



ARIZONA STATE UNIVERSITY

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GENERAL STUDIES PROGRAM COURSE PROPOSAL COVER FORM

Courses submitted to the GSC between 2/1 and 4/30 if approved, will be effective the following Spring.

Courses submitted between 5/1 and 1/31 if approved, will be effective the following Fall.

(SUBMISSION VIA ADOBE.PDF FILES IS PREFERRED)

DATE June 27, 2012

1. ACADEMIC UNIT: Computing, Informatics and Decision Science Engineering (CIDSE)
2. COURSE PROPOSED: CPI 486 Informatics Capstone 2 (3 semester hours)
3. CONTACT PERSON: Name: Kurt VanLehn, Phone: x7-6348, Mail Code: 8809, E-Mail: Kurt.vanlehn@asu.edu

4. ELIGIBILITY: New courses must be approved by the Tempe Campus Curriculum Subcommittee and must have a regular course number. For the rules governing approval of omnibus courses, contact the General Studies Program Office at 965-0739.

5. AREA(S) PROPOSED COURSE WILL SERVE. A single course may be proposed for more than one core or awareness area. A course may satisfy a core area requirement and more than one awareness area requirements concurrently, but may not satisfy requirements in two core areas simultaneously, even if approved for those areas. With departmental consent, an approved General Studies course may be counted toward both the General Studies requirement and the major program of study. (Please submit one designation per proposal)

Core Areas

Awareness Areas

- Literacy and Critical Inquiry-L [X]
Mathematical Studies-MA [] CS []
Humanities, Fine Arts and Design-HU []
Social and Behavioral Sciences-SB []
Natural Sciences-SQ [] SG []

- Global Awareness-G []
Historical Awareness-H []
Cultural Diversity in the United States-C []

6. DOCUMENTATION REQUIRED.
(1) Course Description Included as the first paragraph of the syllabus
(2) Course Syllabus
(3) Criteria Checklist for the area
(4) Table of Contents from the textbook used, if available

7. In the space provided below (or on a separate sheet), please also provide a description of how the course meets the specific criteria in the area for which the course is being proposed.

CROSS-LISTED COURSES: [X] No [] Yes; Please identify courses: _____

Is this a multisection course?: [X] No [] Yes; Is it governed by a common syllabus? _____

Dr. Ronald Askin
Chair/Director (Print or Type)

Ronald Askin
Chair/Director (Signature)

Digitally signed by Ronald Askin
DN: cn=Ronald Askin, o=CIDSE, ou=School of Computing, Informatics and Decision Systems Engineering, email=ronaskin@asu.edu, c=US
Date: 2012.07.20 09:03:58 -0700

Date: 7/20/2012

Arizona State University Criteria Checklist for
LITERACY AND CRITICAL INQUIRY - [L]

Rationale and Objectives

Literacy is here defined broadly as communicative 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 which have little to do with language in the usual sense (words), but the analysis of spoken and written 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 skills become more expert, as well as more secure, as the student learns challenging subject matter. Thus, the Literacy and Critical Inquiry requirement stipulates two courses beyond First Year English.

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.

Students must complete six credit hours from courses designated as [L], at least three credit hours of which must be chosen from approved upper-division courses, preferably in their major. Students must have completed ENG 101, 107, or 105 to take an [L] course.

Notes:

1. ENG 101, 107 or ENG 105 must be prerequisites
2. Honors theses, XXX 493 meet [L] requirements
3. The list of criteria that must be satisfied for designation as a Literacy and Critical Inquiry [L] course is presented on the following page. This list 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, or 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.

Proposer: Please complete the following section and attach appropriate documentation.

