

**MS&E 108 SENIOR PROJECT 2011-2012**  
**Five Fridays, 10:00 a.m. Econ 140**  
**(Class times and location might be different for final presentations.)**  
**<http://msande108.stanford.edu>**

**MS&E 108 COURSE DESCRIPTION**

The course faculty this year are Sabina Alistar, Margaret Brandeau, Chuck Eesley, Riitta Katila, Jim Primbs, and Ross Shachter (**course coordinator**).

This course is devoted completely to your senior project. You form four-person teams, preferably in December 2011, but no later than January 13, 2012. Each team is responsible for locating an organization with a project that can be approached using methodology learned in your MS&E courses. MS&E faculty have contacts at a number of local organizations with potential projects. Contact Prof. Shachter as soon as possible for details if you anticipate needing assistance identifying a project. (You must form and register a four-person team before requesting project leads.)

Your team will be assigned a faculty advisor who will serve as a combination consultant and taskmaster throughout the quarter, and who must approve your project. Both a written and an oral report are required. You should work with the Communications Program in the School of Engineering for help with your oral report. Finally, just as in the "real world," deadlines are crucial, and missing them bears consequences.

**STANDARDS FOR PROFESSIONAL BEHAVIOR**

The course prepares our students for careers as professionals applying the concepts of management science. Students should think of 108 as training for the real world where tardiness and absences reflect on your qualifications. We expect professional behavior from students, including being proactive and assuming responsibility rather than making excuses for progress not made. Being punctual for meetings with your faculty advisor and industry clients, attending all class and group sessions, and delivering quality written materials on time are part of these norms. Your grade will reflect your ability to meet these norms.

Scheduled class meetings and weekly individual project team meetings with your team's faculty advisor will be held throughout the quarter. These meetings are not numerous, but they are very important. **Each member of the class is expected to attend every scheduled class meeting and advising meeting and be on time.**

Grades will be based primarily on the final oral and written reports, as evaluated by your faculty advisor. Advisors will take into account your contribution to the team's efforts, and your attendance at class and project team meetings.

**PROJECT DESCRIPTION**

*The project description is due by 11pm on Tuesday January 24, 2012, submitted via the course web site. It describes the problem your team will be tackling, what you plan to do,*

and how you plan to do it, and it allows us to assign faculty advisors to teams. It contains the following sections:

1. Project title;
2. Administrative information (client organization; names, telephone numbers and emails of all team members and your organization contact);
3. Statement or description of the problem, approaches you plan to use, and nature of the results you plan to deliver; and
4. A schedule of 5-6 available meeting times (one hour blocks between 8am-6pm, Monday-Friday) when your **entire team** can meet with a faculty advisor.

### **PROJECT TEAM MEETINGS**

All teams will be responsible for scheduling weekly meetings with their faculty advisor at a mutually convenient time. All team members are expected to attend each meeting. In preparation for each meeting, your team should email a one or two page summary at least 24 hours prior to the meeting, copying everyone on the team. The summary should contain these items:

1. A review of work accomplished since the last meeting,
2. A description of what work will be done next, and
3. A list of questions and issues to be discussed at the meeting.

To facilitate preparation for your team's meeting with your faculty advisor, you should schedule a **second, working meeting** with your team once each week, several days prior to the meeting with your faculty advisor.

### **WRITTEN REPORT**

You submit your final written report to your faculty advisor (in hardcopy), the client organization, and the course archives. Your written report should contain these items:

- letter of transmittal to the client organization (attached to the report)
- cover page
- one-page Executive Summary
- one-page table of contents
- report sections as follows (modified to suit your particular project):
  - introduction (including organization background, nature of the problem, and project description)
  - methods (including any model and data collection)
  - results
  - conclusions and recommendations
  - technical appendices

Please use at least 1.5 line spacing and reasonable font size for readability; number body pages 1, 2 ... and Appendix pages A-1, B-1, B-2, C-1, ... and use those numbers when referring to material in an Appendix.

