SCHULICH School of Engineering

COURSE OUTLINE
Fall 2013

1. Calendar Information

ENGO500 Geomatics Engineering Project

Principles of project management and applications in Geomatics projects. Group project, under the supervision of a Faculty Member, on an assigned Geomatics Engineering topic. The project will normally involve a literature review, theoretical work, and laboratory or field work. Submission and defence of project reports and a final report are required.

Course Hours: F(1-5)

Calendar Reference:

http://www.ucalgary.ca/pubs/calendar/current/geomatics-engineering.html#10197

2. Learning Outcomes

At the end of this course, you will be able to:

1. Design and plan a project, and carry the project through to completion working in a team environment.
2. Solve design problems in the project by synthesizing skills learned in a variety of courses taken during the course of the Geomatics Engineering degree program.
3. Communicate effectively within your team, with your advisor, and with the Course Coordinator.

3. Timetable

Section	Days of the Week	Start Time	Duration (Minutes)	Location
L01	F	13:00	50	ENE 328

4. Course Instructors

Course Coordinator

Section	Name	Phone	Office	Email
L01	Dr. W. F. (Bill) Teskey	403-220-7397	EN B9	wteskey@ucalgary.ca

5. Examinations

There will be no examinations in this course.

6. Use of Calculators in Examinations

N/A

7. Final Grade Determination

The final grade in ENGO500 will be based on the following components:

Component	Assessed by	% Final Grade
Proposal (10pp)	Coordinator[Dr. W. F. Teskey]	10
Literature Review(20pp Report)	Advisor[see list below]	10
Technical Deliverables(20pp Report)	Written: Advisor(10%) Oral: Coordinator(5%)	15
Progress Report (20pp)	Written: Advisor(10%) Oral: Coordinator(5%)	15
Final Report (100pp)	Written: Advisor(40%) Oral: Panel of Faculty Members(10%)	50
	Total	**100%**

Advisors: Drs. Mike Barry, Yang Gao, Gerard Lachapelle, Mark Petovello, Andrew Hunter, Steve Liang, Ayman Habib, Quassi Hassan, Michael Collins. All Advisors can be contacted by email on Blackboard.

8. Textbook

No textbooks are required or recommended for this course.

9. Course Policies

Advising Syllabus

All Schulich School of Engineering students and instructors have a responsibility to familiarize themselves with the policies described in the Schulich School of Engineering Advising Syllabus available at:

http://schulich.ucalgary.ca/undergraduate/advising

Emergency Evacuation/Assembly Points

In the event of an alarm sounding, all classrooms and labs must be evacuated immediately. Please respond to alarms promptly by leaving the building by the closest available exit. Faculty and students must remain outside the building until the 'all clear' has been given by a Fire Marshall. In case of emergency, call 220-5333.

Assembly Points have been identified across campus. These areas have been selected as they are large enough to hold a significant number of people and will provide an evacuated population access to washroom facilities and protection from the elements. More information on assembly points can be found at http://www.ucalgary.ca/emergencyplan/assemblypoints.

10. Additional Course Information

Information from the CEAB

Excerpt from the Canadian Engineering Accreditation Board (CEAB) guidelines for engineering degree programs:

"The engineering curriculum must culminate in a significant design experience which is based on the knowledge and skills acquired in earlier course work and which preferably gives students an exposure to the concepts of team work and project management."

Design is further defined by the CEAB:

"Engineering design integrates mathematics, basic sciences, engineering sciences and complementary studies in developing elements, systems and processes to meet specific needs."

Workload Expectations

Note that ENGO 500 represents one-sixth of the academic workload in fourth year and, as such, each student is expected to devote an average of 10 hours per week to the project.

Fall 2013 Timetable

Date	Activity
13 September	Course Introduction (ENE 328)
20 September	Meeting of Coordinator and Team Leaders (ENE 328)
27 September	Meeting of Coordinator and Team Leaders (ENE 328)
4 October	Meeting of Coordinator and Team Leaders (ENE 328)
11 October	Meeting of Coordinator and Team Leaders (ENE 328)
18 October	Meeting of Coordinator and Team Leaders (ENE 328)
25 October	Meeting of Coordinator and Team Leaders (ENE 328)
1 November	Meeting of Coordinator and Team Leaders (ENE 328)
15 November	Meeting of Coordinator and Team Leaders (ENE 328)
22 November	Technical Deliverables Report Presentations (ENE 328)
29 November	Technical Deliverables Report Presentations (ENE 328)
6 December	Technical Deliverables Report Presentations (ENE 328)