ASU - [L] CRITERIA			
TO QUALIFY FOR [L] DESIGNATION, THE COURSE DESIGN MUST PLACE A MAJOR EMPHASIS ON COMPLETING CRITICAL DISCOURSE--AS EVIDENCED BY THE FOLLOWING CRITERIA:			
YES	NO		Identify Documentation Submitted
<input checked="" type="checkbox"/>	<input type="checkbox"/>	CRITERION 1: At least 50 percent of the grade in the course should depend upon writing, including prepared essays, speeches, or in-class essay examinations. <i>Group projects are acceptable only if each student gathers, interprets, and evaluates evidence, and prepares a summary report</i>	see attached doc: CPI 486 descriptions requested by literacy checklist
1. Please 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.			
2. Also: <div style="border: 1px solid black; border-radius: 50%; padding: 10px; margin: 10px 0;"> <p style="background-color: yellow;">Please circle, underline, or otherwise mark the information presented in the most recent course syllabus (or other material you have submitted) that verifies this description of the grading process--and label this information "C-1".</p> </div> <p style="margin-left: 20px;">C-1</p>			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	CRITERION 2: The composition tasks involve the gathering, interpretation, and evaluation of evidence	see attached
1. Please describe the way(s) in which this criterion is addressed in the course design			
2. Also: <div style="border: 1px solid black; border-radius: 50%; padding: 10px; margin: 10px 0;"> <p style="background-color: yellow;">Please circle, underline, or otherwise mark the information presented in the most recent course syllabus (or other material you have submitted) that verifies this description of the grading process--and label this information "C-2".</p> </div> <p style="margin-left: 20px;">C-2</p>			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	CRITERION 3: The syllabus should include a minimum of two substantial writing or speaking tasks, other than or in addition to in-class essay exams	see attached
1. Please provide relatively detailed descriptions of two or more substantial writing or speaking tasks that are included in the course requirements			
2. Also: <div style="border: 1px solid black; border-radius: 50%; padding: 10px; margin: 10px 0;"> <p style="background-color: yellow;">Please circle, underline, or otherwise mark the information presented in the most recent course syllabus (or other material you have submitted) that verifies this description of the grading process--and label this information "C-3".</p> </div> <p style="margin-left: 20px;">C-3</p>			

ASU - [L] CRITERIA			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	CRITERION 4: 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. <i>Intervention at earlier stages in the writing process is especially welcomed</i>	see attached
1. Please 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			
2. Also:			
<p>Please circle, underline, or otherwise mark the information presented in the most recent course syllabus (or other material you have submitted) that verifies this description of the grading process--and label this information "C-4".</p>			
C-4			

CPI 486 Descriptions requested by Literacy Checklist

1. Relevant assignments and proportion of the grade.

- The first relevant assignment is revision of 8 documents (listed under Phase 4 in the syllabus). This activity comprises 60% of the grade.
- The second relevant assignment (actually 4 assignments) are four short essays, which together comprise 10% of the course grade.
- There are also essays on the final exam (30%) and weekly written reports (5%), but the writing of these pieces is not expected to be as polished as the preceding assignments.

2. The composition tasks required gathering, interpretation and evaluation of evidence

- Among the 8 documents, the Requirements Document requires gathering of evidence from stakeholders about their requirements for the software to be developed. Although it may seem that this should have been completed in the preceding semester, it is often the case that the stakeholders change their minds as they see the product emerging. Thus, gathering new comments from them, re-interpretation and re-evaluation are necessary. Similar comments apply to the other 7 documents.
- All the 4 short writing assignments require gathering, analyzing and interpreting information about informatics and its applications.

3. Descriptions of two or more substantial writing or speaking tasks.

- The most substantial writing task is the suite of 8 documents. Students work as a team and are graded as such, but they are encouraged to share the load evenly, and their peer evaluations (5% of grade) tend to ensure that they do.
- All students contribute the teams final presentation.

4. The sequence of assignments and the nature of the feedback.

- The 8 deliverables of Phases 4 and 5 are submitted in both preliminary and final versions. No grade is assigned to the preliminary versions, but feedback is given on them as soon as possible so that the team can incorporate the changes into the final version. Phase 4 documents are submitted after 4 weeks, and phase 5 versions are submitted 8 weeks later.
- For the final oral presentation, students receive timely feedbacks on the content and organization of the slides, time control of the presentation, etc.
- For weekly reports and the 4 writing assignments, students receive prompt feedback regarding their task assignments, individual and group progress, etc..

CPI 486 Informatics Capstone II

Syllabus 4 Credit Hours Spring

Catalog Description: Second course in a two-course sequence for informatics majors emphasizing the development process, technical skills and communication.

Textbook: *Technical Communication*, Eighth Edition, M. Markel, Bedford / St.Martin's, 2006.

