Program Proposal
Form B

<table>
<thead>
<tr>
<th>Academic Group (College): Natural Sciences and Mathematics</th>
<th>Date of Submission to College Dean: March 14, 2011</th>
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<tbody>
<tr>
<td>Academic Organization (Department): Biological Sciences</td>
<td>Requested Effective: Fall X__, Spring ____, 2011</td>
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<tr>
<td>Department Chair: Rose Leigh Vines</td>
<td>Contact if not Department Chair: Shannon Datwyler</td>
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<tr>
<td>Title of the Program (Please be specific; indicate minor, undergraduate or graduate degree, etc.): Bachelor of Science in Biological Sciences, Biomedical Sciences concentration</td>
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Type of Program Proposal:

- X Modification in Existing Program:
  - Substantive Change
  - X Non-Substantive Change (in Concentration)
  - Deletion of Existing Program

- New Programs
  - Initiation (Projection) of New Program on to Master Plan
  - New Degree Programs
    - Regular Process
    - Fast Track Process
    - Pilot Process
  - New Minor, Concentration, Option, Specialization, Emphasis
  - New Certificate Program

PLEASE NOTE: Form B is to be used only as a Cover Form. Additional information is requested for each of the above as noted in the corresponding procedure in the Policies and Procedures for Initiation, Modification, Review and Approval of Courses and Academic Programs found at http://www.csus.edu/umanual/acad.htm

Briefly describe the program proposal (new or change) and provide a justification.

*We are proposing changes to the following degree programs:*

- B.S. in Biological Sciences.
  - Biomedical Sciences concentration: two non-substantive editorial changes in the numbers of additional required and elective units within the concentration

*Justification:* See attached page

Approvals:

Department Chair: Rose Leigh Vines  
Date: 3/14/11

College Dean:  
Date: 3/12/11

University Committee:  
Date:  

Associate Vice President and Dean for Academic Affairs:  
Date:  

09/10/2008
B.S. in Biological Sciences, Biomedical Sciences Concentration

Justification:

In the recent revision of the B.S. in Biological Sciences, Biomedical Sciences concentration, two editorial errors were made. One is in "A. Required Courses," which should read **24 units** instead of 27 units. Students in the Biomedical Sciences concentration must take CHEM 24 and CHEM 124 instead of CHEM 20, which was already listed and counted in the Required Lower Division Coursework. We have added language to the "*Note*" to better clarify the substitution.

The second change is in "B. Elective Courses." The third bullet in that section should have read: "Additional electives selected in consultation with an advisor to total **13 upper division elective units.**" Currently, it reads: "Additional electives selected in consultation with an advisor to total 9 upper division elective units." We are proposing to change the 9 upper division units to 13 upper division units in the revision.

The total units in the major do not change with both of these numerical corrections.
## New Program

### Biomedical Sciences (37 Units*)
The concentration in Biomedical Sciences is designed to prepare students for graduate study in the physiological and anatomical sciences or for health professional training (Medical, Veterinary, Physical Therapy, Nursing, Pharmacy, or other health professions).

**A. Required Courses (24 Units*)**

- **(4) BIO 22** Introductory Human Anatomy (One of the following: BIO 1, BIO 2, BIO 10 or BIO 20)
- **(3) BIO 121** Molecular Cell Biology (BIO 1 and BIO 2)
- **(4) BIO 131** Systemic Physiology (BIO 1, BIO 2, BIO 10, BIO 20, or BIO 22 and one year of college chemistry)
- **(4) BIO 139** General Microbiology (BIO 10 or BIO 20 or both BIO 1 and BIO 2; CHEM 6B, CHEM 20 or CHEM 24)
- **(3) CHEM 24** Organic Chemistry Lecture I (CHEM 1B) (In lieu of CHEM 20*)
- **(3) CHEM 25** Organic Chemistry Laboratory (CHEM 24)
- **(3) CHEM 124** General Biochemistry (CHEM 20 or CHEM 124; one year of biological science is recommended)

*Note: Students in the Biomedical Sciences concentration must take CHEM 24 and CHEM 124 instead of CHEM 20. Therefore, the 24 total units of Required Courses does not include CHEM 24.

**B. Elective Courses (13 Units)**

- 3 Units from Elective List 1 (Structure and Function Electives)
- 3 Units from Elective List 2 (Ecology, Evolution and Biodiversity Electives)
- Additional electives selected in consultation with an advisor to total 13 upper division elective units.

## Old Program

### Biomedical Sciences (37 Units)
The concentration in Biomedical Sciences is designed to prepare students for graduate study in the physiological and anatomical sciences or for health professional training (Medical, Veterinary, Physical Therapy, Nursing, Pharmacy, or other health professions).

**A. Required Courses (27 Units)**

- **(4) BIO 22** Introductory Human Anatomy (One of the following: BIO 1, BIO 2, BIO 10 or BIO 20)
- **(3) BIO 121** Molecular Cell Biology (BIO 1 and BIO 2)
- **(4) BIO 131** Systemic Physiology (BIO 1, BIO 2, BIO 10, BIO 20, or BIO 22 and one year of college chemistry)
- **(4) BIO 139** General Microbiology (BIO 10 or BIO 20 or both BIO 1 and BIO 2; CHEM 6B, CHEM 20 or CHEM 24)
- **(3) CHEM 24** Organic Chemistry Lecture I (CHEM 1B) (In lieu of CHEM 20)
- **(3) CHEM 25** Organic Chemistry Laboratory (CHEM 24)
- **(3) CHEM 124** General Biochemistry (CHEM 20 or CHEM 124; one year of biological science is recommended)

*Note: Students in the Biomedical Sciences concentration must take CHEM 24 and CHEM 124 instead of CHEM 20. ++++++++ ++++++++++++++++++++++++++++++++++++++++++++++++++++

**B. Elective Courses (13 Units)**

- 3 Units from Elective List 1 (Structure and Function Electives)
- 3 Units from Elective List 2 (Ecology, Evolution and Biodiversity Electives)
- Additional electives selected in consultation with an advisor to total 9 upper division elective units.