

Deans' Council

Agenda: Tuesday, December 8, 2015

2:00 – 4:00 pm President's Conference Room, Montana Hall

Voting Members		
Martha A. Potvin	Charles Boyer – COA	Helen Melland – CON
Kenning Arlitsch – Library	Brett Gunnink – COE	Randy Babbitt – Faculty Senate
Kregg Aytes – JJCBE	Robert Hietala – GC	Nicol Rae- CLS
Matthew Caires – VPSS Designee	Alison Harmon - EHHD	Bill Shields – COAA
Renee Reijo Pera – VPR	Karlene Hoo – Graduate School	Ilse-Mari Lee – Honors College
Other Members		
Ronald Larsen – Associate Provost	Martin Teintze – WWAMI	Shelly McKamey - MOR
David Di Maria – Associate Provost	David Singel – Associate Provost	Kim Obbink – Extended University
Other Participants in Attendance		

I. Call to order:

II. Approval of Minutes from November 10, 2015

III. Topics for Discussion:

- A. Agriculture Relations Name Change
- B. HHD MEd Counseling Name Change
- C. Entrepreneurship Certificate
- D. Bachelor of Fine Arts in Integrated Lens-Based Media
- E. Computer Network Technology
- F. Re-Title Computer Science Department as School of Computing
- G. Faculty Modified Duties Policy
- H. Extending Tenure Clock Policy

IV. Information/Announcements:

- A. Deans' Review: Randy Babbitt, Faculty Senate Chair

V. Additional Topics:

Please Note: Next Meeting February 9, 2016, President's Conference Room

Deans' Council

Agenda: Tuesday, November 10, 2015

2:00 – 4:00 pm President's Conference Room, Montana Hall

Voting Members			
x	Martha A. Potvin		Charles Boyer – COA
x	Kenning Arlitsch – Library	x	Brett Gunnink – COE
x	Kregg Aytes – JJCBE		Robert Hietala – GC
x	Matthew Caires – VPSS Designee	x	Alison Harmon - EHHD
	Renee Reijo Pera – VPR		Karlene Hoo – Graduate School
		x	Helen Melland – CON
		x	Randy Babbitt – Faculty Senate
		x	Nicol Rae- CLS
		x	Bill Shields – COAA
		x	Ilse-Mari Lee – Honors College
Other Members			
x	Ronald Larsen – Associate Provost		Martin Teintze – WWAMI
x	David Di Maria – Associate Provost	x	David Singel – Associate Provost
			Shelly McKamey - MOR
			Kim Obbink – Extended University
Other Participants in Attendance			
x	Chris Fastnow	x	Deb Barkley
x	Tony Waller		Brenda York

- I. **Call to order:** 2:03 pm
- II. **Approval of Minutes from October 13, 2015,** Helen Melland moved to approve, Ilse-Mari Lee, seconded, approved.
- III. **Information/Announcements:**
 - A. **Veteran Student Mentoring:** Brenda York: An overview of the pilot program with JJCBE was given. The mentors are volunteers with workload units from the college assigned. The mentors are imbedded in the college and can provide frequent interaction. Veterans Services will provide a breakdown of Veteran Students in each college.
 - B. **Identify Finder and LANdesk:** Jerry Sheehan: Thirty percent of administrative units have been installed with Identify Finder and of those 65 million pieces of personal information with 20% being social security numbers have been found. The next step is a communication to be sent out campus wide regarding greater participation.
 - C. **Diplomacy Lab Project Call for Spring 2016:** Tony Waller: MSU was named a Diplomacy Lab University by the US Department of State this past summer. An overview of the program was given. An accepted project can be made a part of coursework and submitted to the Department of State for review. It was suggested that the project list be circulated from the Office of Academic Affairs.
 - D. **Board of Regents Deadlines:** There is a proposal before OCHE to change the submission process for Board items. A brief overview of the proposed changes was given.
 - E. **Deans' Follow-up Retreat:** An update on the agenda for the December 14, 2015 retreat was given.
- IV. **Additional Topics:**
 - A. Next week is International Education week: A celebration of international students
 - B. All day workshop on 11/11 on Avalanche safety.
 - C. Non tenure track contract has been ratified by the Union and will go before the Board at the November meeting.

Please Note: Next Meeting December 8, 2015 President's Conference Room

October 12, 2015

Program Change/Retitle Request

From: MEd in Education, School Counseling Option

To: MEd in School Counseling

This is part of an overall retitling of the masters degree options in HHD. The other proposed changes convert the existing MS HHD into individually labeled MS degrees based on the current options. These proposed changes create new MS degrees in Banner and require more detailed paperwork (Level II) for the Board of Regents. This program change request is a straightforward retitle request from **MEd in Education, School Counseling Option** to **MEd in School Counseling**.

Note: This proposal should be submitted via CIM, but I have not been able to make CIM cooperate on this one – Ron Larsen

Meeting date

XXX-XXX-XXXX

ITEM**Request to change Agricultural Relations option name to Agricultural Communications, Leadership and Extension**

THAT

the existing option in Agricultural Education be changed from Agricultural Relations to Agricultural Communications, Leadership, and Extension

EXPLANATION

MSU stands alone with a program, degree, or option named 'Agricultural Relations'. Across the US, degrees, programs, or options of a similar nature carry variations on the Communications, Leadership, and Extension name. The Agricultural Relations name must be defined in all marketing material as it is otherwise overlooked by and confusing to, even students seeking communications, leadership, or extension curriculum. Furthermore, 'agricultural relations' is a narrower term that refers only to a piece of our option.

ATTACHMENTS

none

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

Item Number: XXX-XXXX+XXXXX Meeting Date: _____
Institution: Montana State University - Bozeman CIP Code: _____
Program Title: Agricultural Education

Please mark the appropriate type of request and submit with an Item Template and any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit the [Academic, Research and Student Affairs Handbook](#).

A. Notifications:

Notifications are announcements conveyed to the Board of Regents at the next regular meeting.

1a. Placing a program into moratorium (Document steps taken to notify students, faculty, and other constituents and include this information on checklist at time of termination if not reinstated)

1b. Withdrawing a program from moratorium

2. Intent to terminate an existing major, minor, option or certificate – Step 1 (Phase I Program Termination Checklist)

3. Campus Certificates, CAS/AAS-Adding, re-titling, terminating or revising a campus certificate of 29 credits or less

4. BAS/AA/AS Area of Study

B. Level I:

Level I proposals are those that may be approved by the Commissioner of Higher Education. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the Board.

1. Re-titling an existing major, minor, option or certificate

2. Adding a new minor or certificate where there is a major or an option in a major (Curriculum Proposal Form)

3. Revising a program (Curriculum Proposal Form)

4. Distance or online delivery of an existing degree or certificate program

5. Terminating an existing major, minor, option or certificate – Step 2 (Completed Program Termination Checklist)

Temporary Certificate or AAS Degree Program

Approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the proposal to go through the normal Level II Proposal approval process.

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

___ **C. Level I with Level II Documentation:**

This type of proposal may go to the Board as a Level I item if all Chief Academic Officers are in agreement. If consensus among the Chief Academic Officers is not reached, however, the item will go to the Board as a Level II request.

___ **1. Consolidating existing programs and/or degrees** (Curriculum Proposal Form)

___ **D. Level II:**

Level II proposals require approval of the Board of Regents. These requests will go to the Board in a two-meeting format, the first being as informational and the second as action.

___ **1. Re-titling a degree (ex. From B.A. to B.F.A)**

___ **2. Adding a new minor or certificate where there is no major or option in a major** (Curriculum Proposal Form)

___ **3. Establishing a new degree or adding a major or option to an existing degree** (Curriculum Proposal Form)

___ **4. Forming, eliminating or consolidating a college, division, school, department, institute, bureau, center, station, laboratory or similar unit** (Curriculum Proposal Form or Center Proposal Form, except when eliminating or consolidating)

___ **5. Re-titling a college, division, school, department, institute, bureau, center, station, laboratory or similar unit**

Specify Request: The Division of Agricultural Education requests a change of the name of the Agricultural Relations option to Agricultural Communications, Leadership, and Extension

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

Item Number: XXX-XXXX+XXXXX Meeting Date: _____

Institution: Montana State University CIP Code: 131101

Program Title: Master of Education: Education major; School Counseling concentration/option

Please mark the appropriate type of request and submit with an Item Template and any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit the [Academic, Research and Student Affairs Handbook](#).

 A. Notifications:

Notifications are announcements conveyed to the Board of Regents at the next regular meeting.

- 1a. Placing a program into moratorium** (Document steps taken to notify students, faculty, and other constituents and include this information on checklist at time of termination if not reinstated)
- 1b. Withdrawing a program from moratorium**
- 2. Intent to terminate an existing major, minor, option or certificate – Step 1** (Phase I Program Termination Checklist)
- 3. Campus Certificates, CAS/AAS-Adding, re-titling, terminating or revising a campus certificate of 29 credits or less**
- 4. BAS/AA/AS Area of Study**

XX **B. Level I:**

Level I proposals are those that may be approved by the Commissioner of Higher Education. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the Board.

- X **1. Re-titling an existing major, minor, option or certificate**
- 2. Adding a new minor or certificate where there is a major or an option in a major** (Curriculum Proposal Form)
- 3. Revising a program** (Curriculum Proposal Form)
- 4. Distance or online delivery of an existing degree or certificate program**
- 5. Terminating an existing major, minor, option or certificate – Step 2** (Completed Program Termination Checklist)

 Temporary Certificate or AAS Degree Program

Approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the proposal to go through the normal Level II Proposal approval process.

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

___ C. Level I with Level II Documentation:

This type of proposal may go to the Board as a Level I item if all Chief Academic Officers are in agreement. If consensus among the Chief Academic Officers is not reached, however, the item will go to the Board as a Level II request.

___ 1. Adding an option within an existing major or degree (Curriculum Proposal Form)

___ 2. Consolidating existing programs and/or degrees (Curriculum Proposal Form)

___ D. Level II:

Level II proposals require approval of the Board of Regents. These requests will go to the Board in a two-meeting format, the first being as informational and the second as action.

___ 1. Re-titling a degree (ex. From B.A. to B.F.A)

___ 2. Adding a new minor or certificate where there is no major or option in a major (Curriculum Proposal Form)

___ 3. Establishing a new degree or adding a major or option to an existing degree (Curriculum Proposal Form)

___ 4. Forming, eliminating or consolidating a college, division, school, department, institute, bureau, center, station, laboratory or similar unit (Curriculum Proposal Form or Center Proposal Form, except when eliminating or consolidating)

___ 5. Re-titling a college, division, school, department, institute, bureau, center, station, laboratory or similar unit

Specify Request:

The Department of Health and Human Development currently offers a Master of Education degree with a major in Education and with a concentration/option in School Counseling. The department proposes to retitle the M.Ed. in Education with a concentration/option in School Counseling to:

- Master of Education with a major in School Counseling.

The reason we are requesting this retitling is to diminish confusion for the students and hiring authorities. Once students graduate and seek employment, their diploma simply states Master of Education. This create confusion and lack of specificity for school administrators and especially human resources departments in larger school districts. Retitling the degree to Master of Education with a major in School Counseling would be clear and much more understandable. It will allow us to more clearly market the degree/major to potential applicants.

