GINA CODY SCHOOL OF ENGINEERING AND COMPUTER SCIENCE

ENGR 201
Professional Practice and Responsibility

Fall 2023

Course Instructor:
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Dr. Govind Gopakumar is Associate Professor in the Centre for Engineering in Society, Gina Cody School of Engineering and Computer Science, Concordia University, Montreal

Office Hours:
Mondays 11:00 AM - 12:00 PM by Zoom.

Tutors and Tutorials: *Please see your class schedule for more details*

Tutorial A **YA Joarder**
ya.joarder@econcordia.com Wednesdays 8:45AM - 9:35AM

Tutorial B **Geovana Franca**
geovana.franca@econcordia.com Wednesdays 8:45AM - 9:35AM

Tutorial C **Saidul Islam**
saidul.islam@econcordia.com Fridays 4:15AM - 5:05PM

Tutorial D **Akinlolu Ojo**
akinlolu.ojo@econcordia.com Fridays 1:15PM - 2:05PM

Tutorial E **Saidul Islam**
saidul.islam@econcordia.com Thursdays 5:45PM - 6:35PM

Tutorial F **Ahad Farnhood Ahmadi**
ahad.farnood@econcordia.com Thursdays 5:45PM - 6:35PM

Tutorial G **YA Joarder**
ya.joarder@econcordia.com Tuesday 4:15PM - 5:05PM

Tutorial H **Neha Roy**
neha.roy@econcordia.com Tuesdays 4:15PM - 5:05PM

Tutorial I **Ahad Farnood Ahmadi**
ahad.farnood@econcordia.com Wednesdays 5:45PM - 6:35PM

Tutorial J **Romina Hosseini**
romina.hosseini@econcordia.com Wednesdays 5:45PM - 6:35PM

Tutorial K **Geovana Franca**
geovana.franca@econcordia.com Mondays 8:45AM - 9:35AM

Tutorial L **YA Joarder**
ya.joarder@econcordia.com Mondays 8:45AM - 9:35AM

Course Calendar Description:
Professional Practice and Responsibility is concerned with ethical professional practices and responsibilities for engineers working within Quebec and Canadian legislative frameworks. The course will touch on four main topics: professional systems, the ethics of engineering, the professional duties of an engineer, as well as the legal dimensions of professional practice. It is a core course for all students enrolled in the Bachelor's in Engineering program but is open to all students (no pre-requisites). This course is particularly important because it will directly address CEAB's graduate attributes on professionalism and ethics by seeking to develop among students an understanding of the roles and responsibilities of the professional engineer in society, especially the primary role protection of the public and the public interest.

Prerequisites: *N/A*
Co-requisites: *N/A*

Specific Knowledge and Skills Needed for this Course:
Students taking this course are expected to have sufficient knowledge of the following topics. Should you have difficulties in any of these topics, you are strongly encouraged to review them before the DNE deadline.

No specific knowledge or skills are needed for this course other than an openness to understand concepts from a range of disciplines such as management, social sciences, and philosophy.

Course materials
Required Textbook: *N/A*

All course materials will be available through the eConcordia platform and can be accessed by logging into the course website with your netname and password at www.econcordia.com.

The material for this course consists of the required online readings and the ENGR 201 course website which includes cases, quizzes, videos, discussion boards and other course material. Each lesson provides study notes, as well as cases and self-tests. Click on Lessons, then chose the chapter you are studying. Also note that solutions to chapter cases, problems and questions are shown only once your response has been entered.

There is a recommended text that is available on short-term loan in the library. Engineering Ethics by Carl Mitcham and R. Shannon Duval, 2008, Pearson.

Grading Scheme

Quizzes (2 * 20% of your grade):
There will be two online quizzes in the semester. These quizzes will try to test your grasp of key concepts, your ability to analyze, and your familiarity with the readings.

Final Exam (40% of your grade):
The final exam for this course will include material from all of the online lessons. The examination will be held online on ***November 24th.***

Tutorial (20% of your grade):
Each of you will regularly attend the tutorial section you are assigned to. In the tutorial, the tutor will assign a problem that you will analyze as a team and then submit your work to the tutor.

