Course Outline

University Studies

Fall, 2019

ENGG 102E Introduction to the Engineering Profession
2 Credits, 2 Hours Lab per week
2.0 Engineering units for the University of Alberta

This course is an introduction to the engineering profession. Students will attend seminars presented by professional engineers of various disciplines. Students may also examine: engineering disciplines; co-operative education; study skills; career fields and work opportunities; history and development of the profession; professional responsibilities; ethics; and engineering and society. A survey of graphical communication methods and an introduction to the design process used by engineers may be included.

NOTE: ENGG 102 is restricted to Engineering students

Instructor

Instructor: Neil O'Donnell
Office location : S209G
Phone number: 780-791-4821
email neil.o'donnell@keyano.ca

Office Hours (Fall 2019)

Monday	11:00 – 1:50 pm
Wednesday	10:00 – 11:50 am
Thursday	2:00 – 3:50 pm

Other times are possible, by appointment

Hours of Instruction

Tuesday 7:00 – 9:00 pm Room S214

Required Resources

Introduction to Professional Engineering in Canada, Fourth Canadian Edition, 5/E
Andrews / Aplevich / MacGregor / Fraser ISBN 978-0-13-420448-2

A Canadian Writer's Reference, D. Hacker, Bedford/St. Martin's Press.

Course Outcomes

Upon successful completion of the course, students will be able to:

- Explain and contrast the various traditional and emerging disciplines within the engineering profession.
- Conceptualize ethical problems in engineering, and formulate possible solutions.
- Examine and give examples of career paths (pre- and post- degree) presented by guest speakers from the engineering industry.
- Organize networking contacts with industry representatives to facilitate possible summer employment.
- Write reports and assignments in proper engineering style.

Advice to Prospective Engineers

Engineers are problem solvers. If you want to succeed in engineering it is important that you learn how to organize your thoughts, to analyze, set up, and solve problems and to experience the often frustrating trials that arise in doing so. The best way to learn and retain knowledge is by practicing; the more problems you attempt and complete, the more experienced and confident you will become. Engineering is a demanding profession: you must be able to clearly articulate solutions to complex problems in a timely manner. This course will encourage you to develop the work habits and skills necessary to submit clear and concise work on deadline. To reinforce this, keep in mind that sloppy work will not be graded in any component of this course, and late work will also not be accepted. Teamwork is pervasive in engineering, but this is an activity that takes place among competent peers. Teamwork is a privilege that comes with competence. It is not a way to get by when you lack the skills to do the work yourself. In this course, working in groups can be helpful and is not discouraged, but you must be careful not to use teamwork to coast through an assignment or project; any work that you turn in must be your own (see rules on plagiarism below).

Engineering Orientation

All engineering students are required to attend a series of orientation sessions during the first week of the term. **Successful completion of the exercises on lab safety and academic integrity is a pre-requisite for submitting any written or on-line work for grading.**

Lecture Notes

You are responsible for keeping a complete record of classroom work (whiteboard notes, classroom exercises, and guest speakers) in a proper notebook. Some (but not all) guest speakers provide copies of their notes and presentations, and these will be posted on Moodle, ENGG102.

Mentoring

All engineering students will be assigned a mentor (a faculty member). Brief meetings between student and mentor will take place at regular intervals, usually weekly, to help students manage the demands of the engineering program. Typical topics discussed with a mentor include study strategies, guidance, monitoring academic progress, among others.

Assignments

It is important to start the reports and assignments early and not put them off until the day before they are due. Assignments must be completed via the assignment web site before the posted due dates; partially completed assignments receive the score achieved before the due date.

Evaluation

Assignment	Percentage	Due Date
Assignments, CMP Conference	10%	Weekly, as occur
Ethics Workshops	7.5%	As occur
Mock Interviews	7.5%	As occur
Reports on 5-7 Guest Speakers	35% (5% each)	Weekly, as occur
Final Examination	40% *	TBA

*****See note below under **Final Exam**

Due Dates

- To get credit for a report, you must attend the scheduled event. If you are absent, the mark recorded will be zero.
- Due Dates for reports are set for a maximum of two weeks following a class, video assignment, workshop, technical conference, lecture, or guest presentation.
- If submitted within one week (7 days) after the Due Date – 50% of regular mark.
- More than three weeks late – zero assigned.
- Unless specified differently by instructor, reports, and assignments will be submitted electronically via Moodle.
- Any changes due to special circumstances will be communicated by the instructor at the class and also via Moodle. Students should check regularly.

Term Mark

- Term mark will be determined from all the reports, and assignments, and the mark will be the weighted average of all submissions.
- If all submissions have been handed in, the lowest mark will be excluded from the calculation.
- If one submission is missing, the calculation will be based on the weighted average of the others. In other words, you can miss one submission without penalty.
- If more than one submission is missing, the calculation will include the zeros for other missing items.

Final Exam

- If 20% or more of submissions (reports, and assignments) are missing, student will not be allowed to write the final exam, and will fail the course.
- The final written exam will be based on the content of the presentations given in class during the semester (where possible, all presentations will be posted on the Moodle site for review).
- Students are required to achieve a grade of 50% or higher on the final exam to successfully complete the course and receive credit in ENGG 102.

