**Class Schedule - Fall 2016**

**Engineering**

ENG 198 **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.

<table>
<thead>
<tr>
<th>CRN</th>
<th>Type</th>
<th>Section</th>
<th>Time</th>
<th>Days</th>
<th>Location</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>60321</td>
<td>Discussion/Recitation</td>
<td>AD1</td>
<td>02:00 PM - 03:20 PM</td>
<td>TR</td>
<td>203 - Transportation Building</td>
<td>Witmer, A</td>
</tr>
</tbody>
</table>

Credit Hours: 2 hours
Inspiring Interacting Informing
Meets 19-Sep-16 - 07-Dec-16.

Inspiring, Interacting and Informing- Secret Weapons of an Engineering Leader: Engineering leaders need to be technically proficient and knowledgeable. But the greatest leaders in engineering possess more than technical expertise to turn their ambitions and aspirations into reality. They display emotional intelligence, curiosity, a collaborative spirit, and a dedication to communicating their objectives and opinions clearly and concisely. This course will focus on building leadership skills through practice and peer-evaluation in a friendly, constructive atmosphere. Particular attention will be given to written and spoken communications, constructive dispute resolution, personal initiative, and entrepreneurial development for students who see themselves as future leaders of student organizations here at Illinois and in the workplace.
Restricted to First Time Freshman students.

| 54771 | Lecture-Discussion | EA    | 08:00 PM - 08:50 PM | W   | 106B3 - Engineering Hall | Amos, J Brunet, M |

Credit Hours: 1 hours
Technical Communication
Instructor Approval Required
Enrollment only for Engineering Ambassadors.

| 57135 | Lecture-Discussion | EB    | 09:00 AM - 09:50 AM | MW  | 106B6 - Engineering Hall | Amos, J Brunet, M |
|       | Lecture-Discussion | EB    | 07:00 PM - 08:50 PM | W   | 106B6 - Engineering Hall | Amos, J Brunet, M |

Credit Hours: 2 hours
Technical Communication
Instructor Approval Required
Restricted to Engineering. Restricted to students with Freshman, Sophomore, or Junior class standing.
Meets 10-Oct-16 - 07-Dec-16.
Engineering communication course focused on presentation techniques. Both didactic and hands-on training in tailoring presentation content, visual aids, delivery, and team dynamics. Students interested in the class must email Dean Brunet with their interest statement to get approval.

| 67058 | Lecture-Discussion | FAS   | 12:30 PM - 01:45 PM | TR  | 1103 - Siebel Center for Comp Sci | Orawiec, J |

Credit Hours: 1 hours
Undergrad Research Lab Safety
Restricted to Engineering.
Meets 17-Oct-16 - 07-Dec-16.
Essentials of safe laboratory practice. Topics include chemical, electrical, biological and radiation safety, waste disposal and fire hazards. Lecture and demonstration format. Essential for students who will perform undergraduate research in a laboratory. Restricted to students in the Engineering College. Physics, Chemical & Biomolecular Engineering, Agricultural & Biological Engineering and Chemistry: contact instructor for override.

<table>
<thead>
<tr>
<th>CRN</th>
<th>Title</th>
<th>Instructor</th>
<th>Days</th>
<th>Time</th>
<th>Location</th>
<th>Credit Hours</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>62652</td>
<td>Essentials of Safe Laboratory Practice</td>
<td>Larson, S</td>
<td>M</td>
<td>02:00 PM - 02:50 PM</td>
<td>143 - Loomis Laboratory</td>
<td>1 hours</td>
<td></td>
</tr>
<tr>
<td>63470</td>
<td>First-Year Women Engineers</td>
<td>Larson, S</td>
<td>W</td>
<td>03:00 PM - 03:50 PM</td>
<td>145 - Altgeld Hall</td>
<td>1 hours</td>
<td></td>
</tr>
<tr>
<td>67259</td>
<td>First-Year Women Engineers</td>
<td>Bradley, J</td>
<td>R</td>
<td>05:00 PM - 05:50 PM</td>
<td>1103 - Siebel Center for Comp Sci</td>
<td>1 hours</td>
<td></td>
</tr>
<tr>
<td>67260</td>
<td>First-Year Women Engineers</td>
<td>Bradley, J</td>
<td>R</td>
<td>05:00 PM - 05:50 PM</td>
<td>1105 - Siebel Center for Comp Sci</td>
<td>1 hours</td>
<td></td>
</tr>
</tbody>
</table>

Credit Hours: 1 hours
First-Year Women Engineers
Restricted to Agr, Consumer, & Env Sciences, Engineering, or Liberal Arts & Sciences. Restricted to Civil Engineering or Computer Engineering or Computer Science or Electrical Engineering or Engineering Mechanics or Engineering Physics or General Engineering or Industrial Engineering or Materials Science & Engr or Mechanical Engineering or Chemical Engineering or Bioengineering or Electrical & Computer Engr or Aerospace Engineering or Agricultural & Biological Engr or Nuclear, Plasma, Radiologic Engr or Engineering Undeclared major(s).
Meets 19-Sep-16 - 07-Dec-16.
Leadership and professional skill development for first-year women in engineering students. Additional focus on academic success strategies and utilizing University of Illinois resources to enhance your first-year experience. Restricted to First Time Freshmen.

