



SOUTH DAKOTA BOARD OF REGENTS
ACADEMIC AFFAIRS FORMS
 New Course Request

USD	Biology	
Institution	Division/Department	
<i>Elizabeth M. Freeburg</i>		3/20/2017
Institutional Approval Signature		Date

Section 1. Existing Course Title and Description

Prefix & No.	Course Title	Credits
BIOL 769	Programming for Biology	3

Course Description

This course introduces the programming languages Python, object-oriented Python, and Biopython and presents how to program in bioinformatics. Topics to be covered include: data types, operators, control structures, functions, regular expressions, files and directories, references, report writing, object-oriented programming, classes, and utility programs for analysis and interpretation of biological structures and data.

Pre-requisites or Co-requisites N/A

Registration Restrictions N/A

Section 2. Review of Course

2.1. Was the course first offered as an experimental course?

- Yes (*if yes, provide the course information below*) No

2.2. Will this be a unique or common course (*place an "X" in the appropriate box*)?

Unique Course

Prefix & No.	Course Title	Credits
BIOL 520	Introduction to Biostatistics and Computational Biology	3
BIOL 720	Biostatistics	3

Provide explanation of differences between proposed course and existing system catalog courses below:

The proposed course focuses on introducing programming skills that are useful in bioinformatics. The existing courses BIOL 520 and BIOL 720 emphasize introductory statistical knowledge, not bioinformatics as proposed here. Furthermore; the proposed course will use Python as the programming language, while the existing courses BIOL 520 and BIOL 720 use R as the computing language.

Section 3. Other Course Information

3.1. Are there instructional staffing impacts?

- No.** Schedule Management, explain below: Will be taught by existing faculty member as part of load.

3.2. Existing program(s) in which course will be offered: Graduate Programs in Biology

- 3.3. Proposed instructional method by university: R-Lecture
- 3.4. Proposed delivery method by university: 001-Face-to-face
- 3.5. Term change will be effective: Fall 2017
- 3.6. Can students repeat the course for additional credit?
 Yes, total credit limit: _____ No
- 3.7. Will grade for this course be limited to S/U (pass/fail)?
 Yes No
- 3.8. Will section enrollment be capped?
 Yes, max per section: 15 No
- 3.9. Will this course equate with any other unique or common courses in the common course system database in Colleague and the [Course Inventory Report](#)?
 Yes No
- 3.10. Is this prefix approved for your university?
 Yes No

Section 4. Department and Course Codes (Completed by University Academic Affairs)

- 4.1. University Department Code: UBIOL
- 4.2. Proposed [CIP Code](#): 26.1103 Bioinformatics

Is this a new CIP code for the university? Yes No