variety of performance-based assessment tools and techniques in the classroom to evaluate students and inform instruction.
- Understand current state- and federally-mandated assessments and their implications for ESOL students.

TECP 90C Supervised Student Teaching/Theory, Practice, and Methods/Materials in ESOL Education

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 30

Credit Hours: 12

Designed to integrate and apply previous course work in ESOL certification. Students document their work in the schools, including planning, teaching, and consultation and aiding with transition issues. Students assume the full range of teaching responsibilities while supervised in the field. Seminars meet weekly throughout the semester. This course also focuses on communicative interactions between and within different culture groups. We explore issues related both to effective cross-cultural communication and to miscommunication. An examination of how one's own cultural values and norms affect and guide intercultural interactions will guide class discussions and projects. Concepts such as power distance, hierarchy, uncertainty avoidance, non-verbal communication, and other intercultural communicative features will be explored, and ethnocentrism, stereotyping, and other value-based judgments will be addressed. (Prerequisites: acceptance in the ESOL Conversion Program, completion of the previous ESOL coursework and department chair approval. Candidates should hold a teaching certification.)

Learning Outcomes:

- Demonstrate the pedagogical knowledge, methods and approaches to lead a self-contained ESOL class.
- Evaluate personal classroom management skills and content area knowledge.
- Identify artifacts that demonstrate fulfillment of national teaching standards.
- Develop a standards-based teaching portfolio organized in a professional manner and with the implementation of technology.

TECP 91C Practicum, Methods/Materials, and Culture in ESOL Education

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 15

Credit Hours: 7

Designed to integrate and apply previous course work in ESOL certification. Students document their work in the school, including planning, teaching, and consultation and aiding with transition issues. Students assume the full range of teaching responsibilities while supervised in the field. Seminars meet weekly throughout the semester. Students document a minimum of 300 practicum hours. This course also focuses on communicative interactions between and within different culture groups. We will explore issues related both to effective cross-cultural communication and to miscommunication. An examination of how one's own cultural values and norms affect and guide intercultural interactions will guide class discussions and projects. Concepts such as power distance, hierarchy, uncertainty avoidance, non-verbal communication, and other intercultural communicative features will be explored, and ethnocentrism, stereotyping, and other value-based judgments will be addressed. (Prerequisites: acceptance in the ESOL Conversion Program, completion of the previous ESOL coursework and department chair approval. Candidates should hold a teaching certification.)

Learning Outcomes:

- Demonstrate the pedagogical knowledge, methods and approaches to lead a self-contained ESOL class.
- Evaluate personal classroom management skills and content area knowledge.
- Identify artifacts that demonstrate fulfillment of national teaching standards.

TECP 92C The Teaching Portfolio

Lecture Hours: 1

Lab/Practicum/Clinical Hours: 0

Credit Hours: 1

Offered to continue to assist TECP candidates with their professional portfolio development. The portfolio is a program requirement for certification. In this course candidates will continue to add coursework and practicum (or student-teaching) evidence and reflections to the portfolio. Candidates will prepare their portfolio for review before application for certification. All coursework and practicum and student teaching work is aligned to N.H. state standards and TECP goals. Offered every semester. (Prerequisite: permission of the department chair)

TECP 93C Internship Clinical Practice I: Methods/Clinical Practice for Middle/Secondary School Science Teachers

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 15

Credit Hours: 7

Prepares prospective teachers for teaching science at the middle/secondary school level. Students take this course as a part of a two-semester sequence. Developmentally appropriate content, strategies, and methods of instruction will be discussed with emphasis on the implementation. This course also requires a full-time placement in an educational setting appropriate for the intended certification area. Students work toward mastery of attitudes, techniques, and professional practices for successful teaching. A college supervisor and a field-based professional provide supervision. This course addresses specific N.H. state standards for certification in the following content areas: Biology, Chemistry, General Science, Earth Science, Physical Science, Physics and Professional Education Standards (N.H. Standard Ed 610). (Prerequisite: successful completion of previous coursework in TECP, internship interview, and permission of TECP director)

Learning Outcomes:

