ARIZONA STATE UNIVERSITY
GENERAL STUDIES COURSE PROPOSAL COVER FORM

Course information:
Copy and paste current course information from Class Search/Course Catalog.

<table>
<thead>
<tr>
<th>Academic Unit</th>
<th>Computing, Informatics, and Decision Systems Engineering</th>
<th>Department</th>
<th>Industrial Engineering / Engineering Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject</td>
<td>IEE</td>
<td>Number</td>
<td>431</td>
</tr>
<tr>
<td>Is this a cross-listed course?</td>
<td>(Choose one)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is this a shared course?</td>
<td>(choose one) If so, list all academic units offering this course</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Course description:

Requested designation: (Choose One)

Note: a separate proposal is required for each designation requested

Eligibility:
Permanent numbered courses must have completed the university’s review and approval process.
For the rules governing approval of omnibus courses, contact the General Studies Program Office at (480) 965-0739.

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.

Checklists for general studies designations:
Complete and attach the appropriate checklist
- Literacy and Critical Inquiry core courses (L)
- Mathematics core courses (MA)
- Computer/statistics/quantitative applications core courses (CS)
- Humanities, Fine Arts and Design core courses (HU)
- Social and Behavioral Sciences core courses (SB)
- Natural Sciences core courses (SO/SG)
- Global Awareness courses (G)
- Historical Awareness courses (H)
- Cultural Diversity in the United States courses (C)

A complete proposal should include:
- Signed General Studies Program Course Proposal Cover Form
- Criteria Checklist for the area
- Course Syllabus
- Table of Contents from the textbook, and/or lists of course materials

Contact information:

Name: Dan McCarville, Allison Farina                     Phone: 77674, 53199
daniel.mccarville@asu.edu
Mail code: BYENG350, BYENG208                         E-mail: allison.farina@asu.edu

Department Chair/Director approval: (Required)
Chair/Director name (Typed): Ronald Askin               Date: 02/06/2013
Chair/Director (Signature):

Rev. 1/94, 4/95, 7/98, 4/00, 1/02, 10/08, 11/11/12/11, 7/12
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:

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>Identify Documentation Submitted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>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. Group projects are acceptable only if each student gathers, interprets, and evaluates evidence, and prepares a summary report.</td>
</tr>
</tbody>
</table>

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:

   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".

### C-1

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>Identify Documentation Submitted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>CRITERION 2: The composition tasks involve the gathering, interpretation, and evaluation of evidence.</td>
</tr>
</tbody>
</table>

1. Please describe the way(s) in which this criterion is addressed in the course design.

2. Also:

   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".

### C-2

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>Identify Documentation Submitted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>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.</td>
</tr>
</tbody>
</table>

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

2. Also:

   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".

### C-3
**ASU - [L] CRITERIA**

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>Identify Documentation Submitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>☒</td>
<td>☐</td>
<td>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. <em>Intervention at earlier stages in the writing process is especially welcomed</em></td>
</tr>
</tbody>
</table>

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:**
   
   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".
Course Prefix | Number | Title | Designation
---|---|---|---
IEE | 431 | Engineering Administration | 

Explain in detail which student activities correspond to the specific designation criteria. Please use the following organizer to explain how the criteria are being met.

