

**COLLEGE OF ENGINEERING**

**General Engineering**

**GENG107 Engineering Skills and Ethics**

**Fall 2022**

**Instructor Information**

Name:  
Academic Title:  
Office:  
E-mail:  
Office Hours:

**TA Information**

Name:  
Office:  
Email:

**Class/Laboratory Schedule**

**Coordinator Information**

Name: Dr. Rashid A.qader M Alammari  
Office: Building C07-0127  
Phone: +974 4403-4209  
E-mail: [ralammari@qu.edu.qa](mailto:ralammari@qu.edu.qa)

**Course Information**

Catalog Description:

Introduction to engineering and engineering disciplines, engineering ethics, communication skills, study skills and problem solving skills, introduction to design.

Credits:

3

Contact Hours:

3

Prerequisites:

None

Textbook:

e-textbook: Saeed Moaveni - Engineering Fundamentals: An Introduction to Engineering, 5<sup>th</sup> Edition, Cengage Learning, 2016 (ISBN: 978-1-305-10572-0)

Reference:

Concepts in Engineering, M. T. Holtzapple and W. Dan Reece, Mc.Graw Hill, 2/e, 2007. ISBN 0073191620 / 9780073191621

Course Objectives:

Students will understand and appreciate the ethical and professional responsibilities, develop communication and problem solving skills and be familiar with engineering design methodology.

Course Learning Outcomes (CLOs):

1. Understand the various disciplines and the role of engineer in the society
2. Describe and analyze consequences of non-ethical or un-professional conducts.
3. Demonstrate schematic approach for engineering problem solving.
4. Demonstrate improved communication skills
5. Apply engineering design methodology.
6. Search for information via traditional and online sources

Relationship of Course Learning Outcomes (CLOs) to Student Outcomes (SOs):

Course Learning Outcomes (CLOs)	Related Student Outcomes (SOs)						
	1	2	3	4	5	6	7
1				X			
2				X			
3	X						
4			X		X		
5		X					
6							X

*Student Outcomes (SOs)*

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts

5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Topics Covered:

Topics	Chapter	Weeks
Course Introduction	-	½
1. The Engineer and engineering disciplines	1	1½
2. Preparing for an Engineering Career	2	½
3. Introduction to engineering design (Supplementary Design Material)	3	2½
4. Literature search skills (Instructor Notes)	-	½
5. Engineering Communications	4	1½
6. Problem Solving	6, 7 & 14	2
7. Engineering Ethics (Codes of Ethics in Engineering Disciplines and Steps in Resolving Ethical Dilemmas)	5	2½
Midterm Exam		½
Student Presentations		2
Review		1
<b>Total</b>		<b>15</b>

### Method of Instruction

Lectures (a combination of PowerPoint and whiteboard delivery will be used).

### Assessment Methods and Grading Policy

Assignments: 10%

Quizzes: 10%

Project: 25% (Written Report 15% & Oral Presentation 10%)

Midterm Exam: 25% (Wednesday, 23 February 2022)

Final Exam: 30% (as scheduled by the registrar)

## ABET Contribution of Course to Professional Component

Subject Area (Credit Hours)  
College-Level Math & Basic Science:  
Engineering : 3 cr.  
Engineering Design :  
Broad Education :

## Computer/Software Usage

Word and PowerPoint

## Laboratory Projects

N/A

## Course Ground Rules

- **Taking Notes:** Students are responsible for taking notes during the lecture. Exams will include some of the materials discussed in class in addition to that given in the textbook and class notes.
- **Attendance:** Attendance is mandatory according to QU policies and more than 25% absence will not qualify you for the course credit.
- **Late arrival:** late arrival will be considered as half absent.
- **Homework:** Homework should be submitted through blackboard before the due date. Deadlines for assignments are strict; 50% will be deducted for each day after the deadline (you get zero marks if two days passed the deadline). Students should review their marks on the blackboard and if any inquiry should contact the TA by email within 48 hours after the grade has been posted; thereafter no discussion on the grades.
- **Blackboard:** Check the course website frequently on Blackboard for updates (e.g. announcements, lectures notes, etc.).
- **Communications:** Students must use the assigned university e-mail address rather than a personal e-mail address. Writing emails in a proper format is required (communication skills is part of the course)
- **Cheating and/or Plagiarism:** Strict rules will apply in accordance with Qatar University regulations and policies in case of any cheating and/or plagiarism. Check the undergraduate students' handbook for further details on University policies.
- **Mobiles/Smart Devices:** Switch off/silent mobiles during the lecture time. Mobile phones/smart devices are not permitted in the classroom during exams.

## University Code of Conduct

QU expects its students to adopt and abide by the highest standards of conduct in their interaction with professors, peers, staff members and the wider university community. Moreover, QU expects its students to act maturely and responsibly in their relationships with others. Every student is expected to assume the obligations and responsibilities required from them for being members of the QU community.

As such, a student is expected not to engage in behaviors that compromise their integrity, as well as the integrity of QU. Further information regarding the University Code of Conduct may be found on the web at <http://www.qu.edu.qa/students/code-of-conduct>

### Support for Students with Special Needs

It is Qatar University policy to provide educational opportunities that ensure fair, appropriate and reasonable accommodation to students who have disabilities that may affect their ability to participate in course activities or meet course requirements. Students with disabilities are encouraged to contact their Instructor to ensure that their individual needs are met. The University through its Special Needs Section will exert all efforts to accommodate for individuals' needs.

#### Contact Information for Special Needs Section:

Tel-Female: (00974) 4403 3843

Tel-Male: (00974) 4403 3854

Location: Student Activities Building

Email: [specialneeds@qu.edu.qa](mailto:specialneeds@qu.edu.qa)

### Academic Support and Learning Resources

The University Student Learning Support Center (SLSC) provides academic support services to male and female students at QU. The SLSC is a supportive environment where students can seek assistance with academic coursework, writing assignments, transitioning to college academic life, and other academic issues. SLSC programs include: Peer Tutoring, the Writing Lab, Writing Workshops, and Academic Success Workshops. Students may also seek confidential academic counseling from the professional staff at the Center.

#### Contact Information for Students Support and Learning Resources:

Tel: (00974) 4403 3876

Fax: (00974) 4403 3871

Location: Female Student Activities Building

E-mail: [learningcenter@qu.edu.qa](mailto:learningcenter@qu.edu.qa)

### Student Complaints Policy

Students at Qatar University have the right to pursue complaints related to faculty, staff, and other students. The nature of the complaints may be either academic or non-academic. For more information about the policy and processes related to this policy, you may refer to the student handbook.

### Declaration

This syllabus and contents are subject to changes in the event of extenuating circumstances. The instructor (with approval of the Head of Department) reserves the right to make changes as necessary. If changes are necessitated during the term of the course, the students will be notified by email communication and posting the notification on the online teaching tool Blackboard. It is the student's responsibility to check on announcements made while they were absent.

Faculty Name: Prof. Rashid Alammari

Date: 9<sup>th</sup> of January 2022