Winter 2014 Timetable

Date	Activity
10 January	Meeting of Coordinator and Team Leaders (ENE 328)
17 January	Meeting of Coordinator and Team Leaders (ENE 328)
24 January	Meeting of Coordinator and Team Leaders (ENE 328)
31 January	Progress Report Presentations (ENE 328)
7 February	Progress Report Presentations (ENE 328)
14 February	Progress Report Presentations (ENE 328)
21 February	Reading Week
28 February	Meeting of Coordinator and Team Leaders (ENE 328)
7 March	Meeting of Coordinator and Team Leaders (ENE 328)
14 March	Meeting of Coordinator and Team Leaders (ENE 328)
21 March	Meeting of Coordinator and Team Leaders (ENE 328)
28 March	Meeting of Coordinator and Team Leaders (ENE 328)
4 April	Meeting of Coordinator and Team Leaders (ENE 328)
7, 8, 9, 10, 11 April	Final Report Presentations and Defences (TBA)

Written Submission Deadlines

Proposal (10pp)	27 September 2013
Literature Review Report(20pp)	18 November 2013
Technical Deliverables Report(20pp)	6 December 2013
Progress Report(20pp)	14 February 2014
Final Report(100pp)	5 April 2014 & 28 April 2014 with corrections after Defence

Oral Presentation Dates

Technical Deliverables Presentations	22,29 November; 6 December 2013
Progress Report Presentations	31 January; 7, 14 February 2014
Final Report Presentations and Defences	7, 8, 9, 10, 11 April 2014

11. Geomatics Engineering Values and Principles

We strive to be a world leader in geomatics education. Our teaching should be lead by internationally recognised research in the various sectors of the discipline, and our academic standards and teaching methods should ensure that our students remain professional leaders in the rapidly changing technological environment within which geomatics engineers operate.

All of our graduates should develop a thorough understanding of the theoretical and factual material which constitutes the Geomatics Engineering degree and upon graduation they should demonstrate the general qualities which are expected of a university graduate listed below. Graduates who qualify for graduate studies should flourish in a geomatics engineering graduate studies programme anywhere in the world.

Geomatics Engineering graduates may register as professional engineers or professional land surveyors in Canada and elsewhere in the world. Thus it is expected that education should occur in an environment of professionalism.

Qualities of a University Graduate

Over the course of their degree, a university graduate should develop creative thinking and critical thinking skills, be able to analyze and construct conceptualizations and ideas, be able to understand complex problems and create effective solutions to problems or effective improvements to complex situations, develop broad international horizons, be encouraged to demonstrate leadership and be inventive in the solutions they develop. Ideally, their degree should encourage graduates to sustain intellectual inquisitiveness over the course of their career.

It is the duty of professors to create an environment and use a range of teaching methods which enable and challenge students to develop these qualities.

Expectations of a University Student

- Students should be familiar with resources in the library and/or on-line resources of a similar quality to those in the library (e.g. good quality journal articles, edited books). To excel, students can expect to be familiar with material which is outside that stipulated for a particular course.

- In general, course materials should provide a skeleton for a particular course. Students are expected to consult other texts and materials in the library and elsewhere as part of their courses to ensure that they have a comprehensive understanding of the material.

- When tackling laboratory and other assignments, the focus should be on the desired learning outcome of the assignment. You should not expect step by step instruction on how to do a particular assignment. As a general rule, you should explore different, creative, ways of achieving the desired outcome, rather than merely seeking the

"right" answer. You should note that there may be a number of answers to a question or ways of solving a problem. Therefore you should examine your solution(s) or responses to a question critically.

- Teaching assistants and professors should guide students to solve problems on their own, and if necessary guide them to material which will help students solve a particular problem, rather than merely providing students with solutions to a problem. If there is a reading list assigned to a particular course, ensure that you have done the relevant reading prior to seeking help from the TA.

- Students are expected to adopt a programmatic approach to learning in which they build on previous course material. Students are expected to review such material as necessary to ensure adequate understanding of the fundamentals throughout their degree program.

Graduates from our programme should be equipped for life-long learning; to continue to learn and contend with technical, social, political and economic change, and make meaningful contributions to society throughout the course of their lives.

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