Credit Hours: 1 hours
Grand Challenge Solar Energy
Restricted to students with Freshman class standing.
Meets 19-Sep-16 - 07-Dec-16.
Grand Challenge 1: Make Solar Energy Economical - Based on the National Academy of Engineering’s 14 Identifiable grand challenges, this course will enhance your ability to stimulate the critical thinking skills and project development surrounding these challenges, which have the potential to make a global impact. Together with fellow students and a faculty advisor, you focus on a subset of the listed challenges for this section to enhance your ability to address real world problems as an engineer. http://www.engineeringchallenges.org/cms/cvhallenges.aspx

Credit Hours: 1 hours
Grand Challenge Fusion Energy
Restricted to students with Freshman class standing.
Meets 19-Sep-16 - 07-Dec-16.
Grand Challenge 2: Provide Energy from Fusion - Based on the National Academy of Engineering's 14 Identifiable grand challenges, this course will enhance your ability to stimulate the critical thinking skills and project development surrounding these challenges, which have the potential to make a global impact. Together with fellow students and a faculty advisor, you focus on
Grand Challenge Carbon Sequestration Methods - Based on the National Academy of Engineering’s 14 Identifiable grand challenges, this course will enhance your ability to stimulate the critical thinking skills and project development surrounding these challenges, which have the potential to make a global impact. Together with fellow students and a faculty advisor, you focus on a subset of the listed challenges for this section to enhance your ability to address real-world problems as an engineer. http://www.engineeringchallenges.org/cms/cvhallenges.aspx

Grand Challenge 5: Provide Access to Clean Water - Based on the National Academy of Engineering’s 14 Identifiable grand challenges, this course will enhance your ability to stimulate the critical thinking skills and project development surrounding these challenges, which have the potential to make a global impact. Together with fellow students and a faculty advisor, you focus on a subset of the listed challenges for this section to enhance your ability to address real-world problems as an engineer. http://www.engineeringchallenges.org/cms/cvhallenges.aspx

Grand Challenge 6: Restore and Improve Urban Infrastructure - Based on the National Academy of Engineering’s 14 Identifiable grand challenges, this course will enhance your ability to stimulate the critical thinking skills and project development surrounding these challenges, which have the potential to make a global impact. Together with fellow students and a faculty advisor, you focus on a subset of the listed challenges for this section to enhance your ability to address real-world problems as an engineer. http://www.engineeringchallenges.org/cms/cvhallenges.aspx

Grand Challenge The Brain - Based on the National Academy of Engineering’s 14 Identifiable grand challenges, this course will enhance your ability to stimulate the critical thinking skills and project development surrounding these challenges, which have the potential to make a global impact. Together with fellow students and a faculty advisor, you focus on a subset of the listed challenges for this section to enhance your ability to address real-world problems as an engineer. http://www.engineeringchallenges.org/cms/cvhallenges.aspx
<table>
<thead>
<tr>
<th>Course ID</th>
<th>Type</th>
<th>Time</th>
<th>Location</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>67270</td>
<td>Lecture-Discussion</td>
<td>05:00 PM - 05:50 PM</td>
<td>GCY</td>
<td>R 344 - Mechanical Engineering Bldg Bradley, J</td>
</tr>
<tr>
<td>52579</td>
<td>Lecture-Discussion</td>
<td>10:00 AM - 11:50 AM</td>
<td>IEF</td>
<td>F 206 - Transportation Building Goodman, M</td>
</tr>
<tr>
<td>57825</td>
<td>Lecture</td>
<td>10:00 AM - 10:50 AM</td>
<td>IS</td>
<td>MWF 106B6 - Engineering Hall Witmer, A</td>
</tr>
<tr>
<td>56323</td>
<td>Lecture</td>
<td>03:00 PM - 04:50 PM</td>
<td>POE</td>
<td>MW 2320 - Digital Computer Laboratory Alleyne, A Bradley, J Krein, P</td>
</tr>
</tbody>
</table>

Credit Hours: 1 hours  
Grand Challenge Virtual Real  
Restricted to students with Freshman class standing.  
Meets 19-Sep-16 - 07-Dec-16.  
Grand Challenge 12: Enhance Virtue Reality - Based on the National Academy of Engineering’s 14 Identifiable grand challenges, this course will enhance your ability to stimulate the critical thinking skills and project development surrounding these challenges, which have the potential to make a global impact. Together with fellow students and a faculty advisor, you focus on a subset of the listed challenges for this section to enhance your ability to address real world problems as an engineer. [http://www.engineeringchallenges.org/cms/cvchallenges.aspx](http://www.engineeringchallenges.org/cms/cvchallenges.aspx)