This request seeks to simply change the title of the major from Education to School Counseling. There are no changes in curriculum, faculty resources, and the major will remain in the Department of Health and Human Development. Nothing will change other than the title of the major. A recent accreditation reviewer (Council for Accreditation of Counseling and Related Educational Programs – CACREP) questioned why our degree is configured in such a way that school counseling is not even indicated on the diploma.

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

Retitling will make our School Counseling program more visible to perspective students, thereby increasing our recruitment rates within the Department of Health and Human Development.

We submit that this is as a Level I B1 retitling of an existing major.

Program Change Request

New Program Proposal

Date Submitted: 10/23/15 3:30 pm

Viewing: **CENT-CER,CER : Entrepreneurship Certificate**

Last edit: 10/30/15 9:16 am

Submitted to workflow by: Dana, Susan (p99v976)

In Workflow

1. Associate Provost
2. CBU CC Chair
3. CBU Head
4. BU CC Chair
5. BU Dean
6. CPC Chair
7. Financial Aide
8. Faculty Senate Chair
9. Associate Provost
10. Deans Council
11. Regents
12. Accreditors
13. Registrar

Overview

Department:	Business (CBU)		
College:	College of Business		
Academic Level:	Undergraduate		
Program Type:	Certificate		
Please review this program for financial aid eligibility.	Yes		
Suggested Program Code:	CENT	Degree Code:	Certificate (CER) Certificate - more than one year less than two (CER)
Program Title	Entrepreneurship Certificate		
Abbreviated Program Title	Entrepreneurship Certificate		
Effective catalog when new program will be available to students:	2016-2017		
One Paragraph Description of Program:	The proposed Entrepreneurship Certificate consists of 15 credits (3 required courses plus two elective courses) and is intended to provide non-business majors with an overview of the business startup process in order to prepare them to start their own businesses or non-profit organizations. The certificate is part of a deliberate effort by the Jake Jabs College of Business & Entrepreneurship to expand its offerings to non-business students who seek to apply their disciplinary knowledge to launch a new business or non-profit but who lack the basic business and entrepreneurial skills necessary for start-up success. The certificate will be available only to students at MSU-Bozeman who are pursuing a 4-year degree in a discipline other than business.		

Approval Path

1. 10/30/15 9:16 am
Ron Larsen (x22m626)
Approved for Associate Provost
2. 10/30/15 9:58 am
Susan Dana (p99v976)
Approved for CBU CC Chair
3. 10/30/15 11:51 am
Susan Dana (p99v976)
Approved for CBU Head
4. 10/30/15 11:53 am
Susan Dana (p99v976)
Approved for BU CC Chair
5. 10/30/15 11:54 am
Susan Dana (p99v976)
Approved for BU Dean
6. 11/19/15 11:35 am
Keely Holmes (n77g116)
Approved for CPC Chair
7. 11/23/15 10:08 am
Brandi Payne (m92d952)
Approved for Financial Aide
8. 12/03/15 11:04 am
Gale Gough (b49w235)
Approved for Faculty Senate Chair
9. 12/03/15 11:06 am
Ron Larsen (x22m626)
Approved for Associate Provost

Need

To what specific need is the institution responding in developing the proposed program?

There are many students at MSU-Bozeman pursuing a major in a discipline other than business who wish also to learn entrepreneurship concepts in order to prepare them for starting and running a business or non-profit. The proposed Entrepreneurship Certificate enables non-business students to gain the basic knowledge and skills needed to start a business or non-profit. Examples include engineering and computer science students seeking to start a business based on their own invention.

How will students and any other affected constituencies be served by the proposed program?

The proposed Entrepreneurship Certificate will serve non-business majors who intend to start their own businesses or non-profits by providing the basic skills needed for a successful launch. The program will also serve the state of Montana by encouraging new business starts and providing non-business students with the skills to help improve the success rate of start-ups in Montana.

What is the anticipated demand for the program? How was this determined?

The Director of University Studies and the Advising Center at MSU-Bozeman estimates that approximately 25 students will enroll in the certificate in the first year of offering, with perhaps as many as 50 enrolling each year thereafter, with 25-50 students graduating per year with the certificate. Please see her attached letter of support.

The fact that over 50 students are currently enrolled in the College's Entrepreneurship and Small Business Management minor suggests that there is strong interest among MSU students in entrepreneurship. The fact that the vast majority of these students are business majors, however, also suggests that the current minor is not attractive to non-business majors, probably because of the number of credits required (30). The

Entrepreneurship Certificate targets non-business majors and provides a lower impact option for gaining basic entrepreneurship knowledge and skills.

Institutional and System Fit

What is the connection between the proposed program and existing programs at the institution?

The proposed Entrepreneurship Certificate will provide non-business majors with the basic knowledge and skills necessary to prepare them to launch a new venture. It is related to existing business programs at MSU-Bozeman but differs from these programs in terms of both target market and number of credits required.

- The B.S. in Business, offered by the Jake Jabs College of Business & Entrepreneurship (JJCBE) is designed for students majoring in business and requires 120 credits, of which over 60 credits are in business-related courses.

- The College's Entrepreneurship Minor requires 30 credits compared to the proposed certificate's 15 credits, and is subscribed almost entirely by business majors. The goal of the proposed certificate is to provide essential start-up knowledge to non-business students seeking to turn their disciplinary knowledge into entrepreneurial opportunities.

- The other minors in the College all require 24-30 credits and have either a very broad focus (Business Administration) or more specific focus (Finance, Accounting, International Business). These minors therefore do not serve student entrepreneurs well.

- The new 18 credit business certificate offered by the College targets non-business students seeking a basic knowledge of business in order to make them more effective employees. Its focus is on fundamental business concepts rather than on the skills needed for a successful entrepreneurial start-up.

The certificate will be available only to students at MSU-Bozeman who are pursuing a 4-year degree in a discipline other than business. Non-business students may earn the Entrepreneurship Certificate in addition to the Business Certificate if they wish, and in addition to another minor in the JJCBE other than the Entrepreneurship Minor.

Other programs offered at MSU-Bozeman with business content, all offered by the College of Agriculture, are the B.S. in Agricultural Business, B.S. in Financial Engineering, and a minor in Agricultural Business. The two B.S. degrees are majors rather than certificates and thus require significantly more credits than the proposed certificate. They also have a very different emphases than the proposed certificate, which has an entrepreneurship focus. The minor in Agricultural Business requires 40 credits compared to the proposed certificate's 15 credits, and focuses on agribusiness rather than on entrepreneurship.

Gallatin College offers a Professional Certificate in Business Management, which is a stand-alone 25-credit workforce development certificate and as such is not intended for undergraduates at MSU-Bozeman seeking a 4-year degree.

Will approval of the proposed program require changes to any existing programs at the institution?

No

Describe what differentiates this program from other, closely related programs at the institution (if appropriate)

The only closely-related programs at MSU-Bozeman are the B.S. in Business, the Entrepreneurship Minor, and the Business Certificate, all offered by the Jake Jabs College of Business & Entrepreneurship. As noted above, the proposed Entrepreneurship Certificate differs from these programs in terms of both target market and number of credits required.

- The B.S. in Business, offered by the Jake Jabs College of Business & Entrepreneurship (JJCBE) is designed for students majoring in business and requires 120 credits, of which over 60 credits are in business-related courses.

- The College's Entrepreneurship Minor requires 30 credits compared to the proposed certificate's 15 credits, and is subscribed almost entirely by business majors. The goal of the proposed certificate is to provide essential start-up knowledge to non-business students seeking to turn their disciplinary knowledge into entrepreneurial opportunities.

- The new 18 credit business certificate offered by the College targets non-business students seeking a basic knowledge of business in order to make them more effective employees. Its focus is on fundamental business concepts rather than on the skills needed for a successful entrepreneurial start-up.

Programs at MSU-Bozeman and Gallatin College that have business content but are not closely-related to the proposed certificate are:

- B.S. Agricultural Business, concentrations in Agribusiness Management and Farm & Ranch Management: Full-fledged major with focus on agricultural business rather than on entrepreneurship.

- B.S., Financial Engineering: Full-fledged major with a focus on the creation of new financial instruments rather than entrepreneurship, with very strong quantitative content.

- Minor, Agricultural Business: Focus on agricultural business rather than on entrepreneurship; requires 40 credits compared to the Entrepreneurship Certificate's 15 credits.

- Professional Certificate, Business Management, Gallatin College: Stand-alone certificate not intended for

undergraduates at MSU-Bozeman seeking a 4-year degree. All courses in the Gallatin College program are offered at 100- and 200-level.

How does the proposed program serve to advance the strategic goals of the institution?

The proposed Entrepreneurship Certificate serves the "Learning" goal of the MSU-Bozeman strategic plan by enhancing the opportunity of non-business students to develop some knowledge of entrepreneurship that will make them more effective entrepreneurs contributing to the economic development of Montana. It also advances MSU's goal to increase interdisciplinary opportunities for students.

Describe the relationship between the proposed program and any similar programs within the Montana University System. In cases of substantial duplication, explain the need for the proposed program at an additional institution. Describe any efforts that were made to collaborate with these similar programs; and if no efforts were made, explain why. If articulation or transfer agreements have been developed for the substantially duplicated programs, please include the agreement(s) as part of the documentation.

Only the University of Montana offers an Entrepreneurship Certificate. However, UM's entrepreneurship certificate is available only to business students seeking a business degree at UM. MSU's proposed Entrepreneurship Certificate is specifically targeted at non-business students at MSU-Bozeman who wish someday to launch their own venture.

Program Details

The Entrepreneurship Certificate provides non-business majors with an overview of the business startup process in order to prepare them to start their own businesses or non-profit organizations. Students completing the Entrepreneurship Certificate will be able to:

1. Demonstrate understanding of the business startup process
2. Apply fundamental concepts in accounting, finance, management and marketing to solve startup related problems
3. Create a business model for a new business venture

The Entrepreneurship Certificate consists of three required courses and two electives for a total of 15 credits. In accordance with the Board of Regents' policy, students must earn a C- or better in all courses in a minor or certificate.

	Year 1 and 2	Credits
<u>BGEN 194US</u> - Seminar: Business & Entrepreneurship Fundamentals		3
or <u>BGEN 204</u> - Business & Entrepreneurship Fundamentals		
<u>BGEN 210</u> - Accounting & Finance Basics		3
Year Total:		6
	Year 3 and 4	Credits
<u>BMGT 448</u> - Entrepreneurship		3
Choose two courses from the following list (or another course approved by the Entrepreneurship Advisor):		6
<u>BMGT 410</u> - Sustainable Business Practices		
<u>BMGT 458</u> - Adv Entrepreneurship Sem		
<u>BMGT 461</u> - Small Business Management		
<u>BMGT 469</u> - Community Entrepreneurship & Nonprofit Management		
<u>BMKT 420</u> - Integrated Online Marketing		
<u>BMKT 436</u> - Sales and Sales Management		
<u>BMKT 446</u> - Marketing for Entrepreneurs		
<u>BFIN 456</u> - Fin Mgmt for the Entrepreneur		
<u>EIND 425</u> - Technology Entrepreneurship		
<u>GDSN 378</u> - Guerrilla Advertising		
<u>SFBS 429</u> - Small Business and Entrepreneurship in Food and Health		

Courses other than BMGT courses have prerequisites in addition to those required for the Entrepreneurship Certificate. Students are responsible for fulfilling all prerequisites before attempting to enroll in a course.