- Plan for learning facilitation, drawing upon knowledge of content area standards, cross-disciplinary skills, learners, the community, and appropriate pedagogy in science that support every learner in meeting rigorous learning goals.
- Demonstrate content knowledge by applying the central concepts, tools of inquiry, and the structure of the discipline of science teaching.
- Ensure an inclusive science learning environment that allows each learner to reach his or her full potential.
- Use multiple methods of assessment to engage learners in their own growth, document learner progress, provide learner feedback, and inform the educator's ongoing planning and instructional practices.
- Use strategies and tools to encourage learners to develop deep understanding of the content areas and their connections to other disciplines.
- Reflect on professional practice using evidence to continually evaluate practice, particularly the effects of choices and actions on students, families, and other professionals in the learning community.

TECP 94 Internship Clinical Practice II: Methods/Clinical Practice for Middle/Secondary School Science Teachers

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 15

Credit Hours: 7

Prepares prospective teachers for teaching science at the middle/secondary school level. This is the second part of the clinical practice/internship experience for science certification. Developmentally appropriate content, strategies, and methods of instruction will be discussed with emphasis on the implementation in the internship II placement. This course also requires a full-time placement in an educational setting appropriate for the intended certification area. Students work toward mastery of attitudes, techniques, and professional practices for successful teaching. A college supervisor and a field-based professional provide supervision. This course addresses specific N.H. state standards for certification in the following content areas: Biology, Chemistry, General Science, Earth Science, Physical Science, Physics and Professional Education Standards (N.H. Standard Ed 610). (Prerequisite: successful completion of previous coursework in TECP, including Internship I, an internship interview, and permission of TECP director)

Learning Outcomes:

- Plan for learning facilitation, drawing upon knowledge of content area standards, cross-disciplinary skills, learners, the community, and appropriate pedagogy in science that support every learner in meeting rigorous learning goals.
- Demonstrate content knowledge by applying the central concepts, tools of inquiry, and the structure of the discipline of science teaching.

- Ensure an inclusive science learning environment that allows each learner to reach his or her full potential.
- Use multiple methods of assessment to engage learners in their own growth, document learner progress, provide learner feedback, and inform the educator's ongoing planning and instructional practices.
- Use strategies and tools to encourage learners to develop deep understanding of the content areas and their connections to other disciplines.
- Reflect on professional practice using evidence to continually evaluate practice, particularly the effects of choices and actions on students, families, and other professionals in the learning community.

TECP 95 Internship Clinical Practice I: Methods/Clinical Practice for Middle/Secondary School Mathematics Teachers

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 15 Credit Hours: 7

Prepares prospective teachers for teaching mathematics at the middle/secondary school level. Candidates take this course as a part of a two-semester sequence. Developmentally appropriate content, strategies, and methods of instruction will be discussed with emphasis on the implementation. This course also requires a full-time placement in an educational setting appropriate for the intended certification area. Students work toward mastery of attitudes, techniques, and professional practices for successful teaching. A college supervisor and a field-based professional provide supervision. This course addresses specific N.H. state standards for certification in the following content areas: Mathematics 5-8 and Mathematics 7-12 and the Professional Education Standards (N.H. Standard Ed 610). (Prerequisite: successful completion of previous coursework in TECP, internship interview, and permission of TECP director)

Learning Outcomes:

- Demonstrate strategies used to make mathematics accessible to students.
- Support students in learning to read, write, and use academic language in mathematics.
- Explain the thinking underlying their teaching decisions.
- Analyze the strategies used to connect students with the mathematics content.
- Examine the effects of one's instructional design and teaching practices on student learning with attention to students' diverse cultural, language and socio-economic backgrounds and learning needs.

