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.

Table of Contents (Click title to go to that section)

Instructions: ........................................................................................................................................................................1
Part I. Course Information: ....................................................................................................................................................1
Part II. Syllabus Statement: ....................................................................................................................................................2
Part III. Design for Accessibility: .............................................................................................................................................2
Part IV. Evidence of Quality Course Design: ..........................................................................................................................3
Part V. Additional Justification (Optional): ............................................................................................................................3
Course Design Table .................................................................................................................................................................4

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: PHYS 499: Physics Seminar

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)
[ ] DLN (Disciplinary Lens – Natural, Physical, and Applied Sciences)
   Includes Lab: [ ] Yes [ ] No
[ ] CID (Communication in the Discipline)
[x] FF (Finishing Foundations)

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

In the space below, include the syllabus statement for this course which will appear on the first page of the syllabus for each section of this course. (Template and examples are appended to this application form.)

Boise State's Foundational Studies Program provides undergraduates with a broad-based education that spans the entire university experience. *Phys 499: Physics Seminar* satisfies one credit towards the Foundational Studies Program's finishing foundation requirement. It supports the following University Learning Outcome, along with a variety of other course-specific goals including providing a culminating experience for the physics major:

8. Apply disciplinary knowledge and skills gained during four years of undergraduate studies to critically think/asses important real world physical problems and presents the innovative ideas to a general audience.

*Phys499: Physics Seminar* is designed to develop scientific writing and communication skills for a variety of audience. 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:

- Perform literature survey on a topic of interest and critically assess the calculation/experimental methods used in a research article
- Write a formal and well-organized research paper
- Communicate effectively to a general audience with illustrations and animations
- Participate in group discussions and develop team work skills

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.)

Phys 499 – Physics Seminar: All instructors are committed to working with the university's Disability Resource Center (DRC) to meet the needs of students with documented disabilities. Students that feel they may need accommodations will be met with privately, and steered to the DRC for further coordination. Approved accommodations may include (but are not limited to): checking pdf reading assignments for readability by a screen reader, 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, graphics in PowerPoint presentations used in class lectures will be verbally described to students on an as-needed basis, providing textual descriptions accessible by screen readers to images used on the course web site, extra time on tests and oral examinations, or other accommodations.
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.

Part V. Additional Justification (Optional):

If the brief justification provided to the University Curriculum Committee in the proposal to accompany the “Request for Curriculum Action” is not sufficient to make the case for including the course in the Foundational Studies Program, additional (optional) narrative can be added here.

<table>
<thead>
<tr>
<th>Foundational Studies Program Director Signature</th>
<th>Date</th>
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</table>
Boise State University  
Foundational Studies Course

Course Number and Title: **PHYS 499: Physics Seminar**

**Course Design Table**

<table>
<thead>
<tr>
<th>Foundation ULO Criteria</th>
<th>Foundation ULO 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>
</tr>
</thead>
</table>
| ULO 3: Critical Inquiry | Critical inquiry through literature survey  
  • Skillful and thorough survey while questioning  
  • Models and approximations used to solve a problem  
  • Open questions in the field  
  • Future directions | • Use appropriate sources such as research articles, books, conference proceedings, and web resources in order to gain an in-depth knowledge of a particular topic.  
  • Critically comment on a research article and pin point its strengths and weaknesses. | • In-class student presentations, questions and detailed comments by the instructor and fellow students  
  • Regular in-class presentations by students on a research article | • Literature survey demonstration on using various available resources in the university library and finding important and relevant literature.  
  • Demonstration on doing a good literature survey by the instructor |
| ULO 1: Writing | Effective writing for a variety of readers  
  • Clear explanation of the statement of the problem  
  • Explanation of the importance/relevance of the problem  
  • Clear explanation of the models and methods used to solve a problem  
  • Conclusions  
  • Future directions | • Clearly express his/her ideas and concepts of the topic in writing  
  • Will be able to use appropriate scientific terminology to describe and interpret scientific data and its patterns. | • Research paper with following topics: Abstract, Introduction to the field, model or methods used, Results, Conclusions, Future directions  
  • Students write a 10 page long research paper | • In-class lectures on scientific writing by the instructor |
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</tr>
</thead>
<tbody>
<tr>
<td>ULO 2: Communication</td>
<td>Communication of Scientific and/or Technological Understandings in speech • Produces clear, accurate, well-organized oral communication about scientific and technological understandings • Use of scientific language, representational tools, etc.</td>
<td>• Convey ideas to a general audience using graphs, pictures, animations, and analogies from everyday experiences. • Speak in a meaningful way about a complex physical problem.</td>
<td>• 40 minute public talk by the student at the end of the semester. Each student creates a 15-20 minute persuasive podcast on an assigned/self-selected topic using an evidence-based approach.</td>
<td>• Demonstrations on creating a focused and well organized presentation</td>
</tr>
<tr>
<td>ULO 4b: Teamwork</td>
<td>Learning to participate in group discussions and acquiring teamwork skill • Uses innovative processes to explore ideas • Divergent and convergent thinking demonstration • Connects, synthesizes and transforms various views to a meaningful information • Fosters a constructive team climate</td>
<td>• Able to reason quantitatively and qualitatively in order to participate in a group discussion in a meaningful way. • Respond appropriately to team climate and contribute to team meetings</td>
<td>• Instructor observation of students during in-class group discussions • In-class group discussions and team projects</td>
<td>• Instructor comments during in-class group discussions</td>
</tr>
</tbody>
</table>