Knowledge Quest (5% bonus):
When you finish reading the material for each lesson, you will be able to answer about 5 knowledge questions. The questions will be a mix of true or false or multiple choice questions. For each lesson you will receive only one chance to answer the questions. Depending on the number of right answers you get over the 11 lessons you will receive a score between 0-5 in the knowledge quest.
Note*: if you received 5 or fewer right answers totally for questions from all the 11 lessons you will receive a score of 0 in this section.*

Tentative Course Schedule

FALL 2023 Agenda

Week 1: September 4 - September 10	
	Course Introduction
	Navigate the Course Website
	Lesson 1: What is a Profession?
September 04	**Labour Day, university closed**
September 05	**Classes begin**
September 05	**Discussion Board opens at 2 PM.**
September 05	**Tutorial G - Tuesday 4:15 - 5:05 PM**
September 06	**Tutorial A - Wednesday 8:45 - 9:35 AM**

September 06	**Tutorial I - Wednesday 5:45 - 6:35 PM**
September 07	**Tutorial E - Thursday 5:45 - 6:35 PM**
September 08	**Tutorial C - Friday 4:15 - 5:05 PM**
Week 2: September 11 - September 17	
	Lesson 1: What is a Profession?
September 11	**Tutorial L – Monday 845 – 935 AM**
September 12	**Tutorial H - Tuesday 4:15 - 5:05 PM**
September 13	**Tutorial B - Wednesday 8:45 - 9:35 AM**
September 13	**Tutorial J - Wednesday 5:45 - 6:35 PM**
September 14	**Tutorial F - Thursday 5:45 - 6:35 PM**
September 15	**Tutorial D - Friday 4:15 - 5:05 PM**
Week 3: September 18 - September 24	
	Lesson 2: Professional Systems in Quebec
September 18	**Tutorial K - Monday 8:45 - 9:35 AM**
September 19	**Tutorial G - Tuesday 4:15 - 5:05 PM**
September 20	**Tutorial A - Wednesday 8:45 - 9:35 AM**
September 20	**Tutorial I - Wednesday 5:45 - 6:35 PM**
September 21	**Tutorial E - Thursday 5:45 - 6:35 PM**
September 22	**Tutorial C - Friday 4:15 - 5:05 PM**
September 18	**Deadline to add fall-term courses**
September 18	**Deadline for withdrawal with tuition refund (DNE) from fall-term courses**
Week 4: September 25 - October 1	
	Lesson 3: What are Ethics?
September 25	**Tutorial L – Monday 845 – 935 AM**
September 26	**Tutorial H - Tuesday 4:15 - 5:05 PM**
September 27	**Tutorial B - Wednesday 8:45 - 9:35 AM**
September 27	**Tutorial J - Wednesday 5:45 - 6:35 PM**
September 28	**Tutorial F - Thursday 5:45 - 6:35 PM**
September 29	**Tutorial D - Friday 4:15 - 5:05 PM**
September 29	**Quiz 1 (covers Lessons 1, 2, and 3)**
Week 5: October 2 - October 8	

	Lesson 4: Ethical Reasoning
October 2	**Tutorial K – Monday 845 – 935 AM**
October 3	**Tutorial G - Tuesday 4:15 - 5:05 PM**
October 4	**Tutorial A - Wednesday 8:45 - 9:35 AM**
October 4	**Tutorial I - Wednesday 5:45 - 6:35 PM**
October 5	**Tutorial E - Thursday 5:45 - 6:35 PM**
October 6	**Tutorial C - Friday 4:15 - 5:05 PM**
Mid-term break: October 9 - October 15	
October 9	**Thanksgiving Day, university closed**
October 10	**Mid-term break begins**
October 15	**Mid-term break ends**
Week 6: October 16 - October 22	
	Lesson 5: Ethics and Organizations
October 16	**Tutorial L – Monday 845 – 935 AM**
October 17	**Tutorial H - Tuesday 4:15 - 5:05 PM**
October 18	**Tutorial B - Wednesday 8:45 - 9:35 AM**
October 18	**Tutorial J - Wednesday 5:45 - 6:35 PM**
October 19	**Tutorial F - Thursday 5:45 - 6:35 PM**
October 22	**Tutorial D - Friday 4:15 - 5:05 PM**
Week 7: October 23 - October 29	
	Lesson 6: Professional Loyalty and Trust
October 23	**Tutorial K - Monday 8:45 - 9:35 AM**
October 26	**Tutorial G - Tuesday 4:15 - 5:05 PM**
October 27	**Tutorial A - Wednesday 8:45 - 9:35 AM**
October 27	**Tutorial I - Wednesday 5:45 - 6:35 PM**
October 28	**Tutorial E - Thursday 5:45 - 6:35 PM**
October 29	**Tutorial C - Friday 4:15 - 5:05 PM**
Week 8: October 30 - November 5	
	Lesson 7: Duties to the Profession
October 30	**Tutorial L – Monday 845 – 935 AM**
October 31	**Tutorial H - Tuesday 4:15 - 5:05 PM**
November 1	**Tutorial B - Wednesday 8:45 - 9:35 AM**

