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|  | **SOUTH DAKOTA BOARD OF REGENTS**  ACADEMIC AFFAIRS FORMS |
| Revisions to General Education Requirements |
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Use this form to request any change to the General Education Requirements specified in Policies 2:7 – Baccalaureate General Education Curriculum and 2:26 – Associate Degree General Education Requirements. This includes any changes to the System General Education Requirements, Institutional Graduation Requirements, Globalization/Global Issues Requirement, and Writing Intensive Requirement.

**NOTE: This process does not include approval for the development of a new course. If the proposal does include the development of a new course, the new course process must be completed before the course will be considered for inclusion in any set of the General Education Requirements**

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| DSU |  | Arts & Science |  | *Dr. Mark Spanier* |  | | 10/23 |
| Institution |  | Division/Department |  | Institutional Approval Signature |  | Date | |
|  |  |  |  |  |  |  | |
|  |  |  |  |  |  |  | |
| Institution |  | Form Initiator |  | Dean’s Approval Signature |  | Date | |
|  |  |  |  |  |  |  | |
| DSU |  |  |  | A picture containing text  Description automatically generated |  | 10/23 | |
| Institution |  | Division/Department |  | Institutional Approval Signature |  | Date | |

**Indicate (X) the component of the General Education Curriculum that the proposal impacts.**

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| --- | --- |
| **X** | System General Education Requirements |

**Indicate (X) the revision(s) that is being proposed (more than one may be checked).**

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|  | Revision to an approved course |
| **X** | Addition of a course to the set of approved courses |
|  | Deletion of an approved course from the set of approved courses |

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| **Section 1. Provide a Concise Description of the Proposed Change** |
| DSU is proposing to add BIOL 211/211L Environmental Biology to the approved list of courses or Goal 6 Natural Sciences. BIOL 211/211L is currently on the list being offered by NSU. With the universities’ goal to increase students in the Cyber Operations and Network Security Administration majors, this added course will be of interest to these students. |
| **Section 2. Provide the Effective Date for the Proposed Change** |
| Fall 2024 |

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| **Section 3. Provide a Detailed Reason for the Proposed Change** |
| NA |

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| **Section 4. Provide Clear Evidence that the Proposed Modification will Address the Specified Goals and Student Learning Outcomes** |
| See attached syllabus |

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| **Section 5. Provide a Copy of all Course Syllabi and Other Supporting Documentation** |
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COURSE SYLLABUS

# Course Prefix, Number, and Title

BIOL 211 and BIOL 211L Environmental Biology

Lecture and Laboratory

# Credits: 3 credit hours

# University Name: Dakota State University

# Academic Term/Year Fall 2024

## Last date to Drop and receive 100% refund

## Last date to Withdraw and earn a grade of 'W'

# Course Meeting Time and Location

Lecture: Monday and Wednesday 9-9:50 am SC

Laboratory: M 1:00-2:50pm SC

**Instructor Information Name**

Kristel Bakker, Ph.D.

## Office: SC 146G

## Phone Number(s): 605-679-7662

## Email Address: Kristel.bakker@dsu.edu

## Office Hours

# Approved Course Description

## Catalog Description

This course examines historic and current environmental issues, including how humans impact the environment and ways we can minimize that impact. Select topics include air and water pollution, climate change, population growth, maintaining biodiversity, energy resources, and waste management.

BIOL 211L: Laboratory component to BIOL 211.

## Additional Course Information

none

# Prerequisites

## Course Prerequisite(s)

None

## Technology Skills

Powerpoint, SimBiotic computer simulations, d2l, word, excel.

# Student Learning Outcomes

GOAL #6: Students will understand the fundamental principles of the natural sciences and apply scientific methods of inquiry to investigate the natural world.

Student Learning Outcomes: As a result of taking courses meeting this goal, students will:

1. Explain the nature of science including how scientific explanations are formulated, tested, and modified or validated.

Assessment:

A. Define problems, form a hypotheses, design and complete experiments and graph experimental results as demonstrated through laboratory exercises, reports, and quizzes.

B. Use the methods and process of scientific inquiry to solve problems as demonstrated through exams, quizzes, writing assignments, laboratory exercises and reports.