TECP 96 Internship Clinical Practice II: Methods/Clinical Practice for Middle/Secondary School Mathematics Teachers

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 15 Credit Hours: 7

This is the second part of the clinical practice/internship experience for science certification. Candidates take this course as a part of a two-semester sequence after successful completion of Internship I. Developmentally appropriate content, strategies, and methods of instruction will be discussed with emphasis on the implementation in the internship II placement. This course also requires a full-time placement in an educational setting appropriate for the intended certification area. Students work toward mastery of attitudes, techniques, and professional practices for successful teaching. A college supervisor and a field-based professional provide supervision. This course addresses specific N.H. state standards for certification in the following content areas: Mathematics 5-8 and Mathematics 7-12 and the Professional Education Standards (N.H. Standard Ed 610). (Prerequisite: successful completion of previous coursework in TECP, including internship I, internship interview, and permission of TECP director)

Learning Outcomes:

- Demonstrate strategies used to make computer science accessible to students.
- Support students in learning to read, write, and use academic language.
- Explain the thinking underlying teaching decisions for teaching the K-12 learners.
- Analyze the strategies used to connect students with computer science content.
- Examine the effects of one's instructional design and teaching practices on student learning with attention to students' diverse cultural, language, socio-economic backgrounds, and learning needs.

TECP 97C Methods/Student Teaching for Computer Science K-12

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 30 Credit Hours: 12

Prepares prospective teachers with the methods for teaching Computer Science in K-12 schools. Developmentally appropriate content, strategies, and methods of instruction will be discussed with emphasis on the implementation in student teaching. This course requires a full-time placement in an educational setting appropriate for the intended

certification area. Students work toward mastery of attitudes, techniques, and professional practices for successful teaching. Supervision is provided by a college supervisor and a field-based cooperating educator. This course addresses specific N.H. state standards for certification in the following content areas: Computer Science K-12 (Ed 612.33) and Professional Education Standards (N.H. Standard Ed 610). (Prerequisite: interview and permission of TECP director)

Learning Outcomes:

- Demonstrate strategies used to make computer science accessible to students.
- Support students in learning to read, write, and use academic language.
- Explain the thinking underlying teaching decisions for teaching the K-12 learners.
- Analyze the strategies used to connect students with computer science content.
- Examine the effects of one's instructional design and teaching practices on student learning with attention to students' diverse cultural, language, socio-economic backgrounds, and learning needs.

TECP 98C Internship Clinical Practice I: Methods/Clinical Practice for Special Education

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 15

Credit Hours: 7

The first part in a two-part methods course sequence that prepares prospective teachers for special education teaching at K-12 school level. Developmentally appropriate content, strategies, and methods of instruction will be discussed with emphasis on the implementation in the internship placement. Seminars meet weekly throughout the semester. This course also requires a full-time, semester-long placement in an educational setting appropriate for the intended general special education area. Students work toward mastery of attitudes, techniques, and professional practices for successful teaching. A college supervisor and a field-based professional provide supervision. Candidates document the hours of work in the schools, including referral, observations, teaching, assessment, remediation, aiding with transition issues, IEP development and implementation, consultation, collaboration, and designing and implementing behavioral programs. This course addresses specific N.H. state standards for certification in the area of general special education. (Prerequisites: acceptance in the General Special Education Conversion program, completion of previous general special education coursework, acceptance into internship, and approval of TECP director)

Learning Outcomes:

- Understand the functions of schools, school systems, and other agencies and their relationships to general and special education.
- Describe the similarities and differences in human development of students with and without disabilities within and across cognitive, social, emotional, and physical areas and the impact and educational implications of the disability
- Understand learning differences and use the diverse range of students' approaches to learning and the range of modifications and accommodations that can be used to support learning; demonstrate the understanding of students with disabilities within the broader context of their families, cultural backgrounds, socioeconomic classes, languages, communities, and peer and social groups; understand a student's learning differences in the development of the IEP and transition needs and how information processing skills can impact student learning.
- Design learning environments to meet student's needs based on abilities and disabilities.
- Understand legal policies and ethical principles of assessment related to the special education process.
- Use instructional planning and strategies, to co-teach and plan for plan instruction appropriate for students with special needs.
- Understand the effect of language development on academic and social development.
- Demonstrate educational practice within the code of ethics, including confidentiality and other standards of the profession.
- Understand the federal law, state law, local policies, and the New Hampshire Standards for the Education and apply that to assessment, IEP development, and instructional practice.
- Collaborate with families, school personnel, agencies, and community members in culturally responsive ways to facilitate access for students with disabilities in a variety of settings.
- Understand curriculum planning and assessment.