November 1	**Tutorial J - Wednesday 5:45 - 6:35 PM**
November 2	**Tutorial F - Thursday 5:45 - 6:35 PM**
November 3	**Tutorial D - Friday 4:15 - 5:05 PM**
November 3	**Quiz 2 (covers Lesson 4, 5, 6 and 7)**
Week 9: November 6 - November 12	
	Lesson 8: Duties Towards the Public
November 6	**Tutorial K - Monday 8:45 - 9:35 AM**
November 7	**Tutorial G - Tuesday 4:15 - 5:05 PM**
November 8	**Tutorial A - Wednesday 8:45 - 9:35 AM**
November 8	**Tutorial I - Wednesday 5:45 - 6:35 PM**
November 9	**Tutorial E - Thursday 5:45 - 6:35 PM**
November 10	**Tutorial C - Friday 4:15 - 5:05 PM**
November 10	**Deadline to register with the Access Centre for Students with Disabilities and receive exam accommodations for the fall 2023 final examination period**
Week 10: November 13 - November 19	
	Lesson 9: Legal Issues
November 13	**Tutorial L – Monday 845 – 935 AM**
November 14	**Tutorial H - Tuesday 4:15 - 5:05 PM**
November 15	**Tutorial B - Wednesday 8:45 - 9:35 AM**
November 15	**Tutorial J - Wednesday 5:45 - 6:35 PM**
November 16	**Tutorial F - Thursday 5:45 - 6:35 PM**
November 17	**Tutorial D - Friday 4:15 - 5:05 PM**
Week 11: November 20 - November 26	
	Lesson 10: Responsibility and Liability
November 20	**Tutorial K - Monday 8:45 - 9:35 AM**
November 21	**Tutorial G - Tuesday 4:15 - 5:05 PM**
November 22	**Tutorial A - Wednesday 8:45 - 9:35 AM**
November 22	**Tutorial I - Wednesday 5:45 - 6:35 PM**
November 23	**Tutorial E - Thursday 5:45 - 6:35 PM**
November 24	**Tutorial C - Friday 4:15 - 5:05 PM**
November 24	**Final Quiz (all lessons)**

Week 12: November 27 - December 3	
	Lesson 11: Issues in Professional Practice
November 27	**Tutorial L – Monday 845 – 935 AM**
November 28	**Tutorial H - Tuesday 4:15 - 5:05 PM**
November 29	**Tutorial B - Wednesday 8:45 - 9:35 AM**
November 29	**Tutorial J - Wednesday 5:45 - 6:35 PM**
November 30	**Tutorial F - Thursday 5:45 - 6:35 PM**
December 1	**Tutorial D - Friday 4:15 - 5:05 PM**
November 27	**Last day for instructor-scheduled tests or examinations**
December 4 - December 5	
December 04	**Tutorial K - Monday 8:45 - 9:35 AM**
December 04	**Last day of classes, fall term**
December 05	**Deadline for academic withdrawal (DISC) from fall-term courses**
	Examinations Period: December 6 – December 19
	There is no Final Exam for this class during the Exam Period

Other information

Please allow for a 24 hour response time during the week (Monday-Friday). Teaching Assistants check their messages once over the 48 hour weekend period and are not available on statutory or university holidays.

