Class Schedule - Fall 2014

Engineering

ENG 298  **Special Topics**  credit: 1 TO 4 hours.
Subject offerings of new and developing areas of knowledge in engineering intended to augment the existing curriculum. See Class Schedule or college course information for topics and prerequisites. Approved for both letter and S/U grading. May be repeated in the same or separate terms if topics vary.

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<th>CRN</th>
<th>Type</th>
<th>Section</th>
<th>Time</th>
<th>Days</th>
<th>Location</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>61672</td>
<td>Lecture-Discussion</td>
<td>1</td>
<td>03:00 PM - 03:50 PM</td>
<td>TR</td>
<td>241 - Everitt Laboratory</td>
<td>Valli, R</td>
</tr>
</tbody>
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Credit Hours: 2 hours
From Idea to Enterprise: This class examines the fundamentals of technology entrepreneurship and addresses critical areas of the entrepreneurship process such as: Creating a successful startup and transforming it into a sustainable business; Validating an idea and taking it to market; Evaluation of new ideas; Forming high performance teams; Financing a technology-based startup. This class combines field trips to local startups and businesses as well as the University Research Park and EnterpriseWorks incubator, in-depth case studies, and a hands-on class project. The class is intended for undergraduates of all majors interested in technology entrepreneurship and is intended to be the first class in a three course track towards a technology entrepreneurship certificate.

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<tbody>
<tr>
<td>60920</td>
<td>Discussion/Recitation</td>
<td>A</td>
<td>ARRANGED -</td>
<td>-</td>
<td>-</td>
<td>Herman, G</td>
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Credit Hours: 1 hours
Instructor Approval Required

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<tr>
<td>54524</td>
<td>Lecture-Discussion</td>
<td>CLD</td>
<td>04:00 PM - 06:40 PM</td>
<td>W</td>
<td>306 - Flagg Hall</td>
<td>Weightman, D</td>
</tr>
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Credit Hours: 3 hours
User-Oriented Collab Design
User-Oriented Collaborative Design: Students develop detailed concepts and models of authentic new products and services. Our focus is on user-oriented, collaborative approaches to design and seeking holistic solutions integrating user and functional perspectives. We emphasize the importance of process and the development of strategies. Students observe and engage people to develop a deep understanding of their values and the patterns of their lives. They work collaboratively in a studio environment to create a shared understanding of the people they design for (and with) and the product ideas they develop. Topics covered include design thinking, ethnographic methods, concept development and interaction design. This course offers an intensive design and team work experience, focused on understanding customer needs. Restricted to iFoundry Innovation Certificate students. Other students may take the course with permission of the instructor.

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<th>Instructor</th>
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<tbody>
<tr>
<td>58523</td>
<td>Lecture-Discussion</td>
<td>FFE</td>
<td>10:00 AM - 11:20 AM</td>
<td>TR</td>
<td>257 - Everitt Laboratory</td>
<td>Levinson, S</td>
</tr>
</tbody>
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Credit Hours: 3 hours
Foundations & Frontiers of Eng
ENG 298: Foundations and Frontiers of Engineering. It is widely thought that Science is concerned only with the physical world. Yet, for the last 80 years, significant effort has been devoted to adapting the principles and methods of the physical sciences to the life and social sciences. Although this work is in its early stages, it is already clear that Science can directly address such human concerns as the nature of mental and social reality. This course examines the origins, methodology, and implications of these developing mathematical theories. Each class will consist of a short (20 minute) lecture followed by open discussion of the assigned readings. Course grades will be based on weekly one page essays on the assigned subject and a final research paper on any relevant topic. The course is primarily a history of ideas course. It is recommended for all Engineering, iFoundry and IEFX students with at least one semester of calculus and physics, or sufficiently strong high school preparation or AP credit in these areas.
Heroic Systems: Tech and Cult
Advanced Composition, and Literature and the Arts course.

**Heroic Systems: Technology and Culture.** This course explores the world’s transformative engineering and technology systems, past, present and future, and is designed to help students understand more deeply how to thrive and innovate as leaders in our new millennium. It is open to all undergraduates, engineers and non-engineers, who are seeking to understand the essential questions of human life and technology through interdisciplinary approaches which integrate the humanities, arts & sciences. Through close reading of the most thought-provoking works of literature, science, history, and social thought, students will learn how the engineering transformations change culture, politics, and society. Interdisciplinary faculty and experts from engineering, humanities, arts and sciences will focus on core questions: what is a heroic system, and what are the world-changing benefits, costs, and impact?; and how do these technologies impact culture and society, political and economic life, morals and manners? Topics to be covered include Buildings & Infrastructure; Telecommunications; Passages through Water & City Life; Transportations: Planes, Trains, & Automobiles; Sports as a Heroic System; The Electric Grid; and Improving Health & Medicine: The Future of Bioengineering & Healthcare. Students are expected to write short weekly essays and a research paper centered on topics related to our discussions, and to participate in a project-based field trip to Chicago to study its great heroic systems. The course fulfills the student requirements outlined by the campus for General Education (Humanities & Arts) and Advanced Composition.

**LEGO Robotics Mentoring**
Lecture/Discussion on the fundamentals of mentoring a FIRST LEGO League team. Students will focus on programming/building a LEGO robot, strategies of mentoring, working with elementary and middle school-age students, problem solving, and continuous learning.

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**Credit Hours:** 4 hours  
**Olin Illinois Program**  
**Instructor Approval Required**  
**Restricted to students in the Olin Illinois Program.**