TECP 99C Internship Clinical Practice II: Methods/Clinical Practice for Special Education

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 15

Credit Hours: 7

The second part in a two-part methods course sequence that prepares prospective teachers for special education teaching at K-12 school level. Developmentally appropriate content, strategies, and methods of instruction will be

discussed with emphasis on the implementation in the internship placement. Seminars meet weekly throughout the semester. This course requires a full-time, semester-long placement in an educational setting appropriate for the intended general special education area. Students work toward mastery of attitudes, techniques, and professional practices for successful teaching. A college supervisor and a field-based professional provide supervision. Candidates document the hours of work in the schools, including referral, observations, teaching, assessment, remediation, aiding with transition issues, IEP development and implementation, consultation, collaboration, and designing and implementing behavioral programs. This course addresses specific N.H. state standards for certification in the area of general special education. (Prerequisites: acceptance in the General Special Education Conversion program, completion of previous general special education coursework, acceptance into internship, completion of Internship I and approval of TECP director)

Learning Outcomes:

- Understand the functions of schools, school systems, and other agencies and their relationships to general and special education.
- Describe the similarities and differences in human development of students with and without disabilities within and across cognitive, social, emotional, and physical areas and the impact and educational implications of the disability
- Understand learning differences and use the diverse range of students' approaches to learning and the range of modifications and accommodations that can be used to support learning; demonstrate the understanding of students with disabilities within the broader context of their families, cultural backgrounds, socioeconomic classes, languages, communities, and peer and social groups; understand a student's learning differences in the development of the IEP and transition needs and how information processing skills can impact student learning.
- Design learning environments to meet student's needs based on abilities and disabilities.
- Understand legal policies and ethical principles of assessment related to the special education process.
- Use instructional planning and strategies, to co-teach and plan for plan instruction appropriate for students with special needs.
- Understand the effect of language development on academic and social development.
- Demonstrate educational practice within the code of ethics, including confidentiality and other standards of the profession.
- Understand the federal law, state law, local policies, and the New Hampshire Standards for the Education and apply that to assessment, IEP development, and instructional practice.
- Collaborate with families, school personnel, agencies, and community members in culturally responsive ways to facilitate access for students with disabilities in a variety of settings.
- Understand curriculum planning and assessment.

Visual Arts

VRTS 101C Introduction to Drawing

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 4

Credit Hours: 4

Students in this course will gain the basic skills and insights necessary to create drawings that are both accurate and expressive. Explorations of line, value, and form will engage the eye and the hand as well as the heart. Students will gain confidence in their own vision and their ability to draw what they see.

Learning Outcomes:

- Understand and apply design elements and principles.
- Demonstrate design/composition skills.
- Describe proportions and spatial relationships between forms.
- Demonstrate various drawing techniques.
- Use spatial conventions.
- Demonstrate hand-eye coordination skills.
- Use of vocabulary of art terms and concepts.
- Demonstrate critical skills as they pertain to creating and evaluating studio work.
- Demonstrate a personal drawing style through expressive technique and subject matter.

VRTS 102C Introduction to the Visual Arts

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Introduces the languages, concepts, and practices of art through visual and art historical perspectives. Students will be engaged in discussion about the elements of art, such as content, composition, style, method, and materials. Students will also be introduced to all of the visual art practices, including drawing and painting, sculpture, printmaking, photography, conceptual and installation art, video art, earthworks, and performance art, as well as craft and graphic design.

Learning Outcomes:

- Analyze pictorial compositions using visual language terms in a concise and informed manner.
- Develop professional studio habits and creative processes that reflect careful planning and appropriate use of artistic media.
- Use critical thinking and creative problem solving to overcome technical challenges when working with 2D and 3D art materials.
- Identify connections to work with art historical influences, including specific artists and artistic periods.

VRTS 103C Two-Dimensional Design

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 3

Credit Hours: 3

Provides a solid foundation in 2-D design and color theory. Students will learn the basic elements needed to form visual patterns and proceed to explore a variety of approaches relating to visual organization and pictorial composition. A section of the course will be dedicated to the fundamentals of color theory, its function, and application.