At least two of the upper-division courses must be taken in residence at MSU-Bozeman.

Year Total:	9
Total Program Credits:	15

Please see attached document "Eship Certificate Prerequisites" for a table summarizing the prerequisites for the above courses and showing how easily non-business students can fulfill these prerequisites.

Describe the planned implementation of the proposed program, including estimates of numbers of students at each stage.

<p>It is estimated that approximately 25 students will be interested in the Entrepreneurship Certificate in its first year, with approximately 50 students per year enrolling by the fourth year of offering with approximately 25-50 students graduating per year with the certificate.</p>

Resources

Will additional faculty resources be required to implement this program? Yes

Please Explain:

While all of the courses listed in the proposed certificate already exist, it is likely that additional sections of BGEN 194, BGEN 210 and BMGT 448 may need to be added over time to accommodate demand generated by the certificate. It is not expected that additional sections of the elective courses will be needed because students will disperse across these courses.

No

Are other, additional resources required to ensure the success of the proposed program?

Please Explain:

Assessment

How will the success of the program be measured? Please see attached assessment plan.

Process Leading to Submission

Describe the process of developing and approving the proposed program. Indicate, where appropriate, involvement by faculty, students, community members, potential employers, accrediting agencies, etc.

The Executive Director of the Jobs Entrepreneurship Center initially proposed the Entrepreneurship Certificate to a group of faculty engaged in entrepreneurship. After several months of discussion and revision, the Director submitted the proposal to the College's Academic Programs Committee (APC), which recommended some additional changes. After a final review the APC sent the proposal the College's full faculty with a recommendation to vote in favor of the proposal. The proposal was then voted upon and approved by the full faculty of the College and the Dean of the College. It is now being submitted to the University for consideration.

Accreditation Information

Resources

Budget projections for first three years of operation: (revenues and expenditures) Please see separate attachment.

Institutional support to be provided, including sources of funds: There is no direct link between student credit hours taught and budget allocations. The table indicates that tuition dollars are likely to exceed the instructional costs. The Provost's Office has been providing extra section funding in support of enrollment growth on campus. It is anticipated that these extra section funds would continue to be available to support a program like the proposed Entrepreneurship Certificate.

Physical facilities and equipment to be provided to the new program, including sources: None required other than a classroom should the College need to add new sections of one or more courses.

Student Services

Capacity of student services to accommodate the change: (if applicable) The Office of Student Services in the Jake Jobs College of Business is well-equipped and sufficiently staffed to advise students on the requirements for the proposed certificate. In addition, the staff of University Studies and the Advising Center will be able to advise interested students into the certificate without additional resources.

Library and Information Resources

Adequacy and availability of required library and information resources: No new resources will be required to support the certificate

Additional Information

Additional Information Please see attached documents:
 1. Letter of support from Diane Donnelly, Director of University Studies and the Academic Advising Center
 2. Summary of prerequisites for courses in the certificate
 3. Assessment plan for the certificate

Supporting Documents [Entrep Certificate ltr of support Aug15.docx](#)
[Eship Certificate Prerequisites.docx](#)
[Eship Cert Assessment Plan.docx](#)
[Entrep Certificate Revenue Final.xlsx](#)

Course Reviewer Comments x22m626|Fri, 30 Oct 2015 15:16:09 GMT|RWL: Asked Julie Heard to see if this is on the BOR Curriculum Plan. If not, we need to figure out how to get it on that list. RWL: Certificate designation of "more than one year, less than two" was chosen because there is no option for a 15-cr certificate.

Program Change Request

New Program Proposal

Date Submitted: 09/25/15 11:41 am

Viewing: **BFAL-B : Bachelor of Fine Arts in Integrated Lens-Based Media**

Last edit: 11/04/15 2:10 pm

Submitted to workflow by: Nelson, Andrew (v98g452)

In Workflow

1. Associate Provost
2. SFP CC Chair
3. SFP Head
4. AA CC Chair
5. AA Dean
6. CPC Chair
7. v98g452
8. CPC Chair
9. Financial Aide
10. Faculty Senate Chair
11. Associate Provost
12. Deans Council
13. Regents
14. Accreditors
15. Registrar

Overview

Department:	School of Film & Photography (SFP)
College:	College of Arts & Architecture
Academic Level:	Undergraduate
Program Type:	Major
Please review this program for financial aid eligibility.	Yes
Suggested Program Code:	BFAL Degree Code: Bachelor (8)
Program Title	Bachelor of Fine Arts in Integrated Lens-Based Media
Abbreviated Program Title	BFA Lens-Based Media
Effective catalog when new program will be available to students:	2016-2017
One Paragraph Description of Program:	The Bachelor of Fine Arts in Integrated Lens-Based Media in the School of Film & Photography at MSU-Bozeman provides students with an intensive, interdisciplinary course of study in film and photographic media that culminates in the creation of two capstone projects. Students apply for admission to the BFA at the end of their sophomore year, after having completed a prescribed sequence of foundational courses in the production, analysis, and history of film and photography. As a professional degree, the BFA in Integrated Lens-Based Media prepares students to pursue graduate study and for careers as professional artists.

Approval Path

1. 09/28/15 8:40 am
Ron Larsen (x22m626): Approved for Associate Provost
2. 09/28/15 8:44 am
Andrew Nelson (v98g452): Approved for SFP CC Chair
3. 09/29/15 9:41 am
Dennis Aig (b77f876): Approved for SFP Head
4. 10/05/15 11:44 am
Dean Adams (r13v835): Approved for AA CC Chair
5. 10/14/15 11:19 am
William Shields (j95k341): Approved for AA Dean
6. 11/04/15 1:35 pm
Keely Holmes (n77g116): Approved for CPC Chair
7. 11/04/15 1:39 pm
Andrew Nelson (v98g452): Approved for v98g452
8. 11/04/15 2:07 pm
Keely Holmes (n77g116): Rollback to v98g452 for CPC Chair
9. 11/04/15 2:10 pm
Andrew Nelson (v98g452): Approved for v98g452
10. 11/19/15 11:35 am
Keely Holmes (n77g116): Approved for CPC Chair
11. 11/23/15 10:05 am
Brandi Payne (m92d952): Approved for Financial Aide
12. 12/03/15 11:04 am
Gale Gough (b49w235): Approved for Faculty Senate Chair

Need

To what specific need is the institution responding in developing the proposed program?

The proposed program has been developed in response to changes in the field, as well as in response to feedback from our students. We live in an age when traditional boundaries between media are breaking down, and when media-makers are increasingly expected to have skills in both filmmaking and photography. Our school has long recognized the importance of a comprehensive introduction to lens-based media, and this is reflected in our freshman curriculum, where prospective majors take the same series of foundation courses in film and photography before applying for entry into either the film or photo option. While some of our students do double-major, this is a demanding option, and it is clear that many more would continue their study of both film and photography if there were greater integration between the two.

We have both the faculty expertise and the facilities to respond to the changing media landscape and better meet the needs of our students. What is required is a new degree. The BFA extends the philosophy behind our current freshman year to encompass an entire degree, in which students will continue their training in both film and photo in the sophomore year and then pursue a customized, interdisciplinary curriculum in the junior and senior year.

The Bachelor of Fine Arts designation has been selected over the Bachelor of Arts because it better reflects the comprehensiveness and rigor of the proposed program of study. Whereas our BA degrees require 56 credits for the major, the BFA will require 84. This accords with the guidelines issued by the National Association of Schools of Art and Design (NASAD), which state that a BFA should require students to take at least 65% of their credits in the major area of study. The BFA will also better prepare students who intend to pursue MFAs or other graduate degrees. While the caliber of student work has meant our graduates have been competitive and successful at applying for graduate education, particularly in photography, many alumni are required to take remedial courses while pursuing MFAs at other universities. The BFA will address this issue and ensure a more seamless transition into graduate school.

How will students and any other affected constituencies be served by the proposed program?

The introduction of the BFA will allow the School of Film & Photography to better meet the needs of students. It will provide our students with the option to pursue an intensive, interdisciplinary degree in lens-based media that will prepare them for graduate school and professional practice. We are confident that the BFA will also make the School a more attractive option for incoming students.

13. 12/03/15 11:06 am
Ron Larsen (x22m626)
Approved for Associate
Provost

What is the anticipated demand for the program? How was this determined?

We anticipate 30 applications for the BFA in the spring of 2018. This figure has been determined based on consultation with current students, both individually and at student-faculty forums.

Institutional and System Fit

What is the connection between the proposed program and existing programs at the institution?

The BFA combines aspects of our existing degrees in film and photography. Incoming students will undertake our existing freshman curriculum, continue their training in both film and photo in the sophomore year, and then pursue a customized, interdisciplinary course of study in the junior and senior years.

Will approval of the proposed program require changes to any existing programs at the institution?

No

Describe what differentiates this program from other, closely related programs at the institution (if appropriate)

The combined study of film and photography as lens-based media distinguishes the BFA from our BAs in film and photography.

How does the proposed program serve to advance the strategic goals of the institution?

The introduction of the BFA in Integrated Lens-Based Media will significantly advance MSU's strategic goals, particularly in the areas of learning, discovery, and integration. The proposed program has been devised in direct response to significant changes in the field, with the goal of preparing students to graduate equipped for careers and further education. The program's unique integration of the study of film and photo will also prove attractive to incoming students, and will thus aid with recruitment.

Describe the relationship between the proposed program and any similar programs within the Montana University System. In cases of substantial duplication, explain the need for the proposed program at an additional institution. Describe any efforts that were made to collaborate with these similar programs; and if no efforts were made, explain why. If articulation or transfer agreements have been developed for the substantially duplicated programs, please include the agreement(s) as part of the documentation.

The BFA in Integrated Lens-Based Media will not substantially duplicate any other programs in the Montana University System, just as our existing degrees in Film and Photography do not. At the University of Montana, the School of Media Arts offers a BFA in Digital Filmmaking and the School of Art offers BFA in Art with a specialization in photography. In emphases, these programs differ both philosophically and practically from ours. The UM-SMA filmmaking program encourages an artisanal mode of film practice with the filmmaker as "digital artist," whereas MSU is principally a narrative-based production program that emphasizes instruction in contemporary professional creative practices. The UM-SA photography program has fine art at the core of its curriculum, whereas MSU emphasizes photography as a lens-based medium. Our BFA reflects these foci, and will draw upon our more than fifty years of experience training young filmmakers and photographers for careers as media creators.

Program Details

Below is a narrative of how a student progresses through the proposed BFA curriculum.

In the freshman year, students take the following courses: FILM 100IH: Introduction to Film and Photography (3 credits), FILM 101IH: Understanding Film and Media (3), FILM 112: Aesthetics of Film Production I (3), PHOT 113RA: Understanding Photography (3), and one of ARTZ 105RA: Visual Language: Drawing (3), ARTZ 109RA: Visual Language: Comprehensive Foundations (4) or ARTZ 110RA: Visual Language: Ideation and Creativity (4).

