Biocomputation Track Proposal

Notes:
- This proposal adjusts the current BMC Informatics track to satisfy the new CS major requirements (assuming SoE unit allocation currently given to BMC). It also redefines more of the Biocomputation electives toward general CS or BMC Informatics electives.

Math Requirements (23 units) – (1 course less than CS)
- Math 41
- Math 42
- CS Theory I: Discrete Math
- CS Theory II: Probability for Computer Scientists
- One of: Stat141, Stat203, Stat205, Stat215, Stat225

Science Requirements (22 or 26 units) – (2-3 courses/11-15 units more than CS)
- Physics 41
- Chem 31A/B or 31X
- Chem 33
- Bio41, 42 or HumBio2A, 3A

Engineering Fundamentals (8 units) – (1 course (E40)/5 units less than CS)
- CS106B/X (CS Systems I)
- Elective

Technology in Society – Same as CS
- One course

CS Core – Same as CS
- CS Systems II (CS107)
- CS Systems III
- CS Theory III (CS161)

Biocomputation Track (10-11 units)
a) Any one of: CS121, CS221, CS228, CS229, CS223B
b) Any one of: CS270, CS273A, CS274, CS275, CS278, CS279, CS262
c) Any one additional course from categories (a) or (b) above, or from the following: CS145, CS147, CS148 or CS248

Four Biocomputation Electives (12-13 units) – Note: Some of these are different than CS electives
- One course from either the general CS elective or BMC Informatics elective list
- One course from the BMC Informatics elective list
- One course from either the BMC Informatics, BMC Cell/Mol, BMC Organs elective list
- One course from either the BMC Cell/Mol or BMC Organs elective list

Senior Project (3 units)
- CS191/191W Research Project

Comparison with "standard" CS program structure:

Standard CS Track Model:

26 units	Mathematics (includes Theory I & II)
11 units	Science
13 units	Engineering Fundamentals (includes Systems I)
15 units	Core courses (Theory III and Systems II & III)
25 units	Upper division (track and electives)
3 units	Senior project
93 units	TOTAL

Biocomputation in CS Track:

23 units	Mathematics (includes Theory I & II)
22-26 units	Science
8 units	Engineering Fundamentals (includes Systems I)
15 units	Core courses (Theory III and Systems II & III)
22-24 units	Biocomputation track/electives
3 units	Senior project
93-99 units	TOTAL