Learning Outcomes:

- Achieve a masterful competency of composition and the above 2D design objectives.
- Develop an accomplished portfolio of 2D assignments.
- Use design element vocabulary to successfully describe and execute strong designs.

VRTS 104C Three-Dimensional Design

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 3

Credit Hours: 3

Introduces the technical and conceptual elements for the organization and development of 3D structures. Beginning projects will address the basic elements needed to explore a variety of approaches relating to form and space, then move to more complex issues involving the relationships between form and function.

Learning Outcomes:

- Understand the design process by creating unique solutions to complex 3D design problems.
- Recognize and apply 3D design principles.
- Understand materials and construction techniques and how to use tools correctly and safely.
- Understand the plastic properties of clay and plaster including how to mix plaster correctly, make molds, and use positive casting techniques, direct carving, and additive and subtractive modeling techniques.
- Understand cross sectional analysis of organic and mathematical forms, the enlargement process, slice form pop up kinetic design, and planal analysis of complex organic forms.

VRTS 111C Survey of Western Art History I

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Examines the history of western civilization through the study of objects created by people from various western cultures from the cave paintings of the pre-historic era to the great cathedrals of Europe during the 12th and 13th centuries. Students will study the artifacts, architecture, painting, and sculpture that inform understanding of a culture's way of life, beliefs, and priorities. In turn, students will gain a deeper understanding of today's culture and society. Students will also develop the basic skills and vocabulary necessary to critique a work of art.

Learning Outcomes:

- Visually identify key monuments – painting, sculpture, and architecture – dating from Ancient Egypt through the 13th century in Western Europe.
- Understand classical foundations of art-making against which modern art-makers will revolt.
- Use orally, and in writing, discipline-specific vocabulary, terminology and critical skills necessary for the historical study and visual analysis of Western works of art dating from Ancient Egypt through the 13th century.

- Use interdisciplinary approaches and various art historical methodologies when completing written analyses of works of art within an historical and cultural context.

VRTS 112C Survey of Western Art History II

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Examines the history of painting sculpture and architecture created by Western Europeans from the early 14th century through the 19th century (and beyond, if time permits). These works of art will be studied as a way to understand the way of life, beliefs and priorities of these societies, as well as contemporary culture. Students will also continue to develop the basic skills and vocabulary necessary to critique a work of art.

Learning Outcomes:

- Identify key monuments – painting, sculpture, and architecture – dating from the early 14th century through the mid-20th century in Western Europe.
- Recognize key elements of the form, subject matter, and content of the works of art they study and understand the foundations of modern art-making.
- Use orally, and in writing, discipline-specific vocabulary, terminology, and critical skills necessary for the historical study and visual analysis of Western works of art dating from the early 14th century through the mid-20th century.
- Understand and use interdisciplinary approaches and art historical methodologies when completing written analyses of works of art within an historical and cultural context.

VRTS 115C History of Modern Art

Lecture Hours: 3 Lab/Practicum/Clinical Hours: 0 Credit Hours: 3

Examines the origins and development of modern art from the French Revolution in 1789 to the outbreak of World War II in 1939. Late 20th century art, including Postmodernism, and trends in contemporary art are introduced. Emphasis is placed on 2-D art, sculpture and architecture, and the creative processes employed by modern artists. Students explore individual works of art within their cultural and historical context.

Learning Outcomes:

- Identify seminal works and their makers from the French Revolution to the 20th century and place them within an historical and cultural context.
- Understand some of the major purposes of and ideas behind modern art-making.
- Understand and use interdisciplinary approaches and various art historical methodologies used in the study of modern art when completing written analyses of works of art within an historical and cultural context.

VRTS 120C Introduction to Oil Painting

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 4 Credit Hours: 4

Introduces the basic techniques of oil painting, concentrating on the principles of color and light. Using a variety of subject matter, students will explore the problems of pictorial composition, color theory, oil-related mediums, and techniques.