In addition to these 15 (or 16) credits, students take 15 (or 14) credits of University and Core electives.

At the conclusion of the freshman year, students apply for admission into either the film or photography BA while indicating their intention to apply for the BFA.

In the sophomore year, students take FILM 212: Aesthetics of Film Production II (3), PHOT 213: Intermediate Photography (3), PHOT 255: Introduction to Color Photography (4), and three of the following four courses: FILM 201D: Film History I-Origins to the 1960s (3), FILM 202D: Film History II-1960s to the Present (3), PHOT 303: Early History of Photography (3), and PHOT 304: Recent History of Photography (3).

In addition to these 19 credits, students take 11 credits of University and Core electives.

At the conclusion of the sophomore year, students apply for admission into the BFA. The application portfolio consists of a cover letter; one sample of creative work; one essay completed for one of FILM 201D, FILM 202D, PHOT 303, or PHOT 304; and an academic transcript. A committee of faculty members reviews each application. Application materials are considered holistically and, where necessary, the committee solicits additional information from other members of the faculty. The committee produces a ranked list of applicants, and places in the BFA are offered to the top twelve. In the event that a student declines an offer, his or her place is extended to the next applicant on the ranked list.

Students who are not admitted to the BFA will be able to continue in their BA programs, and will have the ability to reapply for entry into the BFA the following year.

Students admitted to the BFA will be assigned two advisors—one filmmaker and one photographer—with whom they will design a customized curriculum for the final two years of the degree.

In fall semester of the junior year, all newly-admitted BFA students will take a new course, Issues in Integrated Lens-Based Media (2). This seminar-style course will meet once weekly to discuss the interrelation of still and moving images from a variety of critical and historical perspectives.

In the junior and seniors years, BFA students must take 6 credits of PHOT electives, 6 credits of FILM electives, 6 credits of film and photo studies electives (courses in the history and criticism of film and photography), and 20 additional credits relevant to the student's proposed course of study. Students also take 12 credits of University and Core elective

In the senior year, students will complete two capstone (under FILM 499 and/or PHOT 499) projects at 5 credits each.

Describe the planned implementation of the proposed program, including estimates of numbers of students at each stage.

<p>The proposed program will be implemented in the fall of 2016. The first cohort of students be admitted into the BFA for the fall of 2018, and will graduate in the spring of 2020. Initially, spaces in the BFA will be limited to 12 each year. Because the BFA does not increase the total number of students in the School, we will have the flexibility to adjust enrollment based on demand. Students who enrolled prior to the fall of 2016 will be eligible to apply for the BFA program provided they complete the prerequisites.</p>

Resources

Will additional faculty resources be required to implement this program? No

Please Explain:

Are other, additional resources required to ensure the success of the proposed program? No

Please Explain:

Assessment

How will the success of the program be measured? Success in achieving program outcomes will be measured in multiple ways, including: student performance in individual courses, as gauged by the School's assessment procedures; the quality and innovation of the BFA capstone projects, particularly in how the projects synthesize aspects of film and photography; completion of the degree without four years; and job placement and graduate school admission rates following graduation from the program.

Process Leading to Submission

Describe the process of developing and approving the proposed program. Indicate, where appropriate, involvement by faculty, students, community members, potential employers, accrediting agencies, etc.

The Curriculum Committee of the School of Film & Photography began the process of devising a new BFA program in the winter of 2014. This process continued over the course of the 2014-2015 academic year, involved comprehensive consultation with faculty, students, staff and alumni, and proceeded through multiple iterations. The present version of the proposal was presented to faculty in April of 2015. The proposal was submitted to a vote at a meeting of tenured and tenure-track faculty in August of 2015, and was unanimously approved.

Accreditation Information

Resources

Budget projections for first three years of operation: (revenues and expenditures) Although this is a new program, it is based upon, and draws students from, existing programs within the School of Film & Photography, and therefore entails no new revenue or expenditure.

Institutional support to be provided, including sources of funds: No institutional support will be required beyond that already devoted to our existing programs.

Physical facilities and equipment to be provided to the new program, including sources: No new physical facilities or equipment will be required by the new program.

Student Services

Capacity of student services to accommodate the change: (if applicable) N/A

Library and Information Resources

Adequacy and availability of required library and information resources: The University's existing library and information resources will adequately support this new program.

Additional Information

Additional Information

Supporting Documents

Course Reviewer x22m626|Mon, 28 Sep 2015 14:31:15 GMT|RWL: Changed two instances of the title to make BFA in Lens-Based Media consistent throughout the proposal.
Comments n77g116|Wed, 04 Nov 2015 21:07:48 GMT|Rollback: Edits didn't save
v98g452|Wed, 04 Nov 2015 21:10:15 GMT|Made two changes to Program Details on advice of the CPC

Nov 17 11:55

Program Change Request

New Program Proposal

Date Submitted: 09/25/15 3:15 pm

Viewing: **1110-CAS : Computer Network Technology**

Last edit: 11/06/15 2:20 pm

Submitted to workflow by: Stephanie, Gray (z94k447)

In Workflow

1. Associate Provost
2. WP Head
3. GC Dean
4. z94k447
5. GC Dean
6. CPC Chair
7. z94k447
8. CPC Chair
9. Faculty Senate Chair
10. Associate Provost
11. Deans Council
12. Regents
13. Accreditors
14. Registrar

Overview

Department:	Gallatin Coil Workforce Program (WP)		
College:	Gallatin College		
Academic Level:	Undergraduate		
Program Type:	Certificate		
Please review this program for financial aid eligibility.	No		
Suggested Program Code:	1110	Degree Code:	Certificate of Applied Science (CAS)
Program Title	Computer Network Technology		
Abbreviated Program Title	CAS Network Technology		
Effective catalog when new program will be available to students:	2015-2016		
One Paragraph Description of Program:	<p>Since 2011 Information Technology programing has been on the development list for Gallatin College. The field of Information Technology is vast. Anything having to do with the application of computers and telecommunications equipment to store, retrieve, transmit and manipulate data, in the context of a business or other enterprise is considered information technology. So all aspects such as security, data management, networking, hardware, software, storage, web and mobile, audio visual, are all included in a discussion about information technology. Gallatin College has decided to start the Information Technology programing with a foundational Network Technology Certificate of Applied Science (CAS). This Certificate of Applied Science in Network Technology is the first in a series of Professional Certificates and Certificates of Applied Science (CAS) that will be structured academically around industry certifications in the broad field of information technology. Gallatin College will build these Professional Certifications and CAS degrees so they can be combined into a future Associate of Applied Science in Information Technology (AAS) in Information Technology. This CAS will prepare students for computer hardware, software and applications; local area (LAN) and wide area (WAN) networking; principles of information systems security; disk space and traffic load monitoring; data backup; resource allocation; and setup and takedown procedures. This program will also introduce the design, implementation, and management of linked systems of computers, and peripherals, to maximize efficiency and productivity, and prepare individuals to function as network generalist. The final goal of this program is to prepare students to sit for the CompTIA A+ certification test, the CompTIA Network + certification, the Cisco Certified Entry Networking Technician, and/or the Microsoft Technology Associate.</p>		

Approval Path

1. 10/06/15 10:51 am
Ron Larsen (x22m626): Approved for Associate Provost
2. 10/06/15 2:39 pm
Sara Maki (w75v762): Approved for WP Head
3. 10/09/15 8:19 am
Keely Holmes (n77g116): Approved for GC Dean
4. 10/09/15 8:49 am
Gray Stephanie (z94k447): Approved for z94k447
5. 10/09/15 3:48 pm
Sara Maki (w75v762): Approved for GC Dean
6. 10/15/15 11:45 am
Keely Holmes (n77g116): Approved for CPC Chair
7. 11/06/15 2:21 pm
Gray Stephanie (z94k447): Approved for z94k447
8. 11/19/15 11:35 am
Keely Holmes (n77g116): Approved for CPC Chair

Need

To what specific need is the institution responding in developing the proposed program?

This program will prepare students for four standard occupational classified positions; they are Network Support Specialist, Network and Computer Systems Administrator, Computer Network Architect, and Computer User Support Specialist. The tables below show the demand and wage for these job classifications in Montana and Southwest Montana:

Occupational Demand 2014-2024	% MT Growth	MT Annual Openings	% SW MT growth	Annual Openings	SW MT
Network Support Specialist	10.8%	10	8.9%	7	
Network /Computer System Administrators	12.8%	20	18.2%	9	
Computer Network Architects	18.3%	7	2.1%	3	
Computer User Support Specialist	21.1%	77	17.0%	21	

MT Wage 2014	SW MT Wage 2014
Network Support Specialist	\$46,200 \$46,240
Network /Computer System Administrators	\$58,030 \$60,130

Computer Network Architects \$60,130 \$57,270
 Computer User Support Specialist \$38,700 \$43,210

The above table only reflects Montana Department of Labor data; some employers do not use the local job service agencies to advertise open positions. Looking at this data alone there is evidence that our graduates will be able to secure employment in the local service delivery area at livable wages for at least a decade. Additional labor market data was found that support growth in this area of information technology. At the state level the Montana Department of Labor and Industry reported in their May 2015 Montana Employment Projections Report that Computer User Support Specialist with some type of post-secondary degree has a total annual opening demand of 77 and an average annual wage of \$40,802. In a report completed in July of 2015 by The Advisory Board Company, titled "Market Demand for Computer and Information Technology Associate's Degree Programs, Assessing Employer Demand in Gallatin and Park Counties and Across the State of Montana" the data showed local employer demand in Gallatin and Park Counties for Associate's level Computer and Information Technology professionals increased by 48% between July -- December 2013 and January -- June 2015. In real numbers this was a base level of 29 job listings with an increase up to 43.

How will students and any other affected constituencies be served by the proposed program?

Students will receive a basic foundational program and a CAS in computer networking. They will be introduced to systems design, installation, maintenance and troubleshooting that will allow them opportunities in the local and national workforce. This will be offered in the most efficient way possible and students will make connections with local industry employers. They will be exposed to highly recognized industry credentials that will start them on a career path in Information Technology. Outside constituents include business owners and industry professionals that will benefit from a trained workforce with connections to future professional development. Once approved Gallatin College will organize an Advisory Board that will be comprised of local industry leaders, who will give feedback on program content and student workplace success as a result of existing content.

What is the anticipated demand for the program? How was this determined?

In 2011 Gallatin College completed an Analysis of Workforce Needs for Gallatin Valley. This report stated that employment of computer systems administrators was expected to increase by 23 percent from 2008 to 2018. From this 2011 study to present the demand for any IT support type of employees has remained significant. Additional data on workforce demand can be viewed in "Need" question found above in this document.

As with all new programs Gallatin College will be responsible for going into high schools, and introducing the community to this additional offering. Recruiting techniques vary from high schools to adults wanting to train for a new career.

Institutional and System Fit

What is the connection between the proposed program and existing programs at the institution?

There is no connection between the proposed program and any existing programs at Gallatin College or MSU. MSU does have a Computer Science program in the College of Engineering but this offering trains students for very different careers. In this CAS Computer Networking program M 111 and M 121 could both be free electives towards the CS B.S. This first Math course that is required for the CS Bachelor's is M171. COMX 102/WRT 104 could also be electives and WRT 101 is the required in the CS Bachelor's. Gallatin College has presented this proposal to MSU Computer Science faculty, they are in support of the program.

Will approval of the proposed program require changes to any existing programs at the institution?

No

Describe what differentiates this program from other, closely related programs at the institution (if appropriate)

The College of Engineering Computer Science Department offers a Bachelor's degree, a Master's degree, and a Ph.D. degree in Computer Science. The CAS being proposed here focuses on providing technical assistance to users, building and supporting LAN and WAN networks, and setting up hardware and software to support those networks. It does not teach programming and coding in order to engineer new applications. This proposal has been designed so that a properly advised student could take certain math and writing courses that can transfer to a Bachelor in Computer Science if appropriate.

How does the proposed program serve to advance the strategic goals of the institution?

Gallatin College operates under the MSU Strategic Plan and the Comprehensive Two-Year Mission Plan for Gallatin College. Below are the MSU Strategic Plan metrics to which this program will advance institutional goals.

In the MSU Strategic Plan 2012:

- Metric L.2.3: "By 2019, the number of associate degrees conferred will increase from 38 to 70 per year. Workforce certificates conferred will increase from 35 to 65 per year." By offering additional workforce certificate opportunities and utilizing community partners that will support those certificates with employment and student referrals, this program should increase the number of certificates conferred.
- Metric L.3.1: "By 2019, the percent of graduates employed full time in their field or in positions of their choosing will increase from an average of 62 percent to 70 percent. By offering another option for students that are focused on targeted employment opportunities students should be able to better fulfill their employment goals and help MSU meet its goals."

- Metric A.1.5: "By 2019, the number of students enrolled in Gallatin College degree and certificate programs will double to 400." By offering another certificate option to our community we should attract another variety of students, perhaps that we haven't been able to recruit before. If Gallatin College is going to double the amount of students attending more certificates must be added so students can maintain workforce diversity for the local economy.
 - Metric A.2.4: "By 2019, the number of nontraditional students enrolled in MSU undergraduate and Gallatin College programs will increase to 3,200 (a 20 percent increase)." Gallatin College hopes that by offering this AAS in Photonics and Laser Technology, more non-traditional students will have the opportunity to attend college. The college has experienced an increase in nontraditional students with the addition of applied degree programs.
- Gallatin College also operates under a Two-Year Comprehensive Mission Expansion Plan, approved by Board of Regents March 2013. By adding the CAS in Network Technology, the following numbered initiatives will be increased.
- #1. Enrollment and program growth;
 - #3. Increase percentage of regional high school graduates that access Gallatin College through increasing dual enrollment.
 - #5. Develop industry partnerships and meet local workforce demand;
 - #6. Expand short-term workforce training;
 - #8. Prepare students to be career ready.

Describe the relationship between the proposed program and any similar programs within the Montana University System. In cases of substantial duplication, explain the need for the proposed program at an additional institution. Describe any efforts that were made to collaborate with these similar programs; and if no efforts were made, explain why. If articulation or transfer agreements have been developed for the substantially duplicated programs, please include the agreement(s) as part of the documentation.

Every other 2 year college in the state, except Dawson, offers some type of Information Technology programming. Helena College, Missoula College, and Highlands offer an Associate of Applied Science in Network Support and Computer Networking. City College and Great Falls College offer a Certificate of Applied Science in Computer Networking. Gallatin College acknowledges there is duplication across the state. If the need was being met locally there would not be multiple employers requesting this program and continued unfilled openings as pointed out in above labor market data. This is also a support industry that grows alongside other non-computing business growth. Gallatin County is the fastest growing county in the state which means growth in personal home computing, small business computing, and medium business computing is going to continue to grow and have networking needs it is the mission of Gallatin College to plan for and prepare a workforce to meet local demand.

Program Details

<p><u>M 111</u> or <u>M 121Q</u> <u>WRIT 101W</u> or <u>COMX 102/WRIT 104</u></p> <p><u>ITS 140</u> <u>ITS 142</u> <u>ITS 163</u> <u>ITS 150</u> <u>ITS 164</u> <u>ITS 170</u> <u>ITS 218</u> <u>ITS 224</u></p> <p>Total Credits</p>	<p>Technical Mathematics (depending on educational pathway) 3</p> <p>College Algebra</p> <p>College Writing I (depending on educational pathway) 3</p> <p>Interpersonal Skills in the Workplace</p> <p>Course ITS 140 Not Found (CCNA 1-Intro to internetworking and cabling) MUS course 3</p> <p>Course ITS 142 Not Found (CCNA 2 - Intro to IP Routing) MUS Course 4</p> <p>Course ITS 163 Not Found (Operating Systems: Windows/Apple iOS) MUS Course 3</p> <p>Course ITS 150 Not Found (CCNA Exploration) MUS Course 3</p> <p>Course ITS 164 Not Found (Networking Fundamentals) MUS Course 3</p> <p>Course ITS 170 Not Found (Windows Server) MUS Course 3</p> <p>Course ITS 218 Not Found (Network Security) MUS Course 3</p> <p>Course ITS 224 Not Found (Introduction to Linux) MUS Course 3</p> <p>31</p>
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- M 111 Technical Mathematics**
- Utilize and apply mathematical operations, measurement (English and Metric Systems), introductory geometric principles and applied algebra into technical applications in academic and workplace situations;
 - Read, interpret, and produce solutions to applications at the introductory technical mathematics level.
 - Apply ratio and proportion concepts to introductory technical mathematical situations;
 - Apply appropriate technology in a mathematical situation;
 - Determine the validity of results and data,
 - Solve any component of a right triangle with any two components given.
- M 121 College Algebra**
- Use factoring to solve, find zeros or x-intercepts of polynomial, rational polynomial, and algebraic equations or functions.
 - Solve linear, quadratic, and rational exponential and logarithmic equations and be able to use each of these to model and solve applied problems.
 - Solve absolute value equations and inequalities and express solutions of inequalities in interval notation.
 - Identify relations vs. functions; use function notation; identify domain, range, intervals of increasing/decreasing/constant values; algebraically and graphically identify even and odd functions.
 - Find zeros, asymptotes, and domain of rational functions.

- Evaluate and sketch graphs of piecewise functions and find their domain and range.
- Use algebra to combine functions and form composite functions, evaluate both combined and composite functions and their graphs, and determine their domains.
- Identify one-to-one functions, find and verify inverse functions, and sketch their graph.
- Graph linear, polynomial, radical, rational, exponential, logarithmic and circular equations

WRIT 101 College Writing I

- Use writing as a means to engage in critical inquiry by exploring ideas, challenging assumptions, and reflecting on and applying the writing process;
- Read texts thoughtfully, analytically, and critically in preparation for writing tasks;
- Develop multiple, flexible strategies for writing, particularly inventing, organizing, drafting, revising, and copyediting;
- Demonstrate an understanding of research as a process of gathering, evaluating, analyzing, and synthesizing appropriate primary and secondary sources;
- Integrate their own ideas with those of others,
- Formulate an assertion about a given issue and support that assertion with evidence appropriate to the issue, position taken, and given audience,
- Demonstrate proficiency in the use of the conventions of language and forms of discourse, including grammar, syntax, punctuation, spelling, and mechanics;
- Use conventions of format and structure appropriate to the rhetorical situation and audience;
- Develop and organize logical thoughts as a means of building evidence that results in a persuasive argument;
- Understand how to self-edit and appreciate its importance in crafting a professional document.

COMX 102 Interpersonal Communication in the Workplace

Upon completion of this course, a student will be able to:

- Understand the key elements of the communication process;
- Identify the elements of nonverbal and verbal communication and explain their significance in the communication process,
- Describe appropriate business ethics and professional courtesy;
- Identify practical skills geared toward improving communication in the workplace;
- Practice skills in listening reflectively, attentively, and more empathetically.

WRIT 104 Workplace Communications

- Determine audience, purpose, and topic for workplace writing tasks;
- Develop skills in prewriting, organizing, drafting, editing and revising documents;
- Produce and edit short technical documents such as instructions, memos, and incident reports;
- Demonstrate basic competency in the use of grammar, syntax, punctuation, spelling, and mechanics;
- Design and evaluate documents in order to clearly and effectively communicate the message to the intended audience;
- Demonstrate the ability to work individually and in small groups to produce written documents.

ITS 140 CCNA 1: Discovery Introduction to Networking and Cabling : 3 Credits

- Compare and select appropriate internetworking devices to segment networks using the OSI model;
- Design IP addressing schemes using standard subnetting techniques;
- Choose a logical and physical LAN topology to solve networking problems;
- Evaluate networking media, connectors, wiring closets, structured cabling, and patch panels to meet networking requirements,
- Create, construct, and test a network using PC hardware and software, patch cables, installation of structured cabling, and digital test equipment;
- Prepare network documentation;
- Cooperate in engineering teams

ITS 142 CCNA 2: Discovery: Intro to IP Routing

Students will design, build, and maintain small to medium size networks. Basic configuration routers into small networks.

- Understand the structure of the Internet and how communication occurs between hosts;
- Install, configure, and troubleshoot Cisco IOS devices;
- Plan a basic wired infrastructure to support network traffic;
- Configure a server to share resources and provide common web services;
- Implement basic WAN connectivity using Telco services;
- Demonstrate proper disaster-recovery procedures and perform server backups.

ITS 150 CCNA 1: Exploration

- Use network protocol models to explain the layers of communications in data networks;
- Design, calculate, and apply subnet masks and addresses;
- Build a simple Ethernet network using routers and switches;
- Employ basic cabling and network designs to connect devices;
- Use Cisco CLI commands to perform basic router and switch configuration and verification.

ITS 164 Networking Fundamentals

Course Description: This course is an introduction to networking fundamentals with both lecture and hands-on activities. Topics include the OSI model and industry standards, network topologies, IP addressing (including subnet masks), and basic network design.

Concepts are reinforced with lab activities using equipment in live and simulated environments.

Outcomes:

- Define and distinguish network terminology;

- Identify functions of the OSI and TCP/IP reference models and related protocols;
- Define, name, and identify networking media and understand how it is integrated into local area networks (LAN) and wide area networks (WAN);
- Define and describe network hardware including layer 1, 2, and 3 devices;
- Define and describe physical and logical network topologies;
- Define, describe, and apply IP addressing;
- Define subnetting and understand how subnets are calculated and applied;
- Explain the relationship between ports, protocols, and firewall configurations;
- Define and describe network operating systems;
- Define and perform connectivity testing using ping and tracertr
- Perform LAN setup and connectivity testing;
- Perform small WAN setup and testing using static and dynamic routing protocols.

ITS 163 MS Windows Operating Systems: Windows and Apple iOS Smart Phones

- evaluate hardware readiness and capability
- install and configure Windows 8 and migrate user configurations from previous versions of Windows to Windows 8
- install and configure disk drives, and other devices
- install and configure windows store applications
- control access to local hardware and applications
- configure Internet Explorer, Hyper-V Clients, IP settings, and Network Settings
- configure and maintain network security, remote management, remote connection, shared resources, file and folder access, local security settings, authentication and authorization, mobility options, and updates
- manage local data storage and monitor system performance
- configure backup procedures and file recovery options

ITS 170 MS Windows Server 2012

- Be familiar with Microsoft Server 2012 features, capabilities, and installation methods
- Plan server deployments using MMS, WDS, and Windows AIK
- Plan infrastructure services like DHCP and DNS
- Be able to plan, create, and maintain Active Directory services
- Plan, create, and maintain terminal services and basic virtualization via HyperV
- Be able to deploy file, print and FAX services
- Plan server data storage, file permissions, file sharing, etc
- Understand and apply maintenance procedure for high availability, as done with clustering
- Plan, develop and maintain server security and network access
- Secure infrastructure services for remote access and the use of certificates

ITS 215 Network Security

- Describe the security threats facing modern network infrastructures;
- Secure network device access;
- Implement AAA on network devices;
- Mitigate threats to networks using ACLs;
- Implement secure network management and reporting;
- Mitigate common Layer 2 attacks;
- Implement the Cisco IOS firewall feature set;
- Implement the Cisco IOS IPS feature set
- Implement site-to-site IPsec VPN;
- Administer effective security policies

ITS 224 Introduction to Linux

- Explain the history of Linux and Open Source software;
- Define and explain the Linux installation process;
- Install and configure the Linux operating system;
- Understand and configure the Linux boot process and system initialization;
- Students will utilize text editors to examine, monitor, and configure the operating system;
- Demonstrate proficiency with Linux utilities, commands, applications, file system navigation, file
- Develop shell scripts to automate system tasks, backups, and configurations;
- Students will utilize Linux utilities to perform system backup and restore
- Students will install and manage software

Describe the planned implementation of the proposed program, including estimates of numbers of students at each stage.

Gallatin College would like to have this program approved and through the Board of Regents by their March 2016 meeting. Once approved Gallatin College will start approval process for the courses and recruit to hire the Program Director. In May, June and July recruiting and marketing for students and adjuncts will begin. June, July and August will be used to purchase equipment, set up space and solidify curriculum for fall.

For the first fall semester our program goal will be 10 students with an eventual goal of 20 students. Graduation goal of 5 students in May of 2017, 10 students May of 2018, and 15 May of 2019.

Resources

Yes

Will additional faculty resources be required to implement this program?

Please Explain:

Every workforce program at Gallatin College is overseen by a Program Director that has contractual teaching responsibilities of 9-12 credits a semester. Given this model Gallatin College will hire adjuncts to cover 4-6 credits depending on the semester. The primary plan to pay for this funding increase is to utilize the county mill levy funding Gallatin College receives.

Are other, additional resources required to ensure the success of the proposed program?

Yes

Please Explain:

Gallatin College will need to acquire equipment for a lab with appropriate equipment and supplies. Resources for this equipment will come from Perkins funding and county mill levy funding.

Assessment

How will the success of the program be measured?

Program success can be defined by several metrics in two-year education. Are students having a positive learning experience and gaining the skills required to sustain them in industry specific employment. Gallatin College continually assesses these measures and outcomes at the program and course levels. In addition, we will incur annual assessments based on student, employer, and alumni satisfaction feedback. Input provided by Montana Photonics Alliance employers, including feedback provided during Industry Advisory Committee meetings. Student enrollment, graduation rates, and employment trends will be collected, reviewed and analyzed. Appropriate modifications to the program will occur based on the above feedback and data analysis

Process Leading to Submission

Describe the process of developing and approving the proposed program. Indicate, where appropriate, involvement by faculty, students, community members, potential employers, accrediting agencies, etc.

Gallatin College Program Development Manager met with four industry professionals, on several occasions during the writing of this proposal. These professionals all operate their own business in IT support, their academic background ranges from Bachelor to Doctorate degrees in Computer Science. Their work experience includes supporting residential to medium sized employers as an outsourced IT support service. Gallatin College also met with MSU's IT department for feedback on what type of skill set they were looking for when they recruited, and their network specialist have also reviewed the course content. Gallatin College sent this proposal to MSU's Computer Science Department for their input and John Paxton, Ph.D., participated in one industry meeting the summer of 2014. This proposal will be reviewed by MSU's Curriculum and Programs Committee, MSU's Academic Programs Working Group, MSU Faculty Senate, MSU Dean's Council, MUS CAD's, and finally the MUS Board of Regents.

Accreditation Information

Resources

Budget projections for first three years of operation. (revenues and expenditures)

It is projected that start up equipment cost for this program will be under \$70,000. This program will require one additional classroom that will be located off-site at the current Gallatin College East location. Other costs include one full time IT faculty as program director and another NTT faculty.

Institutional support to be provided, including sources of funds:

Funding to start this program will come from the County Mill Levy funding that is provided to Gallatin College and Perkins funding can be directed to equipment and professional development.

Physical facilities and equipment to be provided to the new program, including sources:

The additional classroom will be at Gallatin College East. Currently Gallatin College has a CNC Machine program and is offering its AA/AS courses at Gallatin College East. Gallatin College is already paying for the cost of this space.

Student Services

Capacity of student services to accommodate the change. (if applicable)

No new student services will be required.

Library and Information Resources

Adequacy and availability of required library and information resources:

No new library services or resources will be required.

Additional Information

Additional Information

Supporting Documents
[Item10mp1vc8t-Computer_Network_Technology.docx](#)
[Curriculum/Proposals-Computer_Network_10092015.docx](#)
[AcademicProposalsRequestForm-Computer_Network_Technology.docx](#)

Course Reviewer Comments
z94k447[Fri, 01 Oct 2015 14:49:27 GMT] Added language changes suggested by Dr. John Paxton and Dr. Mike Wittie, *free* electives and required WRIT and M course distinctions.
z94k447[Fri, 06 Nov 2015 18:04:43 GMT] Gallatin College Program Development made changes recommended by Curriculum Planning Committee.
z94k447[Fri, 06 Nov 2015 21:16:13 GMT] Gallatin College Program Development has made changes suggested by Curriculum Planning Committee.
z94k447[Fri, 06 Nov 2015 21:19:11 GMT] Gallatin College has made changes requested by Curriculum Planning Committee.
z94k447[Fri, 06 Nov 2015 21:20:36 GMT] Gallatin College has made suggested changes from Curriculum Planning Committee.

Rev. 1/9

Meeting date

XXX-XXX-XXXX

ITEM

Request for authorization to re-title Montana State University's Computer Science Department as the School of Computing

THAT

Montana State University's Computer Science Department be re-titled as the School of Computing

EXPLANATION

The term **School of Computing** conveys the pervasive nature of computing in today's world much better than the term **Computer Science Department** does. The new title will provide numerous advantages:

- Because the new name better conveys the reality of computing in today's world, it should attract more students to study computing-related topics, providing much needed additional talent to Montana's high tech industry
 - In the future, a School of Computing is well positioned to offer new academic opportunities to students such as a B.A. in Computer Science, a Data Science certificate and/or innovative multidisciplinary courses. This will better prepare students for the variety of computing careers and opportunities that await them.
 - In the future, a School of Computing is well positioned to serve as a connector for researchers with computational needs and researchers with computational expertise. Because research projects increasingly require computational expertise, the MSU and MUS research enterprise can be better served. Important new interdisciplinary, computationally intensive, research hubs on topics such as data science could be located in the School of Computing.
-

ATTACHMENTS

- Attachment #1 - Academic Proposal Request Form
- Attachment #2 - Modified Curriculum Proposal Form
- Attachment #3 - Letter of Support from Lance Fortnow, Chair of the School of Computer Science, College of Computing, Georgia Tech
- Attachment #4 - Letter of Support from the Montana High Tech Business Alliance

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

Item Number: XXX-XXXX-XXXXX Meeting Date: _____
 Institution: Montana State University CIP Code: _____
 Program Title: School of Computing

Please mark the appropriate type of request and submit with an Item Template and any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit the [Academic Affairs Handbook](#).

 A. Notifications:

Notifications are announcements conveyed to the Board of Regents at the next regular meeting.

- 1a. **Placing a program into moratorium** (Document steps taken to notify students, faculty, and other constituents and include this information on checklist at time of termination if not reinstated)
- 1b. **Withdrawing a program from moratorium**
2. **Intent to terminate an existing major, minor, option or certificate – Step 1** (Phase I Program Termination Checklist)
3. **Campus Certificates- Adding, re-titling, terminating or revising a campus certificate of 29 credits or less**
4. **BAS/AA/AS Area of Study**

 B. Level I:

Level I proposals are those that may be approved by the Commissioner of Higher Education. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the Board.

1. **Re-titling an existing major, minor, option or certificate**
2. **Adding a new minor or certificate where there is a major or an option in a major** (Curriculum Proposal Form)
3. **Revising a program** (Curriculum Proposal Form)
4. **Distance or online delivery of an existing degree or certificate program**
5. **Terminating an existing major, minor, option or certificate – Step 2** (Completed Program Termination Checklist)

 Temporary Certificate or AAS Degree Program

Approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the proposal to go through the normal Level II Proposal approval process.

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

C. Level I with Level II Documentation:

This type of proposal may go to the Board as a Level I item if all Chief Academic Officers are in agreement. If consensus among the Chief Academic Officers is not reached, however, the item will go to the Board as a Level II request.

1. Consolidating existing programs and/or degrees (Curriculum Proposal Form)

D. Level II:

Level II proposals require approval of the Board of Regents. These requests will go to the Board in a two-meeting format, the first being as informational and the second as action.

1. Re-titling a degree (ex. From B.A. to B.F.A)

2. Adding a new minor or certificate where there is no major or option in a major (Curriculum Proposal Form)

3. Establishing a new degree or adding a major or option to an existing degree (Curriculum Proposal Form)

4. Forming, eliminating or consolidating a college, division, school, department, institute, bureau, center, station, laboratory or similar unit (Curriculum Proposal Form or Center Proposal Form, except when eliminating or consolidating)

5. Re-titling a college, division, school, department, institute, bureau, center, station, laboratory or similar unit

Specify Request:

Request for authorization to re-title Montana State University's Computer Science Department as the School of Computing.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

1. Overview

Montana State University's Computer Science Department requests authorization to be re-titled as the **School of Computing**.

Note: At Associate Provost Ron Larsen's recommendation, the questions on the Curriculum Proposal Form have been slightly modified to provide supporting information for this request.

2. Provide a one paragraph description. Be specific about what degree, major, minor or options are provided.

The School of Computing will continue to offer the same degrees and options that the Computer Science Department does, namely

- A Ph.D. in Computer Science
- An M.S. in Computer Science
- A B.S. in Computer Science (professional option and interdisciplinary option)
- A non-teaching minor in Computer Science

The School of Computing will continue to serve the same student populations that the Computer Science Department does. According to the Spring 2015 Registrar's Report (Report G, Part A), the Computer Science Department serves 371 CS students (303 undergraduates, 18 post-bacs, 24 master's students and 26 doctoral students). In addition, the CS Department also serves non-majors and other constituents.