<table>
<thead>
<tr>
<th>Criteria (from checksheet)</th>
<th>How course meets spirit (contextualize specific examples in next column)</th>
<th>Please provide detailed evidence of how course meets criteria (i.e., where in syllabus)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The two quizzes for the class are both &quot;take home&quot; exams that require several hours to complete. Each exam contains four questions that require well written essay answers of approximately two typed pages for each question. These are individual exams; they are not team assignments.</td>
<td>See the highlighted table on page 2 of the syllabus identifying points for the quizzes. These two take home exams provide 67% of the grade. The remaining 33% of the grade is based on the following: Tempe based students complete a key topic presentation, ASU Online students complete a literature review assignment.</td>
</tr>
<tr>
<td>2</td>
<td>The essay questions on the take home exams as well as the presentation and literature review assignments require students to gather the required information, interpret and summarize, evaluate, and make conclusions.</td>
<td>See the highlighted paragraph on page 2 of the syllabus, and the assignment description documents.</td>
</tr>
<tr>
<td>3</td>
<td>The two take home essay exams are substantial writing assignments. Approximately 8 typed pages each. The Tempe student presentations are performed by small teams; however each student must write their own materials and present them to the class. The ASU Online literature review assignment is a substantial writing assignment.</td>
<td>See the highlighted portion of the syllabus, and the assignment description documents.</td>
</tr>
<tr>
<td></td>
<td>The exams and assignments are graded timely. The Tempe based student presentations are graded immediately after the presentations are given throughout the semester. The ASU Online literature review has two parts. The initial report is due early in the semester and graded immediately. The final report is due approximately one week before the end of the 7.5 week semester and is also graded immediately.</td>
<td></td>
</tr>
</tbody>
</table>
IEE 431 Engineering Administration  
Course Syllabus

Instructor: Dr. Daniel R. McCarville, 480-727-7674, daniel.mccarville@asu.edu
Office Hours: TBD
Class Meeting: TBD

Teaching Assistant: TBD
TA Office Hours: TBD

Textbook: Various articles and short papers will be provided.

Optional References: TBD

Prerequisites: Must be a junior or senior Engineering BS/BSE student and have completed ENG 101. The following exposure is assumed:
- Analytical thinking capability.
- Introduction to Engineering and the principles of a systems approach.
- Introduction to Engineering Economy and the principles of economics.
- Minor awareness of how a business operates, how things get done!

Course Description: This course addresses the modern requirements to administer the engineering function.
- Administer in this class can be any activity that:
  - Deals with leading the engineering organization or
  - Deals with leading the engineering process.
- This course will address both!
- This is NOT just about manufacturing; as our service economy grows in Arizona we will be called upon to support the bank teller, the retail sales clerk and the computer technician.

Learning Objectives: This course will have the following Desired Learning Objectives
- Ability to define and apply the principles of leadership
- Ability to construct a learning organization
- Understanding of Core Competencies and their strategic contribution
- Management principles for effective organizations
- Ability to understand and apply the New Product Development process
- Strategic metrics associated with Strategic Core Processes
- Project Management principles and practices
- Systems Engineering principles and practices
- Deep understanding of how to execute to the plan
Readings, Special Materials, Assignments, and Exams
Classes will consist of reading assignment reviews, lectures, active learning exercises, and discussions.

Exams
There are two take home essay exams during the semester. Each exam will have approximately four questions, each question requiring a formally written essay answer.

Tempe based student assignment
Students will be divided into teams. Each team will select a research topic related to engineering management, leadership, or administration. The teams will gather, interpret, and evaluate their research materials. Each student will be responsible for writing and orally presenting their portion of the team presentation. The presentations will be given on dates throughout the semester that correspond to the lecture topics.

ASU Online student assignment
Students are required to write a formal literature review paper that will allow the students to explore an engineering management, leadership, or administration topic that is either of personal interest or based on their own experiences. This is an individual assignment; it is not a team assignment. There are two parts to this assignment. The first is a preliminary literature review that is worth 10 points. The second assignment is the final literature review which is worth 90 points. Students will gather their research, make interpretations, and evaluate their findings.

Grades

<table>
<thead>
<tr>
<th>Assignment</th>
<th>100 points</th>
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</thead>
<tbody>
<tr>
<td>Essay exam #1</td>
<td>100 points</td>
</tr>
<tr>
<td>Essay exam #2</td>
<td>100 points</td>
</tr>
<tr>
<td>Total</td>
<td>300 points</td>
</tr>
</tbody>
</table>

Classroom Behavior
Cell phones must be turned off during class to avoid causing distractions. Laptops must also be turned off during class with the exception of dates when laptops are required for the classroom exercise or training. The use of recording devices is not permitted during class. Any violent or threatening conduct by an ASU student in this class will be reported to the SU Police Department and the Office of the Dean of Students.

