Course title and number    ISEN 460 Capstone Senior Design
Term (e.g., Fall 200X)    Fall 2016
Meeting times and location    TBD

Course Description and Prerequisites
Engineering design including identification of a problem; development, analysis and evaluation of alternative solutions; and recommendations for and, where possible, development of systems improvement tools; application of experience and training to provide a product or solution that helps company clients; balancing client needs with academic requirements.
Prerequisites: ISEN 340, ISEN 350, ISEN 355 and ISEN 370

Learning Outcomes
At the end of the course, the Student should be able to

- Use skills from any or all their previous courses,
- Work as a team to solve real-life engineering problems,
- Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability, and
- Consider alternative designs and contrast them in their recommendations.

Instructor Information
Name    TBD
Telephone number    TBD
Email address    TBD@tamu.edu
Office hours    TBD
Office location    TBD

Textbook and/or Resource Material
None; handouts and projects will be provided.
**Grading Policies**

Class 20%, Team meetings 10%, Proposal 20%, Final Video 25% and Final Report 25%.

Grades assigned are A for 90%–100%, B for 80%–89.9%, C for 70%–79.9%, D for 60%–69.9% and F for less than 60%.

Since this is a writing intensive course, you must pass writing to pass the course; thus, if your written report grade is less than 60%, your course grade will be an F even if all other grades are 100%. The writing grade consists of the proposal and final report, which add up to 45% of the total grade for this course.

**Attendance and Make-up Policies**

Attendance in this course is mandatory and graded. Students are expected to attend all classes, weekly team meetings and final presentations. Poor attendance will be reflected in both the attendance grade and the team meeting grade as appropriate. Excused absences will be dealt with strictly in accordance with university rules (http://student-rules.tamu.edu).

**Course Topics, Calendar of Activities, Major Assignment Dates**

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Required Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to the course, introduction to clients, formation of teams.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Project preferences, code of conduct.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Teams decided and discussion of projects.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>On-site visits.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Proposal draft</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Proposal approval and edits.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Midterm review</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Alternative design options</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Evaluation of alternate designs</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>System modeling.</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Verification and Validation.</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Computational results and recommendations</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Final report draft</td>
<td></td>
</tr>
</tbody>
</table>
Other Pertinent Course Information

Other than class work, weekly meetings with the corporate sponsor’s point-of-contact (POC) are highly desired. These meetings can be done via a conference telephone call, video conference, or on-site visit (e-mail correspondence does not qualify). All group members must be present with exceptions being made only for university excused absences. Meeting times will be arranged between the individual team leader and the corporate sponsor’s POC.

Americans with Disabilities Act (ADA)

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit http://disability.tamu.edu

Academic Integrity

For additional information please visit: http://aggiehonor.tamu.edu

“An Aggie does not lie, cheat, or steal, or tolerate those who do.”

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning and to follow the philosophy and rules of the Honor System. Ignorance of the rules does not exclude any member of the Texas A&M University community from the requirements or the processes of the Honor System. For additional information please visit: http://student-rules.tamu.edu/; http://student-rules.tamu.edu/aggiecode; and http://student-rules.tamu.edu/rule20. The complete information of university regulations regarding the handling of academic misconducts (including the appeal process) can be found at http://aggiehonor.tamu.edu/.

I, <insert instructor name>, as the rest of the Industrial & Systems Engineering Faculty, uphold the Aggie Honor Code as an axiom of our academic excellence. We consider its sincere observance to be essential for membership in our department and Texas A&M. We extend you the trust conferred to those who faithfully adhere to our honor code. Abuse of this trust is intolerable, thus I will report and assign an extreme penalty to those who do not stand with us in preserving the integrity symbolized by the Aggie Honor Code, “An Aggie does not lie, cheat, or steal or tolerate those who do.”

In this course the penalty for any violation of the Aggie Honor Code, as minimal as it may be, is F*.