Grading System

- Pass – You have successfully completed the course and received credit.
- Fail – You have failed to successfully complete one or more of the required components in the course and have not received credit. ENGG 102 is a requirement of your Engineering degree program and you must successfully complete it in order to receive your degree.

Proposed Schedule of Topics

Classes will consist of a variety of elements, such as - lectures by the instructor or professional engineers from industry, video assignments, technical conferences, APEGA meetings, or other special presentations. The proposed schedule will be presented at the first class on Tuesday, Sept.10, 2019.

A number of formats for the learning of course content will be used. Details of the presentation format, term work, assignments, and text references for the content will be given as the course progresses. The order in which these topics are addressed and the time spent on each may vary, depending on the availability of guest speakers. It is your responsibility to obtain such material and information by attending class regularly. You will be expected to actively interact with our guest speakers. Together, we can make this class a productive and practical learning experience.

Please Note:

Date and time allotted to each topic is subject to change.

Performance Requirements

Student Responsibilities

It is your responsibility as a student to contact the Office of the Registrar to complete the forms for Withdrawal or Change of Registration, and any other forms. Please refer to the list of important dates as noted in the Academic Schedule in the Keyano College credit calendar.

More specific details are found in the Student Rights and Student Code of Conduct section of the Keyano College credit calendar. It is the responsibility of each student to be aware of the guidelines outlined in the Student Rights and Student Code of Conduct Policies.

Laboratory Safety

In the science laboratories, safety is important and therefore students must complete the *WHMIS for Students* online training course on Moodle before entering the science laboratories.

Students must comply with the mandatory laboratory safety rules for this course as provided in the laboratory manual. Failure to do so will result in progressive discipline such as a verbal warning, refused entry into the laboratory, or suspension from the College.

Before entering the lab, students are responsible reviewing the lab manual and relevant Safety Data Sheets for the purpose of evaluating risks associated to health. Some hazards used in the laboratory may have additional risks to those with pre-existing medical conditions.

Student Attendance

Class attendance is useful for two reasons. First, class attendance maximizes a students' learning experience. Second, attending class is a good way to keep informed of matters relating to the administration of the course (e.g., the timing of assignments and exams). Ultimately, you are responsible for your own learning and performance in this course.

It is the responsibility of each student to be prepared for all classes. Students who miss classes are responsible for the material covered in those classes and for ensuring that they are prepared for the next class, including the completion of any assignments and / or notes that may be due.

Academic Misconduct

Students are considered to be responsible adults and should adhere to principles of intellectual integrity. Intellectual dishonesty may take many forms, such as:

- Plagiarism or the submission of another person's work as one's own
- The use of unauthorized aids in assignments or examinations (cheating)
- Collusion or the unauthorized collaboration with others in preparing work
- The deliberate misrepresentation of qualifications

- The willful distortion of results or data
- Substitution in an examination by another person
- Handing in the same unchanged work as submitted for another assignment
- Breach of confidentiality.

The consequences for academic misconduct range from a verbal reprimand to expulsion from the College. More specific descriptions and details are found in the Student Rights and Student Code of Conduct section of the Keyano College credit calendar. It is the responsibility of each student to be aware of the guidelines outlined in the Student Rights and Student Code of Conduct Policies.

In order to ensure your understanding of the concept of plagiarism, you must successfully complete the online tutorial found on ilearn.keyano.ca. Then print the certificate, sign it, and show it to each of your instructors. Your course work will not be graded until you show this signed certificate.

Specialized Supports

The Student Academic Support Services (SASS) department: Accessibility Services, Skill Centre, Wellness Services and Student Life Department work together to support student success at Keyano College.

Accessibility Services (CC167) supports student success through group and individualized instruction of learning, study and test taking strategies, and adaptive technologies. Students with documented disabilities, or who suspect a disability, can meet with the Learning Strategists to discuss accommodation of the learning barriers that they may be experiencing. Students who have accessed accommodations in the past are encouraged to visit our office at their earliest opportunity to discuss the availability of accommodations in their current courses. Individual appointments can be made by calling 780-791-8934.

Skill Centre (CC119) provides a learning space where students can gather to share ideas, collaborate on projects and get new perspectives on learning from our tutorial staff. Students visiting the centre have access to one-to-one or group tutoring, facilitated study groups, and assistance in academic writing. The Skill Centre's Peer Tutor program provides paid employment opportunities for students who have demonstrated academic success and want to share what they have learned. Tutoring is available free to any students registered at Keyano College on a drop in basis, from 8:30 am to 5:00 pm Monday through Friday. Additional evening hours are subject to tutor availability and are posted in the Skill Centre.

Wellness Services (CC260) offers a caring, inclusive, and respectful environment where students can access free group and individual support to meet academic and life challenges. Mental Health Coordinators offer a safe and confidential environment to seek help with personal concerns. The Mindfulness Room in CC260 is available as a quiet space for students to relax during regular office hours. Wellness Service welcomes students to participate in any of the group sessions offered throughout the academic year addressing such topics as Mindfulness and Test Anxiety. Individual appointments can be made by calling 780-791-8934.

Student Life Department (CC210) is a place for students to go when they don't know who else can answer their questions. The staff will help students navigate barriers to success and if they don't know the answer, they will find it out. Student success is directly affected by how connected a student feels to their college. The student life department is there to help students get connected.

Please watch your Keyano email for workshop announcements from our Student Academic Support Services team.