There is no minimum or maximum number of pages in the body of the report or in the appendices. Typical reports will have a body length of between 10 and 20 pages and between 5 and 15 pages of Appendix material.

Discuss the content with your faculty advisor. Ideally, you should prepare sections of the report (e.g., project description, methods, etc.) as you progress along the project timeline. Your grade will almost surely suffer if you leave all the writing to the end.

The written report will comprise the majority of your course grade, as modified by your attendance and contribution to the project's success. In grading reports, faculty advisors evaluate both technical content and presentation style (including such things as appropriate organization, use of headings, clear explanations and charts, and absence of grammatical errors or misspellings). The report should clearly reflect the effort you exerted during the quarter as well as the quality of your solution; in other words, it should represent your achievement. You may ask your advisor to discuss with you specifics of what he or she expects in the context of your particular project.

You should submit the final written report to your faculty advisor, your client organization, and the course archives by the last day of class (March 16, 2012).

### **ORAL PRESENTATION**

Near the end of the quarter, each team will make a 12-minute oral presentation to the class. All team members should participate equally, both in time and effort. Please bring your presentation to class on a memory stick as a backup, and submit it afterwards to the course archives. Dress code for is business professional, such as suits.

Please inform the people you have worked with at the client organization that they are welcome to attend our final oral presentations. They truly enjoy being invited, being introduced to the class, and listening to the results of projects. You also may offer to present your findings to the organization.

All teams are expected to schedule and attend **at least two** tutorials with the staff of the School of Engineering's Oral Communication Program in the Terrace level of the Huang Engineering Center. The first tutorial should be at least **a week** before your presentation in class. The second tutorial should be at least **three** days before your talk. Additional tutorials (in which your team could be videotaped) are highly recommended.

Every year Accenture sponsors monetary awards to be split between the top two senior project oral presentations in MS&E 108. A panel of judges will determine the winning teams based solely on the oral presentations, and the awards will be presented at commencement. Criteria for judging the presentations include ample motivation for the problem, clarity of exposition, sufficient support for the methodology, clear explanation of the results, degree to which the client might be expected to be satisfied, and soundness of presentation skills (e.g., appropriate organization, good visual aids, proper pacing and pitch, professional demeanor, and so forth).

## SCHEDULE OF CLASS MEETINGS AND DELIVERABLES

The class meets only five times during the quarter, on Fridays in Econ 140.

The first three meetings will be held at 10 a.m. for about an hour.

The other two meetings, at the end of the quarter, will be at least two hours, but the times and location might change to accommodate all team presentations.

**ALL team members must be present and on-time at each meeting marked in bold.**

*You are expected to attend all the weekly meetings with your faculty advisor, and to submit all materials by their due dates as noted below.*

- Fri, Jan 13    Brief Meeting: Announcements and Team Identification**  
Finalize teams and, if possible, projects.
- Fri, Jan 20    Brief Meeting: Team Formation and Project Matching**  
Required of any students still forming teams or teams still looking for projects.
- Tues, Jan 24    By 11pm you must submit your Project Description on the web.
- Thurs, Jan 26    Assignment of Faculty Advisors
- Fri, Feb 3     Communications Presentation by School of Engineering Staff**
- Fri, Feb 10    Submission of Written Report Introduction to Advisor:  
Email a draft of your report introduction to your faculty advisor by 5 p.m.  
Include material from your Project Description, expanded as appropriate.
- Fri, Feb 24    Submission of Written Report Outline to Advisor:  
Email the outline of your report to your advisor by 5 p.m.
- Fri, Mar 2     Submission of draft Written Report to Advisor:  
Hand in a complete draft of your report to your advisor by 5 p.m.
- Fri, Mar 9     Oral Presentations (in class)**
- Fri, Mar 16    Oral Presentations (in class)**
- Fri, Mar 16    Submission of Written Report to Advisor and Client Organization:  
Hand in your complete Written Report to your advisor by 5 p.m.  
Also submit a copy of your report and slides to the course archives.