Course Objectives and Outcomes:

1. To be able to design and implement substantial informatics projects
 - Students are able to work with clients to understand requirements
 - Students are able to design informatics projects
 - Students are able to evaluate design alternatives
 - Students are able to implement informatics projects

2. To be able to communicate technical concepts and materials effectively both orally and in writing.
 - Students are able to make good technical oral presentations of their designs
 - Students are able to write technical documents that meet audience needs.

3. To be able to function effectively in project teams
 - Students are able to employ teaming techniques to develop high-quality designs

Pre-requisite courses: CPI 485 with a grade of C or better.

Class/Laboratory schedule: 3 hours of lecture/discussion per week

Major topics covered in the course:

- Software project management (2 weeks)
- Leadership (1 week)
- Software testing and quality (2 weeks)
- Software development (5 weeks)
- Business plans and development (2 weeks)
- Professional, ethical, legal, security and social responsibilities (2 weeks)
- Continuing professional development (1 week)

Work overview and Grade breakdown:

All grades are assigned to individuals, not groups. However, for some graded activities, all students in a group are assigned the same grade. For instance, when the documents (deliverable) of Phase 4 are graded, all members of the group get the same grade because they are all responsible for the content and quality of the documents. Such grading is marked (Team grading) to indicate this. All other activities are grade individually.

C-1 *Project phase 4 (4 weeks; 10% of grade)*

Phase 4 continues the work from the previous semester. Students rejoin their teams, and are given the 8 documents developed during the preceding semester. The work in this phase is to understand and refine the documents given the feedback from the end of the preceding semester. Grade is based on completion with points are taken off only for late submission of the revised documents (team grading). Feedback is given on the correctness, completeness and consistency of the documents. This feedback is intended guide revision of the deliverables that will take place in the next phase. The following are the 8 deliverables.

C-4

1. Requirements document
2. Use cases
3. User guide
4. Quality assurance plan and results
5. Evaluation plan
6. Class diagrams
7. Object interaction diagrams
8. Algorithms for all complex methods

C-2

C-1 *Project Phase 5 (8 weeks; 50% of grade)*

Phase 5 focuses on the implementation of informatics system and preparation of the final version of the 8 deliverable documents. At the midpoint of Phase 5, teams submit preliminary versions of the 8 deliverables are submitted. By this time, the user guide should include screen snapshots of the actual implementation and sufficient information of its operation to allow evaluation of the human-computer interaction. The preliminary versions of the deliverables are not graded, but are given feedback. At the end of Phase 5, each team submits the final version of the 8 deliverables as well as the source code. Team grading is based on these 9 submitted documents.

C-2

C-4

Project Final Presentation (10% of grade)

At the conclusion of Phase 5, each student must participate in their team's final presentation. The presentation demonstrates the functionality of the informatics system, how it meets its requirements and major features of its implementation. Team members are assessed on the content and organization of their part of the presentation, time control, presentation of material, etc.

C-3

C-1 *Weekly reports (5% of grade; due throughout the semester)*

Each week, each student must report the recent activities of the team, report the goals for next week, and evaluate each other member of the team's performance and contribution during the week.

C-1

Peer evaluations (5% of grade)

The peer evaluations are accumulated from the weekly reports and aggregated to become the students' final peer evaluation grade.

C-1 *Written assignments (10% of grade; 4 per semester)*

C-2 **Students are assigned four short written assignments to gather and analyze information on informatics and its applications in industry, government, education and other fields.**

C-1 *Midterm and final exams (30% of grade)*

C-2 The exams will test knowledge of the overall informatics development process. **They will include essays and will require analysis and interpretation of results.** Exams are open book and open notes. Midterm counts for 10% and final counts for 20% of the course grade.

90%-100% A

80-89 B

70-79 C

60-69 D

59 and below = E

Feedback on all work

- C-4 • The 8 deliverables of Phases 4 and 5 are submitted in both preliminary and final versions. No grade is assigned to the preliminary versions, but **feedback is given on them as soon as possible so that the team can incorporate the changes into the final version.**
- C-4 • **For oral presentations, students receive timely feedbacks on the content and organization of the slides, time control of the presentation, etc.**
- C-4 • **For weekly reports, students receive prompt feedback regarding their task assignments, individual and group progress, etc.**
- For peer evaluations, if the student did not provide objective and detailed comments on their teammates, the student is requested to give an evaluation again.

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