Written Assignment and Exam Integrity
SafeAssign or TurnItIn will be used for all written assignments and essay exams to prevent plagiarism and copying other students' work.
Academic Integrity
All students in this class are subject to ASU’s Academic Integrity Policy (available at http://provost.asu.edu/academicintegrity) and should acquaint themselves with its content and requirements, including a strict prohibition against plagiarism. All violations will be reported to the Dean’s Office, who maintains records of all offenses.

1. Absence & Make-Up Policies
   Accommodations will be made for religious observances provided that students notify the instructor at the beginning of the semester concerning those dates. Students who expect to miss class due to officially university-sanctioned activities should inform the instructor early in the semester. Alternative arrangements will generally be made for any examinations and other graded in-class work affected by such absences.

2. Classroom Behavior
   Cell phones and pagers (must be/or state alternative rule) turned off during class to avoid causing distractions. The use of recording devices (is/is not) permitted during class. Any violent or threatening conduct by an ASU student in this class will be reported to the ASU Police Department and the Office of the Dean of Students.

3. Academic Integrity
   All students in this class are subject to ASU’s Academic Integrity Policy (available at http://provost.asu.edu/academicintegrity) and should acquaint themselves with its content and requirements, including a strict prohibition against plagiarism. All violations will be reported to the Dean’s office, who maintain records of all offenses.

4. Disability Accommodations.
   Suitable accommodations will be made for students having disabilities and students should notify the instructor as early as possible if they will require same. Such students must be registered with the Disability Resource Center and provide documentation to that effect.
<table>
<thead>
<tr>
<th>Mod</th>
<th>General Topic</th>
<th>Specific Topic</th>
<th>Article Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Overview</td>
<td>Course Overview</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Introduction</td>
<td>The World is Flat</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Leading</td>
<td>Managing vs. Leading</td>
<td>Drucker on Leadership</td>
</tr>
<tr>
<td>4</td>
<td>Leading</td>
<td>Managing vs. Leading</td>
<td>Tower Perrin Study</td>
</tr>
<tr>
<td>5</td>
<td>Learning</td>
<td>The Learning Organization and the KW</td>
<td>Senge - Learning Organization</td>
</tr>
<tr>
<td>6</td>
<td>Core Competency</td>
<td>The Core Competence of the Corporation</td>
<td>Prahalad - Core Competencies</td>
</tr>
<tr>
<td>7</td>
<td>Expectations</td>
<td>Detailing Employee Expectations – An Employee Handbook Outline</td>
<td>Drucker on Management in the 21st Century</td>
</tr>
<tr>
<td>8</td>
<td>Leading the Knowledge Worker</td>
<td>Leadership Principles</td>
<td>Covey - Leadership Principles</td>
</tr>
<tr>
<td>9</td>
<td>Galbraith</td>
<td>The Galbraith Model - 1</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Evaluation</td>
<td>Evaluation Processes</td>
<td>Hay (2 papers) - Evaluation Systems</td>
</tr>
<tr>
<td>11</td>
<td>Rewards / Comp</td>
<td>Performance Management Systems</td>
<td>Employee Job Satisfaction and Retention Survey</td>
</tr>
<tr>
<td>12</td>
<td>New Forms of Work</td>
<td>telecommuting</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>New Forms of Work</td>
<td>– GIE and Ext. Ent</td>
<td>Palmisano - Globally Integrated Enterprise</td>
</tr>
<tr>
<td>14</td>
<td>Strategic Tech Mgt</td>
<td>Strat Tech Mgmt Intro</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>STM Details</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Metrics</td>
<td>Stealth and Blue Ocean</td>
<td>Blue Ocean Review</td>
</tr>
<tr>
<td>18</td>
<td></td>
<td>Intro to Strategic Metrics, Balanced Score Card</td>
<td>Balanced Score Card</td>
</tr>
<tr>
<td>19</td>
<td>Engineering Process</td>
<td>NPD and Gating</td>
<td>Cooper – Stage Gate Process Review</td>
</tr>
<tr>
<td>20</td>
<td>Creating an Innovative Culture</td>
<td></td>
<td>Creating an Innovative Culture</td>
</tr>
<tr>
<td>21</td>
<td>Gating</td>
<td>CD,PD,DD, Collaboration and KM</td>
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</tr>
<tr>
<td>22</td>
<td>Project Management</td>
<td>Project Management – 1</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td></td>
<td>Project Management – 2</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Six Sigma</td>
<td>Six Sigma Overview</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Problem Solving</td>
<td>8 Discipline Problem Solving Methodology</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Execution</td>
<td>Executing</td>
<td>Ram Charan Video Review</td>
</tr>
<tr>
<td>27</td>
<td>Systems Engineering</td>
<td>Systems Engineering Overview</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Gov, Risk, Comp</td>
<td>OCEG, Transparency and Accountability</td>
<td>OCEG White Paper</td>
</tr>
</tbody>
</table>

