

## General Studies Request Form

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Please see the [General Studies Request Overview and FAQ](#) for information and quick answers.

New permanent numbered courses must be submitted to the workflow in [Kuali CM](#) before a General Studies request is submitted here. The General Studies Council will not review requests ahead of a new course proposal being reviewed by the Senate.

### Proposal Contact Information

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Submitter Name	Submitter Email	Submitter Phone Number
Cindy Boglin	cindy.boglin@asu.edu	4807275213

College/School	Department/School
Ira A. Fulton Schools of Engineering (CES)	Engineering Programs (CENGINEER)

### Submission Information

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Type of submission:

Mandatory Review (Course or topic currently holds this designation and is undergoing 5-year review)

#### What is Mandatory Review?

Courses and topics previously approved for General Studies must be reviewed every five years by the General Studies Council to verify requirements are still met.

### ASU Request

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Is this request for a permanent course or a topic?

Permanent Course

Subject Code	Course Number	Units/Credit Hours
EGR	401	3

#### Course Information

Courses approved for General Studies require mandatory review every five years.

Course Title

Professional Design Project I

Course Description

First half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier course work.

Is this a crosslisted course?

No

Is this course offered by another academic unit?

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No

General Studies

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Requested Designation

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L - Literacy and Critical Inquiry

L: Literacy and Critical Inquiry

**Rationale and Objectives**

Literacy is here defined broadly as communicative competence—that is, competence in written and oral discourse. Critical inquiry involves the gathering, interpretation, and evaluation of evidence. Any field of university study may require unique critical skills that have little to do with language in the usual sense (words), but the analysis of written and spoken evidence pervades university study and everyday life. Thus, the General Studies requirements assume that all undergraduates should develop the ability to reason critically and communicate using the medium of language.

The requirement in Literacy and Critical Inquiry presumes, first, that training in literacy and critical inquiry must be sustained beyond traditional First Year English in order to create a habitual skill in every student; and, second, that the skill levels become more advanced, as well as more secure, as the student learns challenging subject matter. Thus, two courses beyond First Year English are required in order for students to meet the Literacy and Critical Inquiry requirement. Most lower-level "L" courses are devoted primarily to the further development of critical skills in reading, writing, listening, speaking, or analysis of discourse. Upper-division "L" courses generally are courses in a particular discipline into which writing and critical thinking have been fully integrated as means of learning the content and, in most cases, demonstrating that it has been learned.

[Revised October 2020]

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Please note:

1. ENG 101, 105, or 107 must be prerequisites to this course. ENG 102, 105, or 108 are acceptable as alternatives.
2. Honors Thesis courses ([493 omnibus](#)) meet "L" requirements.
3. The list of criteria that must be satisfied for designation as a Literacy and Critical Inquiry "L" course is presented below. It will help you determine whether the current version of your course meets all of these requirements. If you decide to apply, please attach a current syllabus, handouts, or other documentation that will provide sufficient information for the General Studies Council to make an informed decision regarding the status of your proposal.

To qualify for the "L" designation, the course design must place a major emphasis on completing critical discourse—as evidenced by the following criteria:

"L" Criterion 1

Per [policy](#), students must have completed ENG 101, 105, or 107 to take an "L" course. This means the course must have, at minimum, ENG 101, 105, or 107 (or ENG 102, 105, or 108) as a prerequisite.

**The "L" designation may not be requested for omnibus special topics, as the course-level prerequisites required for "L" consideration are not possible at the class/topic level.**

Please confirm that the course has the appropriate prerequisites, or that a proposal to change the prerequisites has been submitted in Quali CM.

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Yes

Identify the submitted documentation that provides evidence.

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ASU Course Catalog

Provide detailed evidence of how this course meets this criterion.