Credit Hours: 1 hours  
Grand Challenge Cyberspace  
Meets 19-Sep-16 - 07-Dec-16.  
Grand Challenge 11: Provide Energy from Fusion - Based on the National Academy of Engineering’s 14 Identifiable grand challenges, this course will enhance your ability to stimulate the critical thinking skills and project development surrounding these challenges, which have the potential to make a global impact. Together with fellow students and a faculty advisor, you focus on a subset of the listed challenges for this section to enhance your ability to address real world problems as an engineer. [http://www.engineeringchallenges.org/cms/cvchallenges.aspx](http://www.engineeringchallenges.org/cms/cvchallenges.aspx)

Credit Hours: 2 hours  
IEFX Research  
Meets 19-Sep-16 - 07-Dec-16.  
One reason to experience Engineering at Illinois is the research, and this class is an introduction. You will learn about methods and conduct a project, presenting your results at the IEFX Explorations event in December. You will explore options to be involved beyond the class, and if interested, you may initiate contact with faculty to join a research project/team or start your own.  
Restricted to First Time Freshman students.

Credit Hours: 2 hours  
Introduction to Sustainability  
Meets 19-Sep-16 - 07-Dec-16.  
In this course, we will learn about issues related to sustainability and sustainable practices, both in engineering and in our personal lives. You will apply these sustainability practices to an engineering process or product.  
Restricted to First Time Freshman students.

Credit Hours: 2 hours  
Personal Mobility Innovations  
Meets 19-Sep-16 - 07-Dec-16.  
This course is offered as a collaboration between The Center for Power Optimization of Electro-Thermal Systems (POETS) and the Illinois Engineering First-Year Experience (IEFX). In this class you will have a multi-disciplinary, hands-on, experiential learning experience where you will enhance your project development skills, project management skills, engineering design skills, and communication skills. The focus of this course will be to understand the current state of personal mobility and to envision and to create a future of what can be.
Restricted to First Time Freshman students.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Type</th>
<th>Section</th>
<th>Time</th>
<th>Days</th>
<th>Location</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>56321</td>
<td>Lecture PR1</td>
<td>MW</td>
<td>11:00 AM - 12:50 PM</td>
<td>MW</td>
<td>2320 - Digital Computer Laboratory</td>
<td>Bradley, J</td>
</tr>
</tbody>
</table>

Credit Hours: 2 hours
IEFX Projects 1
Meets 19-Sep-16 - 07-Dec-16.
IEFX Projects - Reinforcing the fundamental concepts introduced in ENG 100, you will work in small teams on real engineering projects led by experienced Engineering Learning Assistants. You learn problem-solving strategies and build skills in group formation, project management, communication, and teamwork. The subject of the projects will help you explore your interests and aspirations. Projects may be of your own creation or chosen from an instructor prepared list.
Restricted to First Time Freshman students.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Type</th>
<th>Section</th>
<th>Time</th>
<th>Days</th>
<th>Location</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>56315</td>
<td>Lecture PR2</td>
<td>MW</td>
<td>01:00 PM - 02:50 PM</td>
<td>MW</td>
<td>2320 - Digital Computer Laboratory</td>
<td>Bradley, J</td>
</tr>
</tbody>
</table>

Credit Hours: 2 hours
IEFX Projects 2
Meets 19-Sep-16 - 07-Dec-16.
IEFX Projects - Reinforcing the fundamental concepts introduced in ENG 100, you will work in small teams on real engineering projects led by experienced Engineering Learning Assistants. You learn problem-solving strategies and build skills in group formation, project management, communication, and teamwork. The subject of the projects will help you explore your interests and aspirations. Projects may be of your own creation or chosen from an instructor prepared list.
Restricted to First Time Freshman students.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Type</th>
<th>Section</th>
<th>Time</th>
<th>Days</th>
<th>Location</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>60395</td>
<td>Lecture-Discussion REN</td>
<td>T</td>
<td>11:00 AM - 11:50 AM</td>
<td>T</td>
<td>106B3 - Engineering Hall</td>
<td>Bradley, J Witmer, A</td>
</tr>
</tbody>
</table>

Credit Hours: 1 hours
Renaissance Engineer
Meets 19-Sep-16 - 07-Dec-16.
Are you someone who likes to connect different fields (e.g., art, science, design, or history)? Based on the premise that broad interdisciplinary knowledge promotes creativity, this course allows you to explore wide ranging topics and then connect your new learning to engineering and the solving of global problems. You will study a few preliminary topics to help establish a renaissance mindset, and then you will study one topic of your own choosing in depth. You will create a plan to continue your development as a renaissance engineer.
Restricted to First Time Freshman students.