C. Research selected problems and apply them to real-world situations as demonstrated through writing assignments.

2. Apply basic observational, quantitative, or technological methods to gather and analyze data and generate evidence-based conclusions in a laboratory setting.

Assessment:

A. Define problems, form a hypotheses, design and complete experiments and graph experimental results as demonstrated through laboratory exercises, reports, and quizzes.

B. Acquire skills in the use of basic laboratory equipment as demonstrated through laboratory exercises and reports.

C. Develop tools for creative problem solving by integrating concepts with hands-on laboratory experience as demonstrated through laboratory exercises, reports, quizzes and exams.

3. Understand and apply foundational knowledge and discipline-specific concepts to address issues, solve problems, or predict natural phenomena.

Assessment:

A. Develop an understanding of the key concepts, nature, processes, and terminology of biology as demonstrated through quizzes, exams, assignments, laboratory exercises, and laboratory reports.

B. Research selected issues, link them to the basic concepts and theories of biology and apply them to real-world situations as demonstrated through bioawareness activities and in class assignments.

4. Distinguish between scientific and non-scientific evidence and explanations, and use scientific evidence to construct arguments related to contemporary issues.

Assessments:

A. Summarize the role, place, and interactions of human beings in the biosphere as demonstrated through writing assignments, and exams.

B. Research selected issues, link them to the basic concepts and theories of biology and apply them to real-world situations as demonstrated through in class assignments.

# Course Materials

## Required Textbook(s)

Cunningham, W. and M. Cunningham. 2023. Environmental Science: A Global Concern. 16th Edition. McGraw Hill. (FIRST DAY ACCESS)

## Required Supplementary Materials

SimBiotic computer simulations (no purchase necessary).

The laboratory manual will be available on d2l

## Optional Materials

<< Optional materials >>

# Course Delivery and Instructional Methods

Environmental Biology is an interactive participatory course. Emphasis will be placed on fostering an atmosphere of discussion and cooperative interaction. Lectures will include exploratory assignments that involve the use of computer technology. The laboratory is hands-on with an emphasis on using an investigative approach that is, where practical, inquiry based and research oriented.

# Communication and Feedback

## Preferred Email Contact Method

Kristel.bakker@dsu.edu

## Email Response Time

I generally respond to email messages within 24 hours. Response time may be a little longer on weekends and holidays.

## Feedback on Assignments

Assignments will be returned within one week of the assignment's due date. When I cannot meet that deadline, I will notify you with an alternative timeline.

## Requirements for Course Interaction

Respectful communication from student to student, student to instructor and instructor to student is required for this course. Students are expected to ask questions and otherwise participate during class.

# Evaluation Procedures

## Assessments

Lecture Exams (3) 300

Final Exam 100

In class assignments 100\*

Laboratory:

Quizzes, Exercises, Graphs, Simulations 300\*

Total 700\*

\*subject to change to better meet the needs of the students.

## Final Examination

## Performance Standards and Grading Policy

Grading Scale:

90-100% A

80-89% B

70-79% C

60-69% D

0-59% F

Tentative Course Outline and Schedule\*

\*Subject to change to better meet the needs of the students.

**Lecture:**

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| --- | --- | --- |
| **Week of:** | **Lecture Topic** | **Text Reading** |
| **Part I** |  |  |
| Aug. 19 | Understanding our Environment | Chapter 1 |
| Aug. 26 | Principles of Science and Systems | Chapter 2 |
| Sept. 2 | Matter, Energy, and Life | Chapter 3 |
| Sept. 9 | Evolution, Biological Communities, and Species Interactions | Chapter 4 |
| Sept. 16 | Evolution, Biological Communities, and Species Interactions |  |
| Sept. 23 | Biomes: Global Patterns of Life | Chapter 5 |
| Sept. 25 | **EXAM I** |  |
| **Part II** |  |  |
| Sept. 30 | Population Biology and Human Populations | Chapter 6, 7 |
| Oct. 7 | Population Biology and Human Populations |  |
| Oct. 16 | Environmental Health and Toxicology | Chapter 8 |
| Oct. 21 | Environmental Health and Toxicology |  |
| Oct. 28 | Air and Water Pollution | Chapter 16, 18 |
| Nov. 4 | Air and Water Pollution |  |
| **Nov. 6** | **EXAM II** |  |
| **Part III** |  |  |
| Nov. 13 | Climate Systems and Climate Change | Chapter 15 |
| Nov. 18 | Preserving Biodiversity | Chapter 11, 12 |
| Nov. 25 | Preserving Biodiversity |  |
| Dec. 2 | Conventional and Sustainable Energy | Chapter 19, 20 |
|  | **Final Exam** |  |

