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: **MSE 480-482 Senior Project I and II**

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. 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, 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**

1. Focus narrowly on a clear purpose
2. Adopt an appropriate voice, tone, and level of formality
3. Use the text conventions of writing in a field professionally
4. Evaluate and synthesize ideas from sources well; document sources according to disciplinary conventions
5. Improve across a series of drafts that are the result of drafting, revising and editing in response to feedback
6. Uses wide variety of resources to locate sources
ULLO 2: Oral Communication
1. Speak effectively
2. Effective organizational patterns

ULLO 3: Critical Inquiry
1. Articulate the problem/question/issue
2. Connect and organize evidence/data/reasoning

ULLO 4a: Innovation
1. Use innovative processes
2. Make a contribution to solving a problem
3. Innovative thinking (novel, unique)
4. Connect, synthesize, transform

ULLO 4b: Teamwork
1. Contribute to team meetings
2. Facilitate team member contributions
3. Contribute outside of team meetings
4. Foster a constructive team climate
5. 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.)

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 wheelchair. 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:

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.

______________________________
Foundational Studies Program Director Signature  Date
Boise State University
Foundational Studies Course

Course Number and Title: MSE 480-482 Senior Project I and II

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>
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