Learning Outcomes:

- Understand basic tools and traditional methods of oil painting.
- Synthesize drawing and composition through preliminary studies to the finished paintings.
- Translate light and interpret value and color through observation and practiced applications.
- Use traditional preparatory and under-painting methods, as well as layered and direct painting.
- Understand the tradition of painting and its genres with respect to still life, portrait, and landscape
- Critique artwork using formal analysis and historical perspectives.

VRTS 121C Introduction to Watercolor

Lecture Hours: 2 Lab/Practicum/Clinical Hours: 4 Credit Hours: 4

Introduces the basic watercolor techniques and use of materials. It is a sequential program of study, applying the elements and principles of 2-D design to the watercolor discipline. Students will study still life, landscape, and the

human form. Reference will be made to past and contemporary masters of the watercolor medium. (Prerequisite: VRTS 101C with a grade of C or higher)

Learning Outcomes:

- Understand the basic tools and methods of watercolor, developing an appropriate growth of expertise with these traditional materials.
- Synthesize the use of drawing and composition through preliminary studies to the finished paintings.
- Use line, value, and color to create watercolors that depict light, transparency, color richness, chiaroscuro and perspective.
- Understand traditional and contemporary watercolor painting methods.
- Understand the tradition of watercolor painting and its contemporary genres with respect to still life, portrait, and landscape.
- Critique artwork using formal analysis and historical perspectives.

VRTS 130C Introduction to Photography

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 4

Credit Hours: 4

Familiarizes students with basic film photography and beginner darkroom techniques. Students are instructed in the use and care of a 35mm manual film camera, film developing and darkroom printing techniques. Assignments are designed to cover a variety of shooting situations and the expectation is that students will apply the elements of composition, capture expressive content, and demonstrate proficient technical ability in the making of photographs. Students should expect to provide their own 35mm film camera with full manual controls. A \$20 fee will be assessed for all students in this course to cover the cost and disposal of chemicals used in this class.

VRTS 133C Introduction to Figural Sculpture

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 4

Credit Hours: 4

Introduces the basic human figural sculpture, designed to develop the student's understanding of the anatomical structures of the human figure, gestural forms, and constructive methods and application of this knowledge to create unique character and figural sculptures in traditional sculpting media, such as wire, wax, plaster, and clay. The emphasis in imagery will be direct live-model observations, translating 2-D sources into form, developing hand-eye coordination, technical discipline, and evolving a personal expressive use of materials, technique, and subject matter. All projects are designed to combine related technical, visual, and historical components. A \$20 fee will be assessed for all students in this course to cover the cost of live modeling. (Prerequisites: VRTS 101C or VRTS 104C with a grade of C or higher)

Learning Outcomes:

- Understand the techniques of sculpting the human form from observation.
- Understand various clays and tools used in figurative sculpture.
- Understand the human skeletal system and human anatomy as it relates to figurative sculpture, specifically superficial muscles.
- Understand how figurative sculpture has changed due to cultural differences and historical events.
- Critique artwork using formal analysis and historical perspectives.

VRTS 135C Introduction to Ceramics

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 4

Credit Hours: 4

Focuses on studio work leading to the completion of five projects. Students will learn the basics of handbuilding, the potter's wheel, kiln firing, glazing, and surface embellishment. Class time will be made up of instructor's demonstrations, group critiques, and individual studio work. Projects will stress the sculptural potential of clay with a visit into the aesthetic merit of functional vessel making. A research project, introducing students to the work of historical clay artists, will provide inspiration and direction. A \$50 ceramic studio fee will be assessed.

Learning Outcomes:

- Understand the workings of a clay studio and its equipment.
- Create work with good craftsmanship through focused work time.
- Understand the potential and limits within the medium of clay.
- Critique work.

- Recognize ceramic artists past and present.
- Understand how to develop a personal and unique voice; use research and documentation skills; use wheel throwing, handbuilding, and plaster mold techniques; use self-discipline and time management; and understand ceramics studio safety.

