Boise State University
Foundational Studies Program Course Application Form
Due to the Foundational Studies Program by August 19, 2011

After the Foundational Studies Program has approved a course, departments will continue through the regular department and college procedures. The approved course should be submitted to the University Curriculum Committee by October 1, 2011.

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Instructions:

1. Complete one form per course.
2. Attach this Foundational Studies Course Application Form to the back of the University Curriculum Committee “Request for Curriculum Action” form. Both forms should be submitted to the Foundational Studies Program Office by August 19, 2011.

Part I. Course Information

Course Number and Title: BIOL 227: Human Anatomy and Physiology

Type of Foundational Studies Course – (Choose One):
[ ] DLS (Disciplinary Lens – Social Science)
[ ] DLL (Disciplinary Lens – Literature and Humanities)
[ ] DLV (Disciplinary Lens – Visual and Performing Arts)
[ ] DLM (Disciplinary Lens – Mathematics)
[x] DLN (Disciplinary Lens – Natural, Physical, and Applied Sciences)
  Includes Lab: [x] Yes [ ] No
[ ] CID (Communication in the Discipline)
[ ] FF (Finishing Foundations)

Delivery Format(s) – (Check all that apply):
[x] Face to Face
[x] Fully Online
[ ] Hybrid
[ ] Concurrent Enrollment
[ ] Other (briefly describe):
Part II. Syllabus Statement

Boise State's Foundational Studies Program provides undergraduates with a broad-based education that spans the entire university experience. BIOL 227 satisfies 4 credits of the Foundational Studies Program's Disciplinary Lens – Natural, Physical and Applied Science requirements. It supports the following University Learning Outcomes, along with a variety of other course-specific goals.

ULO 8. Apply knowledge and methods characteristic of scientific inquiry to think critically about and solve theoretical and practical problems about physical structures and processes.

**BIOL 227: Human Anatomy and Physiology** is the first semester of a two-semester sequence in human anatomy and physiology. The sequence is designed to provide the student with a thorough understanding of the structure and function of the human body. In BIOL 227 we will begin with the lower levels of organization and continue up to the organ system level. We will then examine the integumentary, skeletal, muscular, nervous (including the sensory systems), and endocrine systems. This course helps to achieve the goals of the Foundational Studies Program by focusing on the following course learning outcomes.

After successful completion of this course, you will be able to:

- Analyze a problem using the scientific method, by creating hypotheses based upon observation, and interpreting and evaluating the results of the experiments.
- Apply the idea that science is a process.
- Discriminate between hypothesis, evidence and theory.
- Demonstrate how to locate scientific information, collect data, and convey the results to peers.
- Describe the structure of the cells, tissues, organs, and organ systems in the human body and explain how the structure of each contributes to its function.
- Correctly apply biological and medical terminology.
- Utilize experiments and experimental results to summarize biological facts, hypothesis and theories.
- Describe how physiological processes influence general health and well-being.
- Describe how physiological mechanisms work in the functioning of the human body.
- Analyze the roles that various organ systems of the body play in establishing and maintaining homeostasis using negative feedback systems.

Part III. Design for Accessibility

In the space below, briefly describe plans for providing access to course materials and activities (or equivalent alternatives) to all students in adherence with the Americans with Disabilities Act. Although these plans may vary from instructor to instructor, the descriptions provided below should be representative of intended departmental and instructor practices. (See example statements appended to this form.)

**BIOL 227: Human Anatomy and Physiology**: Whenever available, videos chosen for use in the course will be those that have been close-captioned by the content producer to provide access to students with hearing
impairment. PowerPoints used in class lectures, insofar as they contain graphs or other visual representations of content, will be verbally described to students on an as-needed basis. We will add textual descriptions accessible by screen readers to images used on the course web site.

Online sections will include narrated lectures combining PowerPoint with the instructor’s voice. Instructors will be encouraged to provide PowerPoint files with a textual transcript of the lecture in the notes section of each slide. Images used in the Blackboard site will have appropriate textual descriptions that can be read by screen reader software. In all sections, students will be able to submit assessments in a variety of formats, including written lab write-ups, worksheets, quizzes, and exams.

Extra time on tests, oral examination, or other accommodations will be provided to students as needed per the policies of the Disability Resource center.