See the Teach Plan for the module dates, exams, and assignments.
Many topics are covered in this Engineering Administration class. There is not enough time to investigate many of these topics very deeply. This Literature Review assignment gives students the chance to explore a topic that is either of personal interest or based on their own experiences. Most students find this assignment very interesting!

This is an individual assignment; it is not a team assignment.

There are two parts to this assignment. The first is a preliminary literature review that is worth 10 points. The second assignment is the final literature review which is worth 90 points.

Students will choose their topic from a list of engineering administration topics.

The preliminary literature review is due at the end of the second week of the 7.5 week session. The requirements are:

- Title
- Abstract
- Outline for the final paper
- Bibliography with a minimum of four initial references.

The format for this paper, and the final paper must be professional. Use Microsoft Word for the paper. Please use a font size of 12, along with an easy to read font. Use double spacing and have a one inch margin on the top, bottom, left and right. Put your name and IEE 431 in the header of each page. Use proper bibliography formatting based on a technical journal or engineering textbook. Do not simply copy the weblink; you must include the required information for a bibliography.

The final literature review document is due at the end of week 6. The final report is worth 90 points and should be approximately 8 to 10 pages in length, and include the following:

- Title page with the title of your paper, IEE 431, date, your name, and contact information.
- Abstract
- Table of contents
- Body of the paper
- Conclusion
- Bibliography

The formatting requirements are the same as the preliminary literature review.
IEE 431 Engineering Administration – Oral Presentation

Each team will select a key topic from a provided list based on material covered in this class. The teams will research the topic gathering key information and examples. The information will be evaluated and summarized into a concise presentation. The teams will give their presentation throughout the semester on the date provided.

Each team member must write and present his/her own materials for this team presentation.

The grade for the team presentation will be based on the following criteria.

Technical content quality:
- Use of project management principles
- Project analysis
- Logical conclusions
- Completeness
- Question and answer response

Presentation quality:
- Quality of written slides
- Quality of speech
- Organization and flow
- Use of audio and visual aids
- Use of the team
- Audience involvement

The oral presentation is worth 100 points.
IEE 431 Engineering Administration Assigned Reading List

Drucker on Leadership
Tower Perrin Study
Senge – The Learning Organization
Prahalad – Core Competencies of the Corporation
Drucker on Management in the 21st Century
Covey – 7 Habits Brief Summary
Hay – Evaluation Methods
Hay – Position Evaluation
Employee Job Satisfaction and Retention Survey 2009
Palmisano – Globally Integrated Enterprise
Tobak – How to Create a Culture of Innovation
Christenson – Disruptive Innovation
Kim Mauborgne – Blue Ocean Review article 2007
Kim Mauborgne – Blue Ocean Review article 2009
Kaplan Norton – The Balanced Score Card
Cooper – Stage Gate Process Review
Linkner – 7 Steps to a Culture of Innovation
Hawker – 8D Problem Solving
Liker – The Second Toyota Paradox
OCEG – Capability Model GRC Standards Overview