VRTS 140C Digital Photography

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Addresses digital camera operation, a variety of file types, digital photo editing, and printing procedures. Digital camera capabilities will be learned through a series of project-based assignments, lectures, demonstrations, and critiques. Formal emphasis is placed on the creative use of camera controls, composition, exposure, digital imaging software (including Lightroom and Adobe Photoshop®), and an awareness of critical issues in contemporary photography. Scanning and printing techniques will also be included. Students are required to provide their own digital camera and media cards for storing image files; the camera must be capable of full manual control and capturing RAW files. Although all work can be accomplished on campus computers, a laptop computer suitable for viewing/editing images and Adobe Photoshop software will facilitate additional work outside of the scheduled lab time but is not required.

Learning Outcomes:

- Operate a digital camera using auto, aperture priority, shutter priority, and manual modes.
- Configure a camera's settings based on the lighting situation.
- Create imagery with strong compositions in color and black and white with aesthetic awareness.
- Understand how to process files in post-production effectively and establish a workflow.

VRTS 193C Introduction to Photoshop

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Introduce students to the powerful tools of Photoshop for manipulating digital images, photomontage, and page layout applications. The course topics cover Photoshop tools, photo corrections, working with selections, and layer basics. The use of masks and channels, typographic design, and vector drawing techniques are also covered. In addition, assignments will include advanced compositing, basic video editing, digital painting, and working with 3-D images/text. Textbook and portable media storage device required. (Prerequisite: working knowledge of Microsoft Windows environment)

Learning Outcomes:

- Navigate and configure the Photoshop CC interface to find the tools needed to complete a given task.
- Identify common image file formats and select the correct format based on project specifications.
- Modify the contents of a layer using layer styles, adjustment layers, layer effects and layer masks.
- Perform a variety of photo corrections.
- Complete simple graphic design projects with vector drawing and text elements.

VRTS 195C Introduction to Illustrator CC

Lecture Hours: 3

Lab/Practicum/Clinical Hours: 0

Credit Hours: 3

Introduces students to the powerful tools of Adobe Illustrator (Ai) for manipulating images, building multimedia online graphics, and creating page layout applications. Students learn skills and techniques for editing images and creating effective digital graphics for a variety of online and print applications. The course topics cover Illustrator tools, layers, typography, digital painting, symbols/shapes, brushes, and graphic styles/effects. (Prerequisite: Working knowledge of Microsoft Windows environment)

Learning Outcomes:

- Understand Adobe Illustrator as a tool to make images and comprehending the power of images to communicate ideas and express feelings.
- Create a professional web portfolio to host ideas.
- Display proficient Ai image editing techniques, layers, compositing, typography, digital painting and graphic effects.
- Use Adobe Creative Cloud for multiple programs to enhance Illustrator projects.

VRTS 201C Drawing II

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 4

Credit Hours: 4

Builds on the aesthetic, technical, and conceptual foundation established in VRTS 101C. This observational drawing course will develop greater technical facility with materials and explore methods for translating and interpreting one's environment onto a drawing. As conceptual options and skill with materials increase, drawing will become a stronger outlet for personal and creative expression. Students will expand their understanding and use of color and work more extensively from the human figure. The historical foundation of drawing will be explored, as well as contemporary and historical trends. (Prerequisite: VRTS 101C)

Learning Outcomes:

- Use line and value to create drawings depicting volume, texture, perspective, and still lifes.
- Create a drawing from life with accurate proportions, correct perspectives, and seven midtones.
- Create a composition based on clearly defined content.
- Sight size and use grid thinking and measuring systems in observational drawings to create effective visual illusions.
- Understand art history, comprehend symbolism in subject matter, and respond articulately to critiques.
- Develop an accomplished portfolio of observational drawings.
- Describe and execute strong drawings that communicate effectively.
- Analyze artwork from different cultures, past and present, to study content.