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Enrollment Requirements Prerequisite(s): ENG 101, 105, or 107 with C or better; EGR 313, 314, 315 or 316 with C or better OR ENG 101, 105, or 107 with C or better; MFG 318 with C or better

"L" Criterion 2

At least 50 percent of the grade in the course should depend upon writing assignments (see Criterion 3). Group projects are acceptable only if each student gathers, interprets, and evaluates evidence, and prepares a summary report. *In-class essay exams may not be used for the "L" designation.*

Describe the assignments that are considered in the computation of course grades--and indicate the proportion of the final grade that is determined by each assignment.

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This information is on the third page of the syllabus. The writing assignments are enclosed in red boxes labeled "C-2."

Identify the submitted documentation that provides evidence.

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The course syllabus.

How does this course meet the spirit of this criterion?

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66.5% of the grade is comprised of written assignments as identified in the course syllabus.

Provide detailed evidence of how this course meets this criterion (i.e. where in the syllabus).

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The evidence is in the syllabus in the red boxes marked with "C-2."

"L" Criterion 3

The writing assignments should involve gathering, interpreting, and evaluating evidence. They should reflect critical inquiry, extending beyond opinion and/or reflection.

Describe the way(s) in which this criterion is addressed in the course design.

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The course is structured around a design project, in which students work with an industrial partner who has proposed a problem. The students work with their industrial partner to define and understand the problem, look at existing potential solutions, generate solution concepts of their own, select a concept, and refine the concept through prototyping and engineering analysis.

The following course assignments work together to require students to collect, interpret, and evaluate evidence in the process of moving their design project forward.

In the Voice of the Customer (VOC) Paper, students are individually required to collect customer needs and wants through interviews of their industrial partner (and potentially other customers) and interpret these needs and wants into critical-for-quality requirements; these requirements are criteria by which a student team will evaluate potential solutions to their problem. Each student team combines the requirements generated in the VOC Papers of the team members to synthesize a set of team requirements that they will use to make decisions throughout the class; this process is scaffolded by the Project Charter document that each team creates as they work through project definition.

In the Competitive Benchmarking Paper, students are individually required to research potential existing solutions to their project problem and evaluate the strengths and weaknesses of these existing solutions

relative to their team's requirements. In addition to researching existing solutions, students are also required to research any engineering standards and intellectual property (usually patents) that are relevant to their project; they must determine how these relate to their project and whether they will constrain their project activities. Students use the information they have gathered individually in their Competitive Benchmarking Papers as a starting point in brainstorming design concepts as a team; they then evaluate these design concepts relative to their requirements, and using a structured decision process, they select one concept with which to go forward for the remainder of their project.

In the Interim Technical Report, each team summarizes the work they have done in the semester; the audience for these reports includes the team's industrial partner. In addition to summarizing the requirements and the concept generation and selection process, this report includes evaluation of and interpretation of information obtained through preliminary prototyping and engineering analysis of their design concept.

Identify the submitted documentation that provides evidence.

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The evidence is provided in the VOC Paper Assignment, Competitive Benchmarking Paper Assignment, and Interim Report Assignment. It is enclosed in blue boxes and labeled "C-3."

How does this course meet the spirit of this criterion?

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The evidence is provided in the VOC Paper Assignment, Competitive Benchmarking Paper Assignment, and Interim Report Assignment. It is enclosed in blue boxes and labeled "C-3."

Provide detailed evidence of how this course meets this criterion (i.e. where in the syllabus).

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See the course assignment documents, in which the evidence for this criterion is marked with "C-3": VOC Paper Assignment, Competitive Benchmarking Paper Assignment, and Interim Report Assignment.

#### "L" Criterion 4

The syllabus should include a minimum of two writing and/or speaking assignments that are substantial in depth, quality, and quantity. Consider at least 5 pages (~2500 words) for an in-depth critical analysis and 10-15 minutes for a presentation. Substantial writing assignments entail sustained in-depth engagement with the material. Examples include research papers, reports, articles, essays, or speeches that reflect critical inquiry and evaluation. Assignments such as brief reaction papers, opinion pieces, reflections, discussion posts, and impromptu presentations are not considered substantial writing/speaking assignments.