Tutorials: Please attend the very same tutorial section that you are assigned to on the class roll. Please do not migrate from one tutorial section to another. Since schedules for tutorial sections are a bit complicated, please remember which days your tutorial meets. The details of the tutorial schedules are also provided in your class agenda.

Please note that the tutorials for Section BL are in-person mandatory tutorials that meet once in two weeks.

Late Submissions and Extensions

- No extensions will be offered on quizzes or case studies.
- If you are unable to complete your work by the deadline or complete an exam on the assigned date, it is your responsibility to advise your Teaching Assistant, copied to the Instructor (govind.gopakumar@concordia.ca)
- You are responsible for the version of the work you upload to the website. If you upload the incorrect version of your work to the website, you can resubmit the correct version prior to the deadline. You can resubmit only one time. If you fail to meet the

deadline, the version of your work located on the website is the one that will be graded. In addition, please note that it is your responsibility to ensure that your case is received before the deadline. Should you be unable to submit your work via the website you must submit your work via e-mail to your TA before the deadline. Please give yourself enough time for online submissions to send your cases via e-mail should a technical issue arise.

- If you have technical issues with an assignment, e.g. your browser crashes, or a quiz is submitted automatically before the time has run out, please use the "Report an Issue" function on the course website to report your problem to an eConcordia administrator. Please do this before contacting a Teaching Assistant or the Instructor.

Graduate Attributes:

The following is the list of graduate attributes (skills) that students use, learn and/or apply throughout the term.

This semester this course will emphasize and develop the Canadian Engineering Accreditation Board (CEAB) graduate attributes of ***Ethics and Equity****,* ***Professionalism,*** *and* ***Life-long Learning****.*

The ethics and equity attribute is defined by the CEAB as: An ability to apply professional ethics, accountability, and equity. More specifically, students will be assessed on their abilities to:

- *Understand what ethics are*
- *Differentiate between ethics, morals, values, and law*
- *Identify theoretical basis for ethical reasoning*
- *Apply ethical reasoning to resolve professional dilemmas*
- *Understand of accountability to the engineering profession*
- *Understand of accountability to the public*
- *Appreciate challenges to accountability in organizations*
- *Apply accountability to professional context*
- *Identify professional obligations against discrimination*
- *Appreciate gender dimensions of equity*

This attribute will be assessed in tutorials and the final examination.

The ***professionalism*** *attribute is defined by the CEAB as: An understanding of the roles and responsibilities of the professional engineer in society, especially the primary role of protection of the public and the public interest. More specifically, students will be assessed on their abilities to:*

- *Appreciate the role filled by professional engineers in society*
- *Describe the role of engineers in Quebec's professional system*
- *Differentiate between professional and personal roles*
- *Distinguish between dimensions of responsibility – moral, legal & social*
- *Identify legal issues on occupational safety and intellectual property*
- *Apply responsibility in professional context*
- *Demonstrate a good understanding of liability in Quebec's legal system*
- *Communicate through accepted professional means*

- *Identify relevant professional standards*

This attribute will be assessed in tutorials, quiz 1 and quiz 2.

*The **life-long learning** attribute is defined by the CEAB as: An ability to identify and to address their own educational needs in a changing world, sufficiently to maintain their competence and contribute to the advancement of knowledge. More specifically, students will be assessed on their abilities to:*

- *Assess a physical problem and identify the knowledge necessary to solve it*
- *Self-acquire necessary information from different sources*
- *Show awareness of various engineering organizations for training opportunities*

This attribute will be assessed in the "Knowledge Quest" portion of the online course material

Course Learning Outcomes (CLOs):

By the end of this course, learners will be able to:

1. *Describe the main features of the Professional Order of Engineers in Quebec and Canada*
2. *Analyze ethical dilemmas in the field of engineering using ethical reasoning*
3. *Identify the professional duties and obligations of an engineer*
4. *Recognize the legal dimensions of professional practices.*

Health and Safety Guidelines

All health and safety rules specific to this course can be found in the lab manual. General health and safety instructions and available health and safety trainings can be found at: Safety Programs - Concordia University (https://www.concordia.ca/campus-life/safety/general-safety.html)

If your course has additional information about health and safety guidelines/training, please insert them here.

On Campus Resources

Please visit Student services at Concordia University for the services available Gina Cody School students.