To be Adopted:

Proposed Changes in Course Requirements for the Bachelor of Arts and Bachelor of Science Degrees in Biology

Present

MAJOR REQUIREMENTS

Some of the following requirements for the major in Biology may also fulfill the College's breadth requirements. Consult with a department advisor for course planning.

1. Life sciences core curriculum (65-69 units)
   a) BIOL 005A, BIOL 005B, BIOL 005C
   b) CHEM 001A-CHEM 001B-CHEM 001C
   c) CHEM 112A-CHEM 112B-CHEM 112C
   d) MATH 009A-MATH 009B
   e) PHYS 002A-PHYS 002B-PHYS 002C, PHYS 02LA-PHYS 02LB-PHYS 02LC
   f) One course from STAT 020, STAT 100A, STAT 105, or STAT 120A
   g) One course from BCH 100 or BCH 110A

The core curriculum must be completed with a grade point average of 2.0 or better and no grade lower than "C-." If a grade of D or F is received in two core curriculum courses, either in separate courses or repetitions of the same course, the student will not be permitted to continue in the major.

2. Upper-division requirements (36 units)
   a) BIOL 102
   b) Thirty-two (32) additional Biology units to be taken in consultation with a faculty advisor.

3. Other requirements
   For the Bachelor of Arts only (0-16 units):
       The foreign language requirement may be fulfilled by completing level four or the demonstration of equivalent proficiency in one foreign language.
   For the Bachelor of Science only (16 units):
       An additional 16 units in upper-division biology courses and/or substantive courses in a field or fields related to the major.

Proposed

MAJOR REQUIREMENTS

Some of the following requirements for the major in Biology may also fulfill the College's breadth requirements. Consult with a department advisor for course planning.

1. Biology core curriculum (65-69 units)
   a) BIOL 005A, BIOL 05LA, BIOL 005B, BIOL 005C
   b) CHEM 001A-CHEM 001B-CHEM 001C
   c) CHEM 112A-CHEM 112B-CHEM 112C
   d) MATH 009A-MATH 009B
   e) PHYS 002A-PHYS 002B-PHYS 002C, PHYS 02LA-PHYS 02LB-PHYS 02LC
   f) One course from STAT 100A, STAT 105, or STAT 120A
   g) One course from BCH 100 or BCH 110A

The core curriculum must be completed with a grade point average of 2.0 or better and no grade lower than "C-." If a grade of D or F is received in two core curriculum courses, either in separate courses or repetitions of the same course, the student will not be permitted to continue in the major.

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JUSTIFICATION:

The inclusion of BIOL 05LA is contingent on approval of the request to separate BIOL 005A into lecture (BIOL 005A) and laboratory (BIOL 05LA) segments.

The Department of Biology proposes to delete STAT 20, Statistics for the Life Sciences (lecture, 2 units), as an option for completion of the statistics core requirement for the Biology major. Regulations for the College of Natural and Agricultural Sciences require a statistics course included in the core curriculum, but the choice of courses is left to the discretion of the departments and programs sponsoring the majors.

1. STAT 20 does not include a computer lab and has only two hours of lecture. If it is deleted as an option, most students in the Biology major will take a more substantial course, STAT 100A, Introduction to Statistics (5 units), during their freshman or sophomore year. This course has lecture (3 hours), discussion (1 hour), and computer lab (3 hours). While all these statistics courses include problem sets, the computer lab with a Teaching Assistant or other assistance should be helpful, especially for the lower division students who will take STAT 100A as part of the core requirement.

2. Most upper division biology courses require one statistics course as a prerequisite. Since STAT 100A only has MATH 5 as prerequisite, students should be able to complete STAT 100A during the freshman or sophomore year, and thus be eligible for upper division biology courses if the other core requirements are completed or nearly so.

3. STAT 100A is applicable to the Related Areas requirement (B.S. degree) for the Biology major, so students complete five units in this category when they complete their core statistics requirement. For this reason, many Biology majors now complete STAT 100A rather than STAT 20, and some continue with STAT 100B for five additional Related units.

4. STAT 120A-120B, Experimental Techniques for Biologists (4 units each), is considered an in-depth course for upper division students. Those with STAT 100A are not precluded from receiving credit for STAT 120A, and the latter course will remain a core statistics option for Biology majors.

5. Biomedical Sciences students complete STAT 105, Statistics for Biomedical Sciences (2 units), in the Fall Quarter of their sophomore year. Those who transfer earlier into the Biology major will be required to take STAT 100A or STAT 120A. Those who transfer after taking STAT 105 will have completed their core requirement, but probably should be advised to take additional statistics if they plan a career that includes science research.

6. Deletion of STAT 20 will clarify our statistics requirement in the articulation agreements with the community colleges. They apparently have statistics courses with business but not biological examples. With deletion of STAT 20, community college biology students will be advised to delay taking statistics until they arrive at UCR. Courses equivalent to STAT 20, 40 and 48 will not be accepted in satisfaction of the core statistics requirement for the Biology major.