Provide relatively detailed descriptions of two or more substantial writing or speaking tasks that are included in the course requirements.

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The two major writing assignments in the course are the Competitive Benchmarking Paper and the Interim Report. The Interim Report is accompanied by an Interim Presentation.

The Competitive Benchmarking Paper typically requires students to generate five to ten pages in the body of the paper to adequately address the required material. To encourage students to engage in depth with the material they are researching, they are given a 1000 word minimum for the core section of the paper (describing and evaluating the existing problem solutions they have found). Students that create excellent papers exceed this minimum. In addition to this core section, students are required to find information on engineering standards that apply to the problem they are working on; this generally requires a substantial section as well. The other required content in the paper generally leads to a paper body that is five to ten pages long.

The Interim Report is generally longer than fifteen pages, and many extend to 30 or more pages. In it, students report the work they have done in the EGR 401 class. This work includes the formation of requirements, surveying existing solutions, the concept generation and selection process, preliminary prototyping, and engineering analysis of their design concept. This report reflects the students' semester-long

engagement with their project problem and includes evaluation of their prototyping activities and their engineering analysis; this evaluation should lead to improvements in the student's understanding of their problem and in the quality of their proposed solutions.

The Interim Presentation is a 12-minute presentation in which students present their project work up through the end of EGR 401. They are required to present their prototyping efforts and their preliminary analysis and describe what they have learned through these efforts that will improve their project outcomes.

Identify the submitted documentation that provides evidence.

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See course syllabus and the following course assignment documents in which the evidence for this criterion is marked with green boxes labeled "C-4": Competitive Benchmarking Paper Assignment, Interim Report Assignment, and Interim Presentation Assignment.

How does this course meet the spirit of this criterion?

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See course syllabus and the following course assignment documents in which the evidence for this criterion is marked with green boxes labeled "C-4": Competitive Benchmarking Paper Assignment, Interim Report Assignment, and Interim Presentation Assignment.

Provide detailed evidence of how this course meets this criterion (i.e. where in the syllabus).

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See course syllabus and the following course assignment documents in which the evidence for this criterion is marked with green boxes labeled "C-4": Competitive Benchmarking Paper Assignment, Interim Report Assignment, and Interim Presentation Assignment.

#### "L" Criterion 5

These substantial writing or speaking assignments should be arranged so that the students will get timely feedback from the instructor on each assignment in time to help them do better on subsequent assignments. *Intervention at earlier stages in the writing process is especially welcomed.*

Describe the sequence of course assignments--and the nature of the feedback the current (or most recent) course instructor provides to help students do better on subsequent assignments.

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cThe Course Schedule shows the sequence of assignments whose grading process is the evidence for this criterion. Assignments discussed in the following are labeled "C-5."

In the Voice of the Customer Paper, students are individually required to collect customer needs and wants through interviews of their industrial partner (and potentially other customers) and interpret these needs and wants into critical-for-quality requirements. They receive grader feedback on this assignment through comments on rubric items in the Canvas LMS.

In the Project Charter: Definition and Scope, Project Charter: Requirements and Success Criteria, Project Charter Briefing, and Project Charter: Complete and Approved assignments, students work to iteratively develop a project charter document that defines the scope, deliverables, and problem to be solved for their project. After each of the first three assignments in the project charter sequence, students receive verbal feedback in meetings with their instructor and written feedback through comments on rubric items; they are expected to respond to this feedback. A critical piece of the charter is the team's critical-for-quality requirements, which are synthesized using the work of each individual team member in the VOC paper.

In the Competitive Benchmarking Paper, students are individually required to research potential existing solutions to the problem given to them by their industrial partner and evaluate the strengths and weaknesses of these existing solutions relative to the critical-for-quality requirements that they have created. Feedback on this paper is given through comments on rubric items.