**Laboratory:**

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| --- | --- | --- | --- |
| Week of: | Laboratory Exercise | Assignment | Due Date |
| Part I |  |  |  |
| Aug. 26 | Scientific Method in Environmental Science | Understanding Experimental Design |  |
| Sept. 2 | Labor Day |  |  |
| Sept. 9 | Evolution and the Environment | Darwinian Snails Simulation |  |
| Sept. 16 | Species Interactions | Keystone Predator Simulation |  |
| Sept. 23 | Biomes |  |  |
| Part II |  |  |  |
| Sept. 30 | Population Growth |  |  |
| Oct. 7 | Toxicology |  |  |
| Oct. 14 | Native American Day |  |  |
| Oct. 21 | Water Field Trip |  |  |
| Oct. 28 | Water Pollution | Nutrient Pollution Simulation |  |
| Part III |  |  |  |
| Nov. 4 | Climate Change |  |  |
| Nov. 11 | Veterans’ Day |  |  |
| Nov. 18 | Biodiversity | Patchy Prairies |  |
| Nov. 25 | Sustainable Energy |  |  |

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# Student Success Services and Supports

## ADA Accommodations

Dakota State University strives to ensure that physical resources, as well as information and communication technologies, are reasonably accessible to users to provide equal access to all. If you encounter any accessibility issues, you are encouraged to immediately contact the instructor of the course and Dakota State University's Office of Disability Services, which will work to resolve the issue as quickly as possible.

DSU's Office of Disability Services is located in the Learning Engagement Center and can be contacted by calling 605-256-5121 or emailing [dsu-ada@dsu.edu](mailto:dsu-ada@dsu.edu). Students seeking ADA accommodations (such as non-standard note taking or extended time and/or a quiet space taking exams and quizzes) can access the DSU website <https://dsu.edu/student-life/disability-services/index.html> for additional information and the link to the Disability Services Request Form. You will need to provide documentation of your disability and the ADA Coordinator must confirm the need before officially authorizing accommodations.

## DSU Knowledge Base

The DSU Knowledge Base contains links and resources to help students by providing information about the following topics: User Accounts & Passwords, Academic Tools & Resources, Software & Apps Support, WiFi & Network Access, Campus Emergency Alert System, Campus Printing, IT Security & Safe Computing, and the Support Desk (which is there to help both on and off-campus students). The Knowledge Base can be accessed through the link below:

* [DSU Knowledge Base](https://support.dsu.edu/TDClient/KB/)

## D2L Support for Students

The D2L Support for Students site is designed to provide DSU students a D2L support resource center that contains user guides, tutorials, and tips for using the D2L learning environment. The D2L Support for Students site can be accessed through the link below:

* [DSU D2L Support Resources for Students](https://d2l.sdbor.edu/d2l/home/606414)

# Classroom Policies

## Attendance and Make-up Policy

Attendance and participation are expected in lecture and laboratory. Material that is not specifically in your textbook will be covered and it will be included on exams. You are responsible for any missed material and announcements made in class.

There are no make ups for missed assignments or laboratories without an excused absence.

Exams: When EXCUSED absences (i.e., absences that are accompanied by verifiable documentation) require you to miss an exam, arrangements for make-up will be made with the instructor.

Final Exam: It is the policy of Dakota State University that each student enrolled in BIOL 101 must take the final examination during the time slot that has been determined by the Vice-President for Academic Affairs. Changes to this schedule will occur only for serious emergencies that are accompanied by verifiable written documentation. The Vice-President for Academic Affairs will evaluate such emergencies on a case-by-case basis.

Plan ahead. Schedule doctor’s appointments, interviews, work, vacations, travel, and any other activities to not overlap with lecture, lab, and exam times.