3. Need

A. To what specific need is the institution responding by re-titling the Computer Science Department?

We live in a collaborative, interdisciplinary world where computing is pervasive. The term **School of Computing** captures this reality more effectively than the term Computer Science Department. The term School of Computing provides immediate benefits, as well as a shell for future growth and opportunities. Some of the immediate and potential future benefits include

- A more inclusive name will attract more MSU students to study computing. In today's world, a student who gains a richer understanding of computing will benefit both professionally and personally.
- Montana's computing industry, where demand for students with computing skills far exceeds supply, will be better served by having a larger and more diverse computing talent pool. In turn, this will contribute to growth in Montana's economy. A letter of support is attached from the Montana High Tech Business Alliance.
- A more inclusive name will enable our organization to better connect researchers inside and outside of MSU who have either computational needs or computational skills. This will benefit the MUS research enterprise. As one recent example that illustrates the multidisciplinary research potential, two computer science faculty are co-PIs on Barry Jacobsen's recently funded MREDI project entitled *Increasing Profitability by Improving Efficiency of Montana's Farm and Ranch Lands*.
- A School of Computing could house exciting new degrees and educational opportunities. For example, a B.A. in Computer Science fits well into a School of Computing.
- A School of Computing will shine a light on computing minors, attracting more students from other

Montana Board of Regents
CURRICULUM PROPOSAL FORM

majors to acquire computational skills.

- A School of Computing could house exciting new multidisciplinary research hubs in strategic areas such as data science.
- A School of Computing could offer joint appointments to multidisciplinary researchers whose expertise includes computing. Because many faculty have multidisciplinary research interests, this could help MSU attract high caliber faculty members.

Other top universities have recognized the strategic importance of a name that better captures the broad aspects of computing. Here are a few examples:

- The University of Utah has a School of Computing, <http://www.cs.utah.edu/>
- Arizona State University has a School of Computing, Informatics & Decision Systems Engineering, <http://cidse.engineering.asu.edu/>
- Carnegie Mellon has a School of Computer Science, <https://www.scs.cmu.edu/>
- Georgia Tech has a School of Computer Science located in a College of Computing, <http://www.scs.gatech.edu/>. A letter of support is attached from Lance Fortnow, who is chair of Georgia Tech's School of Computer Science.
- Drexel University has a College of Computing & Informatics, <http://drexel.edu/cci/>

B. How will students and any other affected constituencies be served by the re-titling?

Because this is a name change, affected constituencies will continue to be served as before.

C. What is the anticipated demand for degrees offered by a School of Computing? How was this determined?

Since the Computer Science Department already exists, the current demand is known. During Spring Semester 2015, 371 majors and graduate students were served (see response to Question 2 above for more detailed information), as well as non-CS students. Since 2009, nationwide enrollments in Computer Science have grown at a rate of 10%-15% per year, due to the plentiful opportunities for students with computing knowledge. At Montana State University, enrollments have risen from a low of 179 in Fall Semester 2008 to 371 in Spring Semester 2015. These enrollments are projected to continue rising in the foreseeable future and can be accelerated by an organizational name change that better captures both the depth and breadth of computing.

4. Institutional and System Fit

A. What is the connection between the re-titled program and existing programs at the institution?

The School of Computing would replace the Computer Science Department and assumes all of its former functionality.

B. Will approval of the re-titled program require changes to any existing programs at the institution? If so, please describe.

No changes will be required.

C. Describe what differentiates this re-titled program from other, closely related programs at the institution (if appropriate).

Because the School of Computing is a name change for the Computer Science Department, our organization is already differentiated by providing degrees (Computer Science B.S., M.S. and Ph.D.) and opportunities (a CS

Montana Board of Regents
CURRICULUM PROPOSAL FORM

minor, computing coursework, etc.) that other programs do not.

The re-titling signals that beyond the traditional role of a Department in academics and educating students, a School of Computing embraces and expands the role of the University in addressing the needs of our partners in both industry and the public sector. A School of Computing will serve a broader public as they increasingly seek computing-related research and scientific assistance. Developing new partnerships will serve the state of Montana well and will better prepare our students for future employment and other endeavors.

D. How does the re-titled program serve to advance the strategic goals of the institution?

The re-titled program will contribute to several of Montana State University's strategic goals.

- *Learning: MSU prepares students to graduate equipped for careers and further education.* In Montana and nationwide, computer science degrees at all levels are among the most in-demand degrees. In 2015 according to <http://www.forbes.com/sites/susanadams/2014/11/12/top-degrees-for-getting-hired-in-2015/>, Computer Science is the third most demanded undergraduate degree, the second most demanded M.S. degree and the seventh most demanded Ph.D. degree. Longer-term, a School of Computing will explore creating additional degrees (such as a B.A.) and options.
- *Discovery: MSU will raise its national and international prominence in research, creativity, innovation and scholarly achievement, and thereby fortify the university's standing as one of the nation's leading public research universities.* Research increasingly requires computing or data science expertise to be successful. The broader interdisciplinary reach of a School of Computing will help it serve as a connector between researchers with computational needs and researchers with computational expertise. This interdisciplinary reach can help attract high caliber researchers to MSU.
- *Engagement: Members of the Montana State University community will be leaders, scholars and engaged citizens of their local, national and global communities, working together with community partners to exchange and apply knowledge and resources to improve the human prospect.* The broader interdisciplinary reach of a School of Computing will provide more opportunities for engagement with a broader range of constituents.
- *Integration: By integrating learning, discovery and engagement, and by working across disciplines, the MSU community will improve the world.* A School of Computing will be a highly interdisciplinary organization, leading to more opportunities that integrate learning, discovery and engagement.
- *Access: Montana State University is committed to widening access to higher education and ensuring equality of opportunity for all.* The number of students seeking computer science degrees at MSU more than doubled from Fall Semester 2008 to Spring Semester 2015. According to the most recent 2014 Taulbee Survey, <http://cra.org/wp-content/uploads/2015/06/2014-Taulbee-Survey.pdf>, nationwide enrollments in computer science have risen for seven consecutive years and last year rose by 20%. A School of Computing will better serve the rapidly increasing number of students interested in computing. In addition, the interdisciplinary nature of a School of Computing will likely attract more underrepresented populations such as women, who last year earned 14.1% of CS degrees nationwide.

E. Describe the relationship between the re-titled program and any similar programs within the Montana University System. In cases of substantial duplication, explain the need for the proposed re-titling at an additional institution. Describe any efforts that were made to collaborate with these similar programs; and if no efforts were made, explain why. If articulation or transfer agreements have been developed for the

Montana Board of Regents
CURRICULUM PROPOSAL FORM

substantially duplicated programs, please include the agreement(s) as part of the documentation.

There is no other School of Computing in the MUS. However, other Computer Science Departments exist because of the importance of computing knowledge in today's world. Four year degree granting Computer Science Departments can be found at The University of Montana (offering B.S. and M.S. degrees) and Montana Tech (offering a B.S. degree). No new duplication results from the re-titling of Montana State University's Computer Science Department.

5. Re-titling Details

- A. Provide a detailed description of the School of Computing's curriculum. Where possible, present the information in the form intended to appear in the catalog or other publications. **NOTE: In the case of two-year degree programs and certificates of applied science, the curriculum should include enough detail to determine if the characteristics set out in Regents' Policy 301.12 have been met.**

The School of Computing will continue to offer the same computer science degrees and minor that the Computer Science Department currently does. This information already appears in the MSU catalog at the following two URLs: <http://catalog.montana.edu/graduate/engineering/computer-science/> and <http://catalog.montana.edu/undergraduate/engineering/computer-science/>

- B. Describe the planned implementation of the re-titled program, including estimates of numbers of students at each stage.

The name change would take effect for Fall Semester 2016. As of Spring Semester 2015, 371 students are pursuing degrees in Computer Science (see the answer to Question 2 for more details). Given the upward trend over the past seven years, the anticipated number of students pursuing degrees in Computer Science could be 10-20% higher by Fall Semester 2016.

6. Resources

- A. Will additional faculty resources be required to implement this re-titling? If yes, please describe the need and indicate the plan for meeting this need.

No additional faculty resources are required to implement the name change.

- B. Are other, additional resources required to ensure the success of the re-titled program? If yes, please describe the need and indicate the plan for meeting this need.

A School of Computing can absorb the Computer Science Department's current functionality without additional resources.

7. Assessment

How will the success of the re-titled program be measured?

Metrics that can be used to measure the success of a School of Computing include

- Research expenditures
- Range of research collaborators
- New research hubs/centers/institutes that are located in the School of Computing
- Number of students earning the B.S., M.S. and Ph.D. degrees in Computer Science

Montana Board of Regents
CURRICULUM PROPOSAL FORM

- Number of students earning minors in Computer Science
- New curricular and degree opportunities

8. Process Leading to Submission

Describe the process of developing and approving the re-titled program. Indicate, where appropriate, involvement by faculty, students, community members, potential employers, accrediting agencies, etc.

For the past several years, the Computer Science Department has recognized the need for a name that better conveys the broad range of computing to people outside our organization. We have engaged in numerous discussions and solicited feedback by sharing a draft of this document with the following constituents.

- The MSU Computer Science Department's Advisory Board, <http://www.cs.montana.edu/industry-advisory-board.html>.
- The MSU Computer Science Department's faculty and staff, <http://www.cs.montana.edu/personnel.html>.
- The MSU Computer Science Department's M.S. and Ph.D. students.
- The MSU Computer Science Department's undergraduates in our ACM and AWC student clubs.
- The 584 members of the MSU Computer Science Department's LinkedIn Alumni Network.
- Kennig Arlitsch, MSU Dean of the Library.
- King Aytes, MSU Dean of the Jake Jabs College of Business and Entrepreneurship.
- J. C. Braun, outgoing Montana Tech Computer Science Department Head.
- Anne Camper, MSU Associate Dean for Faculty and Administration in the College of Engineering.
- Christine Foreman, MSU Associate Dean for Student Success in the College of Engineering.
- Tomms Gedeon, outgoing MSU Mathematical Sciences Department Head.
- Brett Cunnink, MSU Dean of the College of Engineering.
- Jeff Hoys, MSU Chemical and Biological Engineering Department Head.
- Rob Maher, MSU Electrical and Computer Engineering Department Head.
- Bob Mokwa, incoming MSU Mathematical Sciences Department Head.
- Dan Miller, MSU Mechanical and Industrial Engineering Department Head.
- Donn Raiford, University of Montana Computer Science Department Chair.
- Jerry Sheehan, MSU Chief Information Officer.
- Jerry Stephens, MSU Civil Engineering Department Head.
- Michelle van Dyne, incoming Montana Tech Computer Science Department Head.
- And others.

Montana High Tech Business Alliance
1121 E Broadway St, Suite 108
Missoula, MT 59802
406.552.9157
director@mthightech.org
www.MTHighTech.org



AUGUST 14, 2015

To Whom It May Concern:

The Montana High Tech Business Alliance (MHTBA) is delighted to support the proposal put forth by Montana State University's Computer Science Department to change its name to the School of Computing.

The MHTBA was formed in 2014 and includes more than 200 member companies. The economic growth of our members is hampered by a shortfall of graduates with computing knowledge. A February 2015 study by The University of Montana's Bureau of Business and Economic Research shows that MHTBA members have the capacity to add 400 net new jobs in 2015. Yet, the entire MUS system produced less than 100 computer science graduates in academic year 2014-2015.