Part IV. Evidence of Quality Course Design

Please use the table below (column headings for this table should not be changed) to provide evidence that the course has been carefully designed and is clearly aligned with Foundational Studies Program desired ULOs. All sections of the course should share similar student learning outcomes. Teaching and Learning Activities and Assessment Methods may vary from instructor to instructor. Please use the table to report representative strategies that may be used. Assessment activities used for reporting to the Foundational Studies Program should be consistent across different sections of the course.

BIOL 227 is the first in a two-semester sequence for students whose career objectives require a thorough study of human anatomy and physiology. This course has traditionally been required for students in the various allied health programs, including nursing and radiology, as well as for students pursuing non-biology majors, such as psychology.

Please see below.
### Course Design Table

<table>
<thead>
<tr>
<th>Foundation ULO 8 Criteria</th>
<th>Foundation ULO 8 Notions of Exemplary Work</th>
<th>Course Learning Outcomes: By the end of this course, each student should be able to…</th>
<th>Assessment Method: Evidence of Student Learning</th>
<th>Planned Teaching &amp; Learning Activities / Pedagogy</th>
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</thead>
<tbody>
<tr>
<td>ULO 8.1: Process of Inquiry and Analysis in Response to Evidence or Observation</td>
<td>Skillfully and thoroughly formulates a research question or testable hypothesis. Constructs a model to test evidence and observations. Skillfully uses model to either confirm existing explanations or formulate new hypotheses</td>
<td>Analyze a problem using the scientific method, by creating hypotheses based upon observation, and interpreting and evaluating the results of the experiments. Apply the idea that science is a process.</td>
<td>Lab write-ups Oral presentations in which the student will define the hypothesis and present the results of the experiments. Design an experiment to test the validity of a hypothesis. Multiple choice exam questions that meet higher critical thinking levels and mid-level analytical thinking which analyze data and draw conclusions</td>
<td>* Lab experiments and computer simulations, which include all steps of the scientific method Group projects and presentations over the lab experiments Class discussions Think/pair/sharing Video clips and movies Minute papers Muddiest points Worksheets Lectures Case studies</td>
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<td>ULO 8.2: Understanding of knowledge and inquiry</td>
<td>Clearly understand the difference between evidence (data) and explanation (theory). Is able to connect evidence and explanation to build an argument Understands the role of these kinds of arguments in building knowledge in the discipline</td>
<td>Discriminate between hypothesis, evidence, and theory</td>
<td>Multiple choice exam questions that meet higher and mid-level thinking skills which analyze data and draw conclusions</td>
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<td>ULO 8.3: Communication of Scientific and/or Technological Understandings</td>
<td>Produces clear, accurate, well-organized written and oral communications about scientific and technological understandings * Use of scientific language, representational tools, and notation covered in the course is skillful.</td>
<td>Demonstrate how to locate scientific information, collect data, and convey the results to peers. Describe the structure of the cells, tissues, organs, and organ systems in the human body and explain how the structure of each contributes to its function. Correctly apply biological terminology Utilize experiments and experimental results to summarize biological facts, hypothesis and theories</td>
<td>Multiple choice exam questions that meet higher and mid-level thinking skills on biological concepts Oral presentations using correct terminology Lab reports Worksheets Discussion boards and class Wikis</td>
<td>Group projects and presentations using correct terminology Class discussions Think/pair/sharing Video clips and movies Minute papers Muddiest points Worksheets Lectures Case studies Jigsaw to introduce new material Role play Discussion boards and class Wikis</td>
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| ULO 8.4: Understanding of interactions of science and technology with humans and environment | - Skillfully assesses the potential connection of scientific and/or technological developments to humans and the environment | - Describe how physiological mechanisms work in the functioning of the human body.  
- Analyze the roles that various organ systems of the body play in establishing and maintaining homeostasis using negative feedback systems. | - Poster presentations  
- Multiple choice exam questions that meet higher and mid-level thinking skills on biological concepts  
- Case studies  
- Discussion boards and class Wikis | - Think/pair/sharing  
- Video clips and movies  
- Minute papers  
- Muddiest points  
- Worksheets  
- Lectures  
- Case studies  
- Jigsaw to introduce new material  
- Role play  
- Gameplay  
- Discussion boards and class Wikis |

5-16-2013

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Foundational Studies Program Director Signature

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Date