# DSU Policies

## Complaint Procedure

Dakota State University seeks to resolve student concerns and complaints in a fair and prompt manner. Students may file a complaint using the [DSU Concerns and Feedback form](https://dsu.wufoo.com/forms/dsu-concerns-and-feedback/). SARA complaints from out-of-state students may be filed using the procedures noted [here](https://catalog.dsu.edu/content.php?catoid=35&navoid=1632&hl=complaint&returnto=search#student-complaints).

## Grade Appeal Policy

If a student believes the final grade assigned in a course was inappropriate, he/she may appeal that grade by filing a formal grade appeal within 15 days of the start of the next academic session. Please see the [Undergraduate Catalog](https://catalog.dsu.edu/content.php?catoid=35&navoid=1614&hl=grade+appeal&returnto=search#Grade_Appeal_Process) or [Graduate Catalog](https://catalog.dsu.edu/content.php?catoid=36&navoid=1666#grade-appeal-process) for the required process to appeal a final grade.

## Student Verification Statement and Proctoring Policy

Federal law requires that universities verify the identity of students when course materials and/or course assessment activities are conducted either partially or entirely online. A student’s Desire2Learn (D2L) login and password are intended to provide the student with secure access to course materials and are also intended to help the university meet this federal mandate. Some DSU Faculty also require the use of a proctor for exams in distance-delivered (Internet) courses and this requirement provides a second level of student identity verification. Students are responsible for any proctoring fees, if applicable. Finally, an instructor who uses web conferencing technology may require students to use a webcam during exams as another means of student identity verification through voice and visual recognition.

<< For online courses, include the verification method used for the course (i.e., proctoring, portfolio, oral exam, student observation, etc.) >>

# South Dakota Board of Regents Policy Statements

## Freedom in Learning Statement

Under Board of Regents and Regental Institutions policy, student academic performance may be evaluated solely on an academic basis, not on opinions or conduct in matters unrelated to academic standards. Discussion and debate are critical to education and professional development. Students should be free to take reasoned exception to the data or views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled. While the exploration of controversial topics may be an important component of meeting the student learning outcomes in a course, no student will be compelled or directed to personally affirm, adopt, or adhere to any divisive concepts (as defined in SDCL 13-1-67). Students who believe that an academic evaluation reflects prejudiced or capricious consideration of student opinions or conduct unrelated to academic standards should contact their home institution to initiate a review of the evaluation.

## ADA Statement

The Regental Institutions strive to ensure that physical resources, as well as information and communication technologies, are reasonably accessible to users to provide equal access to all. If you encounter any accessibility issues, you are encouraged to immediately contact the instructor of the course and the Office of Disability Services, which will work to resolve the issue as quickly as possible. Please note: if your home institution is not the institution you are enrolled at for a course (host institution), then you should contact your home institution’s Office of Disability services. The disability services at the home and host institution will work together to ensure your request is evaluated and responded to in a timely manner.

## Academic Dishonesty and Misconduct

Cheating and other forms of academic dishonesty and misconduct run contrary to the purposes of higher education and will not be tolerated. Academic dishonesty includes, but is not limited to, AAC Guideline 5.3.A – Syllabi BOR Required Policy Statements (Last Revised 01/2023) Page 2 of 2 plagiarism, copying answers or work done by another student (either on an exam or an assignment), allowing another student to copy from you, and using unauthorized materials during an exam. The Regental Institution’s policy and procedures on cheating and academic dishonesty can be found in your home institution’s Student Handbook and the governing Board of Regents policies can be found in BOR Policy 2:33 and BOR Policy 3:4. The consequences for cheating and academic dishonesty are outlined in policy.

## Acceptable Use of Technology

Acceptable Use of Information Technology Resources: While Regental Institutions strive to provide access to computer labs and other technology, it is the student’s responsibility to ensure adequate access to the technology required for a course. This may include access to a computer (not Chromebooks, iPads, etc.), webcam, internet, adequate bandwidth, etc. While utilizing any of the information technology systems students, faculty and staff should observe all relevant laws, regulations, BOR Policy 7.1, and any institutional procedural requirements.

## Emergency Alert Communication

In the event of an emergency arising on campus under BOR Policy 7:3, your Regental Home Institution will notify the campus community via the emergency alert system. It is the responsibility of the student to ensure that their information is updated in the emergency alert system. The student’s cell phone will be automatically inserted if available and if not, their email address is loaded. Students can at any time update their information in the student alert system.