Course Outline
Engineering and Design I, ENGG*1100
University of Guelph
School of Engineering
Fall 2012

Instructors

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Alex Galvez (Graphics instructor)	Thornbrough Room 2363 ext. 53663 agalvez@uoguelph.ca Office hrs: by appointment

Graduate Teaching Assistants (GTAs) There are ten (10) GTAs assigned to this course. You will meet them during the seminars and labs.

Required Text Engineering Graphics Essentials With AutoCAD 2010 Instruction", K. Plantenberg, SDC Pubs. ISBN 978-1-58503-517-5 (Text only)

Recommended Text "Introduction to Engineering and Design, Custom Edition for the University of Guelph", Fogler & Leblanc/ Stephan & Park/ Voland/ Andrews/Aplevich/MacGregor. Pearson Learning Solutions. ISBN 1256824437.

Schedule

Lectures:	Tue. & Thu.	8:30-9:20	ROZH 101
Design Seminars:	Check WebAdvisor for your specific seminar section		
Graphics Labs:	Check WebAdvisor for your specific lab section		

It is the responsibility of the students to stay up-to-date with all assignments and other milestones by attending the lectures, seminars and labs and regularly checking Courselink (https://courselink.uoguelph.ca).

Course Description

Engineering and Design I is intended to provide a firm basis for engineering design that will be broadly applicable in all areas of engineering. Students integrate basic science, mathematics, and complementary studies to develop and communicate engineering solutions to specific needs using graphical, oral, and written means. Application of computer-aided drafting, spreadsheets, and other tools to simple engineering design problems is stressed. The practice of professional engineering and the role of ethics in engineering are also covered.

This is a course designed to introduce students to engineering and the process of engineering design and analysis. Introduced are some of the key tools used in engineering including the use of spreadsheets (Excel), word processors (Word), and graphics (AutoCAD 2010). Emphasis is on developing skills with elementary tools

which will be used throughout the engineering program and beyond, the importance of communication through drawings, presentations and writing and the key steps in solving most engineering problems.

Course Learning Objectives

Important course objectives include:

- developing engineering skills necessary to address technical problems,
- developing a systematic methodology for design,
- acquiring good engineering communication skills,
- building analytical/design skills,
- learning problem solving, and decision-making techniques,
- gaining teamwork and project management skills, and
- becoming familiar with the technical drawing and graphics language as a means of expressing and communicating an engineering design.

Grade Evaluation

Deliverables (Assignments) and participation in labs and seminars	50%
Graphics practical tests	30%
Final Exam	20%

Important Notes

- Some deliverables will be due at the end of your scheduled design seminar/graphics lab session. These must be submitted by the end of the lab or seminar session. If you have not completed the deliverable, submit what you have completed. **Late assignments will not be marked.**
- Individual and original deliverables are to be submitted by each student unless otherwise indicated. For group deliverables, each group must submit an original deliverable.
- Attendance in assigned lab and seminar sessions is **essential**. Final and updated instructions will be provided during the lab and seminar sessions.
- All assignments must be clearly legible, and include student name and identification number. Illegible assignments will not be marked.
- Communications regarding this course will frequently involve the use of CourseLink (http://courselink.uoguelph.ca/) and e-mail. Students are responsible for checking the CourseLink web site and your university email account for instructions and announcements. It is expected that this will be done at least once every week.
- **First: Learning resources for first-year students.** First is a collection of resources, services, and technologies designed to help make the transition to university learning smooth and successful. Visit the First website to register for workshops, find out about Supported Learning Groups, and make individual appointments with staff or Peer Helpers. http://www.lib.uoguelph.ca/first/
- The instructors of ENGG*1100 reserve the right to change the course material, procedures and marking methods in this outline at any time during the course at their discretion. All changes will be duly communicated to the students.

Term Project

Each student is required to complete a term project as part of this course. Projects are to be undertaken in groups of five to six students from the *same design seminar section*. Project groups will be assigned in the first seminar sections during the week of September 10, 2012. The instructors and teaching assistants may add students to groups, or change group membership, after initial group formation.

The project will comprise of several milestones and deliverables (see Design Project handout). Each deliverable will be reviewed and marked by GTAs and/or the instructors and feedback will be provided in a timely fashion.

The marks allocated to the project-related deliverables will be added up and will constitute the overall project mark for each student team. Many of the project-related deliverables will be completed, and sometimes submitted during the seminar and labs sessions and as such, ***attendance in all designated labs and seminar sessions is of utmost importance for all students.***

The final project mark for each member of a design group will depend on his/her performance within the group. Each member of the group will be responsible for submitting a Group Performance Summary to identify their individual contribution relative to the rest of the group. In addition, every group member will be evaluated by her/his group members and based on this evaluation will receive her/his individual mark. The final mark is a combination of the group mark and peer evaluation marks.

Other Assignments

In addition to the project-related deliverables, there will be other assignments. These assignments relate to the process of design communication and include graphical and written materials as well as data analysis and presentation. Some of these assignments may be submitted at the end of each lab by individual students (Note: these are individual and not group assignments). As such, ***attendance in all designated lab sessions is essential for all students***.

Graphics Practical Tests

There will be three practical tests of graphics skills during the semester. Dates for these test will be announced later in the semester. These practical tests will be held in the computer lab (room 2313). Each student will complete these practical tests within the lab period. The practical tests will be held during your lab section.

Project Presentation

Each student group will present their final project to their colleagues and the public at a public forum on the evening of Wednesday, Nov. 28.

Final Exam

The final exam is a two-hour examination conducted in a central location. It is scheduled for Dec. 7, 2012, from 19:00 to 21:00. The location will be announced. The exam will include all materials covered during lectures, labs and seminars.

Math Diagnostic Test and ENGG*001

A mathematics diagnostic test will be held on **Thursday, September 13th, 2012** in your ENGG*1100 class. The test is intended to provide information about your mathematical strengths and weaknesses. This information is also the basis for ENGG*001: Fundamentals of Mathematics, a course which focuses on the mathematics that you will need as an Engineering student. In order to agree with as many schedules as possible, the same material will be taught twice a week; **Tuesdays and Thursdays in THRN*1307 from 5:30pm-6:50pm** starting the week of September 18, 2012.

University Policy on Academic Misconduct

Academic misconduct, such as plagiarism, is a serious offence at the University of Guelph. Please consult the current Undergraduate Calendar and School of Engineering program guide for offences, penalties and procedures relating to academic misconduct.
http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml