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 departmental and college procedures. The approved course should be submitted to the University Curriculum Committee by October 1, 2011.

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

<table>
<thead>
<tr>
<th>Course Number and Title:</th>
<th>CHEM 111/CHEM 111L General Chemistry I</th>
</tr>
</thead>
</table>
| 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) | [ ] CID (Communication in the Discipline) |
  [ ] 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.) Attach additional pages if needed.

Boise State's Foundations Program provides undergraduates with a broad-based education that spans the entire university experience. CHEM 111/111L: General Chemistry I and Lab satisfies 3 units of the Foundation Program's Disciplinary Lens - Natural, Physical, and Applied Sciences (DLN) requirement. It supports the following University Learning Outcomes, along with a variety of other course-specific goals.

8. Apply knowledge and the methods characteristic of scientific inquiry to think critically about and solve theoretical and practical problems about physical structures and processes.
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.) Attach additional pages if needed.

**CHEM 111/111L: General Chemistry I and Lab:** All posted pdf reading assignments will be checked for readability by a screen reader. (The department will ask Academic Technologies to help with a review of these electronic materials.) 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. PowerPoint presentations 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. Extra time on tests, oral examinations, 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

Attach a separate document including a table like the one below. (A link to the Word template that allows rows to be adjusted as needed may be found at: [Course Design Table](#). Column headings for this table should not be changed.) The purpose of the table is 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.

<table>
<thead>
<tr>
<th>Foundational Studies ULO Criteria and Notions of Exemplary Work</th>
<th>Course Learning Outcomes</th>
<th>Assessment Method: Evidence of Student Learning</th>
<th>Planned Teaching and Learning Activities/Pedagogy</th>
</tr>
</thead>
<tbody>
<tr>
<td>These are drawn from the appropriate rubric for the ULO supported by the course.</td>
<td>“By the end of this course, each student should be able to...”</td>
<td>How will the outcomes be assessed in the course? (Note key assessments to be used for reporting student learning outcomes.)</td>
<td>What kind of activities will be used to support students’ success on the planned assessments?</td>
</tr>
</tbody>
</table>

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.

This course is required for a chemistry degree and is often offered in large 250 person sections.

Electronic signature included on course application evaluation form below.

<table>
<thead>
<tr>
<th>Foundational Studies Program, Director</th>
<th>Date</th>
</tr>
</thead>
</table>
Boise State University
Foundational Studies Review Committee: Course Application Evaluation Form

Fall 2011

Course Information

Course Number and Title: CHEM 111/CHEM 111L General Chemistry I
Number of Credits: 3

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 – Math)
- DLN (Disciplinary Lens – Natural, Physical and Applied Science)
- CID (Communication in the Discipline)
- FF (Finishing Foundations)

Review Committee Checklist

_ Y __ Syllabus Statement - statement introduces the student to the purpose and role of the course in the Foundational Studies Program curriculum.

_ Y __ An appropriate number of Course Learning Outcomes are specified for the course and are clearly designed to support the Foundational Studies Program ULOs.

_ Y __ Course Learning Outcomes are appropriately designed for level of the course and address both content mastery and skill-based outcomes.

_ Y __ The types and numbers of assessments planned for the course are appropriate for measuring the content or skills being assessed.

_ Y __ Course learning activities are likely to promote the achievement of the stated outcomes.

_ Y __ Course design and materials have considered best practices for accessibility to course materials and ideas by all students (e.g., alternatives to auditory and visual content)

Feedback from Review Committee:
This looks good, but we have two comments: 1) Consider reducing the assessed outcomes in ULO 8 row “Understanding of Knowledge and Inquiry.” A much more sustainable approach to the assessment process would be to select and assess one outcome per row in the ULO 8 document. 2) We note that the "Understanding of Interactions" section is not filled out, but, after conversations with the Foundations Program Director, we understand that this is not necessarily requirement, but consideration should be given as to how to include this learning outcome in the future.

Feedback from the Foundational Studies Program

It is understood that the assessment plans for these courses will evolve and, another option to the suggestions above, are to leave the assessment details in this document and know that we are in a continuing process of refinement. This document will “leave your options open.”

CERTIFIED FOR APPROVAL 9-9-2011.

Electronically signed by Vicki Stiehl, Director, Foundational Studies Program
Boise State University
Boise State University
Foundational Studies Course
Fall 2011

Course Number and Title: CHEM 111 General Chemistry I

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</tr>
</thead>
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<tr>
<td>Process of Inquiry and Analysis in Response to Evidence or Observations</td>
<td>“By the end of this course, each student should be able to...”</td>
<td>analyze data or models for trends and relationships - use data or models to make meaning, draw conclusions, or draft hypotheses and make predictions</td>
<td>Exams and Homework  The performance on select problems from the homework and exams will be reported.</td>
</tr>
<tr>
<td>Understanding of Knowledge and Inquiry</td>
<td>articulate an understanding of the particulate nature of matter (&quot;thinking&quot; on the level of atoms and molecules)</td>
<td>Relate the basic structure of atoms and molecules to their chemical properties and behavior</td>
<td>Solve basic chemical problems related to the behavior and properties of atoms and molecules by drawing upon your conceptual understanding of chemistry and your knowledge of quantitative relationships.</td>
</tr>
<tr>
<td>Communication of Scientific and/or Technological Understandings</td>
<td>Identify, use, and articulate an understanding of information derived from both written and spoken sources</td>
<td>Exams and Homework</td>
<td>The performance on select problems from the homework and exams will be reported.</td>
</tr>
<tr>
<td>Understanding of Interactions of Science and Technology with Humans and Environment</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>