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 1. Course Information

<table>
<thead>
<tr>
<th>Course Number and Title:</th>
<th>MSE 480-482 Senior Project I and II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Foundational Studies Course - (choose one):</td>
<td></td>
</tr>
<tr>
<td>[ ] DLS (Disciplinary Lens – Social Science)</td>
<td>[ ] DLL (Disciplinary Lens – Literature and Humanities)</td>
</tr>
<tr>
<td>[ ] DLM (Disciplinary Lens – Mathematics)</td>
<td>[ ] DLN (Disciplinary Lens – Natural, Physical and Applied Sciences)</td>
</tr>
<tr>
<td>[x] FF (Finishing Foundations)</td>
<td></td>
</tr>
</tbody>
</table>

Delivery Format(s) - (check all that apply):

[ ] 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 Foundational Studies Program provides undergraduates with a broad-based education that spans the entire university experience. MSE 480-482; Senior Project I and II satisfies three units of the Foundation Program’s Finishing Foundations (FF) requirement. It supports the following University Learning Outcomes (ULO), along with a variety of other course-specific goals:

ULO 1: Write Effectively
ULO 2: Oral Communication
ULO 3: Critical Inquiry
ULO 4: Innovation and Teamwork
MSE 480-482: Senior Project I and II is a culminating capstone experience for senior materials science and engineering students that incorporates design principles, project management, communication, critical inquiry, innovation, teamwork, professionalism and ethics with a real-world materials, processing and/or failure analysis problems. Students work in teams over two semesters, utilizing engineering design approaches, to solve their industry sponsored technical problem. By working with industry professionals, students develop their professional and technical skills while providing a focused, resourceful and creative problem solving approach for their sponsor.

Students, working in teams, are responsible for planning, implementing, managing, documenting and executing all phases of their project. To this end, each team must (i) submit a problem statement based on a needs statement provided by their industry sponsor, (ii) perform a literature survey to obtain the comprehensive knowledge required to fully evaluate the technical problem and to establish an effective approach, (iii) provide a written proposal and present the proposed approach, (iv) use project management principles to stay on track and (v) design and perform experiments, evaluate results, and provide solutions for their sponsor - all of which are documented in a culminating final report (written and presented) to their sponsors and faculty.

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 have improved your ability to:

**ULO 1: Write Effectively**
- Focus narrowly on a clear purpose
- Adopt an appropriate voice, tone, and level of formality
- Use the text conventions of writing in a field professionally
- Evaluate and synthesize ideas from sources well; document sources according to disciplinary conventions
- Improve across a series of drafts that are the result of drafting, revising and editing in response to feedback
- Uses wide variety of resources to locate sources

**ULO 2: Oral Communication**
- Speak effectively
- Effective organizational patterns

**ULO 3: Critical Inquiry**
- Articulate the problem/question/issue
- Connect and organize evidence/data/reasoning

**ULO 4a: Innovation**
- Use innovative processes
- Make a contribution to solving a problem
- Innovative thinking (novel, unique)
- Connect, synthesize, transform

**ULO 4b: Teamwork**
- Contribute to team meetings
- Facilitate team member contributions
- Contribute outside of team meetings
- Foster a constructive team climate
- Respond appropriately to team conflict
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.

In the syllabus, the types of course materials and activities will be described. All students will be encouraged to meet or email the instructor privately if they have any issues with any of the course activities or materials and accommodations will be made. For example, required project activities will be modified to accommodate a student in a wheel chair. Since students work in teams and share responsibilities, needs can be accommodated with an appropriate distribution of tasks. Extra time on tests, oral presentations 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>&quot;By the end of this course, each student should be able to...&quot;</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>
<tr>
<td>All learning outcomes are listed.</td>
<td></td>
<td></td>
<td></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.

Electronic signature included on course application evaluation form below
Course Information

<table>
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<th>Number of Credits: 3 + 3</th>
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<td>□ CID (Communication in the Discipline)</td>
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</table>

Review Committee Checklist

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

_x__ An appropriate number of Course Learning Outcomes are specified for the course and are clearly designed to support the Foundational Studies Program ULOs. See comments below.

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

_x__ The types and numbers of assessments planned for the course are appropriate for measuring the content or skills being assessed

_x__ Course learning activities are likely to promote the achievement of the stated outcomes

_x__ 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:

Judging from the catalog description and from one of the committee members experience in engineering, the course appears to be a genuine capstone course that will meet the appropriate university learning outcomes for a finishing foundations course. The course has been taught before and is already routinely assessed for engineering accreditation purposes. The syllabus statement is clear and explicit in terms of how this will occur.

The committee wonders if both the courses are each FF courses, or if both must be taken in order to satisfy the FF requirement. It may be easier to simply list MSE 482 as being the sole FF course.

Feedback will be shared with department for consideration in implementation.

Certified as is for Foundational Studies Program by Sharon McGuire, September 1, 2011.