To complete the Preliminary Design Review Slides assignment, students use the information they have gathered individually in their Competitive Benchmarking Papers to synthesize design concepts as a team. They then evaluate these design concepts relative to their critical for quality requirements to select a concept with which to go forward for the remainder of their project. Feedback on this paper is given through comments on rubric items.

The Interim Presentation and Interim Report summarize the project work that the students have performed throughout the semester. In preparing these assignments, students have a wealth of feedback from previous assignments. Their work on which these two assignments is based has received feedback at multiple points in the semester.

Identify the submitted documentation that provides evidence.

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Evidence is provided by the Course Calendar. The assignments on which significant feedback is given or which are informed by feedback are identified with pink boxes labeled "C-5."

How does this course meet the spirit of this criterion?

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The Course Calendar shows where each assignment is scheduled; the major writing assignments are scheduled so that students can get feedback on each one before working on the next one. The VOC Paper and the Competitive Benchmarking Paper are done in parallel with the Project Charter assignments; the Project Charter assignments require information from the VOC Paper; in turn, the Project Charter assignments inform the criteria (requirements) that will be used to assess existing solutions in the Competitive Benchmarking Paper. Students are given feedback on all of this work, which in turn informs the Interim Report and Interim Presentation.

Provide detailed evidence of how this course meets this criterion (i.e. where in the syllabus).

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See the Course Calendar in which each of the course assignments that contribute to satisfying this criterion is marked with "C-5."

Attach a sample syllabus for this course or topic, including the list of any required readings.

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[EGR 401 Syllabus F22 Annotated.pdf](#)

Attach the table of contents from any required textbook(s).

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No Response

Attach any other materials that would be relevant or helpful in the review of this request.

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[EGR 401 Submissions For General Studies Review.pdf](#)

## Form Submission - Proposer

Submitted for Approval | Proposer

Cindy Boglin - December 2, 2022 at 1:36 PM (America/Phoenix)

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## Department Approval

Approved

Cindy Boglin - December 2, 2022 at 1:37 PM (America/Phoenix)

John Rajadas

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## Provost's Office Review

Sent Back

April Randall

Joni Lochtefeld - December 5, 2022 at 1:37 PM (America/Phoenix)

Per the instructions on the form, current syllabus information must also be entered in Quali Curriculum Management (CM). If you don't have access to Quali CM, you'll need to work with your unit and coordinate with the individual(s) able to submit Quali CM course proposals. Please see the General Studies Request FAQ for more information: [https://docs.google.com/document/d/1BF\\_lpZ4neXWRQgZfXj-5ILS07EEn-Nu34Z35S8CrAEVk/](https://docs.google.com/document/d/1BF_lpZ4neXWRQgZfXj-5ILS07EEn-Nu34Z35S8CrAEVk/)

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## Form Submission - Proposer

Submitted for Approval | Proposer

Cindy Boglin - December 5, 2022 at 2:05 PM (America/Phoenix)

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## Department Approval

Approved

Cindy Boglin - January 4, 2023 at 2:58 PM (America/Phoenix)

John Rajadas

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## Provost's Office Review

Approved

April Randall

Joni Lochtefeld - January 6, 2023 at 10:42 AM (America/Phoenix)

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## Literacy and Critical Inquiry Mandatory Review

Acknowledgement Requested

Patricia Webb

Brent Scholar - January 30, 2023 at 10:53 AM (America/Phoenix)

Revise and Resubmit. According to Criterion 2, 50% of the critical writing needs to be towards the literacy requirement. The Competitive Benchmarking and Tech Report add up to 34% and are considered part of the literacy requirement. The Interim Presentation needs to have each student present for around 10-minutes each with additional slides to be considered. The Voice of the Customers could be considered if there was a definitive page/word range presented of around 5 pages/2500 words or more.

Emily Mertz

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## General Studies Council Meeting

Waiting for Approval

April Randall

Joni Lochtefeld

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## Proposer Notification

Notification

Cindy Boglin

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