VRTS 210C Life Drawing

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 4

Credit Hours: 4

Builds on the aesthetic, technical, and conceptual foundation established in VRTS 101C with an emphasis on the human form. The student will aim to develop a knowledge of and a sensitivity to the structure, anatomy, and expressive qualities of the human form in a variety of ways including line, place, value, mass, and shape. Composition will be a consideration at all times. A \$20 fee will be assessed for all students in this course to cover the cost live modeling. (Prerequisite: VRTS 101C with a grade of C or higher)

Learning Outcomes:

- Demonstrate mastery of scale, placement, tonal range, gesture and proportions.
- Understand human anatomy and anatomical terminology.
- Use standard measuring techniques.
- Capture posture and motion through gesture drawing.
- Capture the shape of human subjects, utilize line, contour, shading, perspective, and mass conception
- Create classical figure drawings using different approaches and techniques.
- Critique artwork objectively.
- Understand how figuration changes because of cultural differences and historical events.

VRTS 220C Painting II

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 4

Credit Hours: 4

Involves further development of skills and concepts covered in FA 120 while emphasizing individual expression within the parameters of structured studio projects. This course is intended to advance the student's understanding of visual organization and design through the development of a personal painting vocabulary. (Prerequisite: VRTS 120C)

Learning Outcomes:

- Explore issues of image development and placement through master painter copies, and preliminary drawing studies to the finished paintings.
- Develop an accomplished portfolio of paintings that reflect expertise in issues of craft, color translation, and composition.
- Expand knowledge of art historical traditions of painting to that of contemporary realms with respect to still life, portrait, figure, and landscape.
- Use color theory and design vocabulary to critique artwork objectively.

VRTS 230C Photography II

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 4

Credit Hours: 4

Helps the student who has basic darkroom and exposure/development skills further their understanding of the principles and techniques of black and white photography. Assignments will focus on both technical and aesthetic concerns. Class topics include still life composition, the use of fiber paper, toning, studio lighting, portraiture, street photography, photojournalism, medium format film, and low light photography. In-class critiques provide feedback on students' work. Students should expect to provide their own 35mm film camera with full manual controls and be able to independently operate studio lighting equipment. A \$20 fee will be assessed for all students in this course to cover the cost and disposal of chemicals used in class. (Prerequisite: VRTS 130C with a grade of C or higher)

Learning Outcomes:

- Use photo printing expertise with use fiber paper and toners.
- Use film processing knowledge with medium format film and film speeds.
- Set up and use studio lighting backdrops, studio lights, light modifiers, and handheld light meters for still life compositions and portraiture.
- Compose and shoot in-camera medium format double exposure images.

VRTS 235C Ceramics II

Lecture Hours: 2

Lab/Practicum/Clinical Hours: 4

Credit Hours: 4

Students will be asked to develop a body of artwork that reflects a growing understanding of building techniques and surface treatment. The development of personal direction and an individual artistic voice will be stressed. Projects will be concept driven, expecting students to be able to visually and verbally demonstrate the intent of the work. Focused time on the potter's wheel will open up a new creative tool and begin a dialogue on design and function. Students will have the opportunity to explore work and techniques of contemporary clay artists. A \$50 ceramic studio fee will be assessed for all students taking this course. (Prerequisite: VRTS 135C with a grade of C or higher)

Learning Outcomes:

- Understand the workings of a clay studio and its equipment.
- Create work with good craftsmanship through focused work time.
- Understand the potential and limits within the medium of clay.
- Critique work.
- Recognize ceramic artists past and present.
- Understand how to develop a personal and unique voice; use research and documentation skills; use wheel throwing, handbuilding, and plaster mold techniques; use self-discipline and time management; and understand ceramics studio safety.

VRTS 290C Visual Arts Capstone Practicum

Lecture Hours: 1

Lab/Practicum/Clinical Hours: 0 Credit Hours: 1

A capstone experience in which students will create an independent body of work and demonstrate their ability, present it in a professional manner, document the artwork photographically, curate their exhibition, and write their artist statement. The work from the capstone exhibition will be included in the student's program exit portfolio. The student will select a member of the Visual Arts faculty to oversee their capstone progress through weekly scheduled critiques, demonstrations, and discussions. Emphasis will be on the marriage of conceptual content with technical competence in the selected mediums. (Prerequisite: successful completion of 52 credit hours in the Visual Arts degree program and permission of the department chair)

Learning Outcomes:

- Create an independent body of work that demonstrates ability and present it in a professional manner.
- Document the artwork photographically.
- Curate an exhibition.
- Write an artist statement.



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