An immediate benefit of the name change is that

- Computing is ubiquitous in today's world. The term School of Computing captures both the breadth and depth of computing. In contrast, the term Computer Science Department only captures the technical depth aspect. By changing the name to one that better conveys computing's accessibility, more students will be attracted to learn about computing. This in turn will lead to more students earning in-demand computing degrees, minors and certificates.

After the name change takes place, there are other important long-term benefits that can be realized:

- A School of Computing provides a venue for broader, more multidisciplinary endeavors such as a Data Science Center. In contrast, a Computer Science Department does not. These exciting new opportunities will attract more students to computing. In addition, these opportunities will help recruit quality faculty and broaden the number of potential collaborative researchers.
- A School of Computing provides a venue for broader, more interdisciplinary academic opportunities. For example, a B.A. in Computer Science could be offered by a School of Computing. As another example, a Facebook data mining course could be developed through the School of Computing and jointly taught by a sociologist and a computer scientist. These new academic opportunities will stimulate more students to undertake computing-related degrees, minors and certificates.

In conclusion, a School of Computing will create a virtuous cycle that results in economic growth for the state of Montana. More computing talent will attract more high tech companies to locate in Montana. More high tech companies will provide a broader set of opportunities for employees, attracting even greater numbers of students to computing fields.

Thank you for your consideration of this important proposal.

Sincerely,


Christina Henderson

EXECUTIVE DIRECTOR

August 18, 2015

To whom it may concern:

I strongly support the proposal by MSU Computer Science chair John Paxton and his team to establish a School of Computing at Montana State.

I chair the School of Computer Science at the Georgia Institute of Technology, part of the University System of Georgia. The School of Computer Science sits within a College of Computing, separate from Engineering. The college has three schools, Computer Science, Interactive Computing, and Computational Science and Engineering. We have 35 tenure-track faculty in the School of Computer Science and about 90 overall in the college for approximately 1800 undergraduate majors.

Computer science has grown to be much more than a single discipline. Not only does the field develop the skills to produce computers that are faster, smarter, reliable, secure and smartly connected, computer science also explores how people and society connect with computers as well as the main tools to deal with the enormous growth of data from cloud computing and scientific experimentation and simulations. Virtually every job requires computer skills and having a few computer courses can make an engineer or an English major far more valuable to potential employees. 25 years ago Georgia Tech recognized the value of computing as a discipline worthy of its own college and has become a world leader in the field as a result and drawing industry from start-ups to Fortune 500 companies coming to the Atlanta region.

I had the privilege to visit the Montana State CS department in May and already see recent growth in the city and a synergy between a growing tech industry in Bozeman and the university. I had extensive conversations with John Paxton and several CS faculty and came away impressed with their leadership and vision. The demand in computer science from both industry and students has greatly increased in the past few years and all indications are that they will continue to increase in years to come. Bozeman and the state of Montana cannot continue to increase their high tech presence without a corresponding increase in the talent pool produced from Montana State.

Transitioning the department of computer science at Montana State to a school of computing is the first step in recognizing the value of computer science and computing across the campus, in Bozeman and the whole of Montana.

Sincerely,



Lance Fortnow
Professor and Chair

MONTANA STATE UNIVERSITY
FACULTY HANDBOOK

Policy: Faculty Modified Duties (FMD)

Effective date: TBD

Review date: TBD

Revised:

Responsible Party: Office of Provost

1. INTRODUCTION AND PURPOSE

In recognition of the importance of a healthy integration between work and life, and consistent with the goals of providing classroom continuity and promoting faculty diversity and professional career development and advancement, Montana State University is committed to creating a supportive environment for all faculty, particularly during major life transitions. This policy is intended to provide faculty with some relief from duties in response to significant life events.

2. ELIGIBILITY FOR FMD

All full-time tenure-track/tenured faculty are eligible for FMD when they are the primary care giver related to the following life events:

- a. the birth, adoption, or foster care placement of a child.
- b. the sickness or disability of a family member such as a spouse, parent, live-in partner or child who requires constant care by the primary care giver.

For purposes of this policy, a primary care giver can be a parent, a legal guardian, a live-in partner or a spouse by marriage. The primary care giver is the person who has primary responsibility for the care of a child, sick or disabled family member.

Human Resources will determine what medical documentation may be required to verify a family member's health condition and subsequent eligibility for modified duties.

3. MODIFICATION OF FACULTY DUTIES

- a. FMD is intended to assist faculty experiencing major life transitions by providing a release from teaching or other appropriate duties for up to one semester without a reduction in pay and without an expectation of enhancement of other duties. Modifications may include a release from a portion of or all teaching duties for all or part of a semester, and/or an adjustment to the faculty member's service and/or research expectations.

- b. If the modification of duties takes the form of a complete or partial release from teaching, the modification shall, when possible, be arranged to coincide with the semester calendar (or appropriate teaching module in effect in the faculty member's unit) to ensure classroom continuity and to minimize disruptions for students as much as possible.
- c. If a foreseeable event such as the birth or adoption of a child or major surgery will occur during the last six weeks of a semester, the faculty member may request modified duties for either the semester during which the event occurs or the following semester.
- d. The period of modified duties must begin within twelve months of the date of the triggering event.

4. PROCESS FOR FMD

- a. A faculty member seeking modified duties shall inform his/her department head at least three months prior to the semester in which the modified duties will be applied or as early as is practical depending on the nature of the triggering event.
- b. The faculty member, department head and dean shall work together to set the terms of the modified duties.
- c. The FMD shall not release the faculty member from more than 50% of the faculty member's normal work load for the academic year.
- d. If the faculty member seeks a full release from teaching for a semester, and the faculty member normally teaches an uneven load from semester to semester (e.g. 1-2, or 2-3), it is permissible for the dean and department head to shift the faculty member's course load so that the release from teaching applies to the lower course load.
- e. The department head shall issue a memorandum of understanding establishing the expectations for the semester in which the modified duties occur. The annual review shall be based upon the modified duties only and the duties excused will not be included in the review.
- f. The department head shall complete the request for FMD [insert link] and submit it to the dean and provost for approval.
- g. The period of modified duties is not a leave of absence. Faculty members with modified duties status will be relieved of some responsibilities but will be expected to perform the responsibilities that have been identified as remaining.
- h. No faculty member shall experience reprisal for exercising the right to faculty modified duties.
- i. Faculty Modified Duties (FMD) is NOT an employee benefit or leave as defined under the Family Medical Leave Act (FMLA). Furthermore, modification of duties under this policy does not preclude or require use of other defined benefits, such as sick leave, nor modification of

duties mutually arranged by faculty and the Department Head without opting for FMD.

5. FMD POOL

The university will provide a pool for funding faculty modified duties. Where and when possible, the funding will be applied so that FMD in any unit:

- a. results in hiring of faculty to replace necessary teaching responsibilities;
- b. does not result in cancellation of required classes;
- c. does not result in an increased teaching load for any unit faculty, unless by volition.

6. OTHER RESOURCES

A period of modified duties does not affect a faculty member's tenure review date; however, the faculty member is entitled to certain automatic and requested extensions of the tenure review period as outlined in the Extending Tenure Review Period [\[insert link\]](#) policy.

These guidelines do not take the place of policies and other resources that may be appropriate including reasonable accommodation, parental and maternity leave, sick leave, family medical leave, disability benefits or other leave processes available to faculty. Questions regarding benefits and leave policies should be directed to Human Resources.

MONTANA STATE UNIVERSITY
FACULTY HANDBOOK

Policy: Extending the Tenure Review Period

Effective date: TBD

Review date: TBD

Revised:

Responsible Party: Office of Provost

1. Introduction and Purpose

The university recognizes the importance of a healthy integration of work and life, and consistent with the goals of promoting faculty diversity, and professional career development and advancement, Montana State University is committed to creating a supportive environment for all faculty, particularly during major life transitions. This policy is intended to establish the guidelines for the extension of a faculty member's tenure review period at Montana State University.

2. Extending the Tenure Review Period

The tenure review period is the time between the date of hire and the date of tenure review established at the time of hire in the faculty member's letter of hire. This period may be extended as outlined in this policy, through either the automatic extension process or a requested extension process, provided that no combination of extensions may be granted for more than three (3) years total per faculty member.

3. Automatic Extension of the Tenure Review Period

The tenure review period is extended automatically for one year for the following reasons:

- a. Childbirth, adoption or placement of a foster child in the home (applicable to both parents).
- b. Serious illness [insert link] of the faculty member, his or her child, foster child, spouse, domestic partner, parent or other individual for whom the faculty member serves as a primary caregiver or legal guardian.

- c. Death of a child, foster child, spouse, domestic partner or parent or other individual for whom the faculty member serves as a primary caregiver or legal guardian.
- d. Full-time military service.

Each faculty member is entitled to one automatic extension of either the retention or tenure review.

4. Automatic Extension of the Retention or Tenure Review Period

When a faculty member notifies the department head about an event described in Section 3, the department head is responsible for informing the faculty member, the dean and provost that the retention and/or tenure review period will automatically be extended by one academic year. Notification must be made no later than 12 months after the event.

The provost's office will notify the faculty member and department head of the faculty member's revised retention and/or tenure review date. The faculty member may opt out of that extension any time before March 30 prior to the designated academic year of review.

If the automatic extension is for a serious illness of the faculty member or other family member, the university may request documentation of the serious illness.

If the faculty member qualifies for the automatic extension of the retention review, both the retention and tenure review periods are extended. If the automatic extension is granted after retention, only the tenure review date is extended.

5. Requested Extension of the Tenure Review Period

Any faculty member may request a one academic year extension of his or her retention or tenure review period for unanticipated circumstances that significantly limit the faculty member's available time to devote to teaching, research and service other than an event listed in section 3. Such circumstances may include administrative or special assignment given by the University or similar unanticipated circumstances that significantly limit the faculty member's available time to devote to teaching, research and service.

A faculty member who has had an automatic extension may also request an additional extension of his or her review period for an event listed in Section 2.

6. Process for Requesting Extension

A faculty member may request a one academic year extension of his or her retention or tenure review period by submitting a written request to the department head as soon as possible after the need for the extension arises. The request must be submitted no later than 12 months after the need arises or by March 30th in the year prior to the designated academic year of review, whichever is earlier.

The extension of the designated tenure review date must be approved in writing by the department head, the dean and the provost. If approved, the provost's office will notify the faculty member and department head of the faculty member's revised retention and/or tenure review date.

If the faculty member is approved for the extension under this section before the retention review, both the retention and tenure review periods are extended. If the extension is approved after retention, only the tenure review date is extended. Approval of an extension does not preclude any faculty member from seeking retention or tenure on a date earlier than the extended review date.

7. Standards for Review of Faculty Receiving Extension.

When a faculty member extends his or her review date, the standards for review are the same as if he or she had not received an extension and the extension does not increase the expectations of performance for that faculty member. When a faculty member is being reviewed for tenure, the letter soliciting evaluations from external reviewers should explicitly state that the candidate received an extension under university policy. The letter should further state that the policy of the university is to evaluate the productivity of each candidate who has been granted an extension as if he or she had been in probationary status for the normal duration, so that the candidate is not penalized for having received the extension.

To be included in definition section

SERIOUS ILLNESS

A "serious illness" is an illness, injury, impairment or physical or mental condition that significantly limits the faculty member's available time to devote to teaching, research and service.