



SOUTH DAKOTA BOARD OF REGENTS
ACADEMIC AFFAIRS FORMS
 New Course Request

USD

Arts & Sciences / Biology

Institution

Division/Department

Elizabeth M. Freeburg

03/20/2017

Institutional Approval Signature

Date

Section 1. Course Title and Description

Prefix & No.	Course Title	Credits
BIOL 725	Integrative Organismal Biology	3

Course Description

This course focuses on the organism as the integrative unit of life which coordinates diverse inputs ranging from molecular to environmental. Concepts covered will address how genomic and epigenetic variation, genetic and physiological regulatory networks, and environment interact to produce the phenotypic variability that drives evolution.

Pre-requisites or Co-requisites (add lines as needed) N/A

Registration Restrictions N/A

Section 2. Review of Course

2.1. Was the course first offered as an experimental course? No

2.2. Will this be a common or unique course?

Unique Course

Prefix & No.	Course Title	Credits
BIOL 710	Population/Quantitative Genetics	3

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

Course description: Students will learn to integrate and apply methods of molecular genetics to the broader analysis of populations, understanding evolutionary processes, primary forces that shape genetic variation in natural populations, and continuously varying traits.

BIOL 710 focuses on populations of organisms, while the focus of the proposed BIOL 725 is on the individual organism and how its phenotype expresses the integration of multiple signals from the environment and the genome.

Prefix & No.	Course Title	Credits
BIOL 574	Ecological Genomics	3

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

Course description: An introductory course for graduate students that identifies the organisms and areas in ecology and evolutionary ecology that link best to genomics and specifically functional genomics, the branch of genomics that determines the biological function of genes and their products. Molecular techniques, databases, and analysis of genomic data are discussed. Students are required to have taken a genetics course prior to enrollment.

BIOL 574 is an introductory graduate course on functional genomics. Although ecological and evolutionary ecology are mentioned, the main focus is on studying the specific functions of genes and their products. There is no explicit focus on the organism as the integrative unit of life.

Section 3. Other Course Information

3.1. Are there instructional staffing impacts?

No. Schedule Management, explain: Course will be taught with current faculty.

3.2. Existing program(s) in which course will be offered: Ph.D. in Biological Sciences

3.3. Proposed instructional method by university: D-Discussion/Recitation

3.4. Proposed delivery method by university: 001 Face-to-face Term Based Instruction

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: Sections capped at 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](#): 26.0901

Is this a new CIP code the university?

Yes No