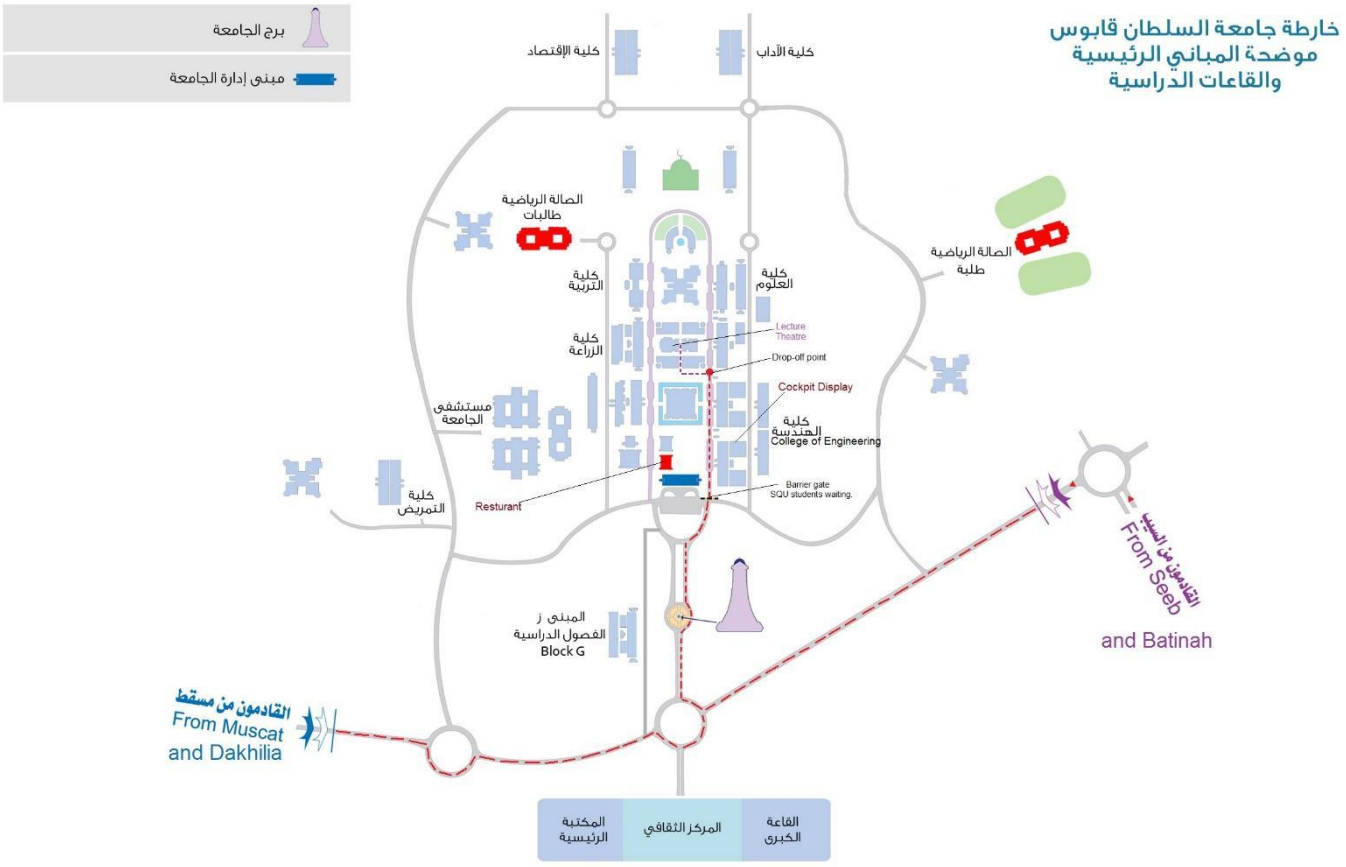
Sultan Qaboos University

COLLEGE OF ENGINEERING BULLETIN

The Academic Year 2025-2026



THE SULTAN QABOOS UNIVERSITY CAMPUS

College of Engineering Bulletin, Number 26, September 2025

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Information in this Bulletin is generally accurate as of Fall 2025. The College reserves the right to change courses, programs, and the academic calendar, or to make other changes deemed necessary or desirable, giving an advance notice of the changes when possible.

College of Engineering Administration

	Room No.	Tel.No.
Dr. Nabeel Al Rawahi, *Dean*	2004	24141300
Dr. Hassan Al Lawati, *Assistant Dean, Undergraduate Studies*	2026	24142510
Dr. Majid Al Maharbi, *Asst. Dean, Post Graduate Studies & Research*	2029	24141333
Dr. Aliya Al Hashim, *Acting Assistant Dean, Training &Community Service*	2008	24142522
Dr. Mubarak Al Alawi, *HoD, Civil & Architectural Engineering*	2045	24141332
Dr. Ahmed Al Maashri, *HoD, Electrical & Computer Engineering*	2065	24141363
Dr. Nasr Al Hinai, *HoD, Mechanical & Industrial Engineering*	2048	24141352
Dr. Rashid Al Hajri, *HoD, Petroleum & Chemical Engineering*	1001	24141318
Mohammed Al Sawafi, *Director of Administration*	2031	24141326
Ahmed Al Kharboushi, *Asst Director of Administration*	2007	24141305
Shaima Majid Al-Zadjali, *Coordination & Follow-Up & Archive Specialist (B), Dean's Office*	2005	24142511
Noura Hamoud Al Abri, *Clerk*, *Dean's Office*	2005	24142511
Khalid Saif Al Shukaili, *Coordination & Follow-Up & Archive Specialist, Dean's Office (B)*	2028	24142581
Hamed Hamoud Al-Khanbashi, *Clerk, DOA Office*	2030	24141382
Iman Suleim Rashid Al Sumri, *Coordination & Follow-Up & Archive Specialist (B), DOA Office*	2018	24142663
Anwaar Ambusaidi, *Coordination & Follow-Up & Archive Specialist (C), ADUS*	2027	24142592
Saida Hamed Al Mashaikhi, *Student Affairs Specialist*, *ADUS*	2020	24142686
Hanan Abdullah Al Shuaily, *Coordinator, ADPGSR*	2020	24142686
Abdullah Omar Al-Ojaily, *Clerk, ADTCS*	2009	24141359
Moadh A. Al-Zadjali, *Clerk, ADTCS*	2018	24142667
Wafa Hamad Al-Nabhani, *Coordination & Follow-Up & Archive Specialist (B), CAE*	2046	24141331
Noora Hilal Al Arafati, *Coordination and Follow Up Specialist, ECE*	2066	24141390
Amina Al Balushi, *Coordination & Follow-Up & Archive Specialist (C), ECE*	2066	24141330
Khazina Al Kalbani, *Coordination & Follow-Up & Archive Specialist (C), MIE*	2056	24142549
Mouza Al Barwni, Coordination *& Follow-Up & Archive Specialist (C), PCE*		*24141354*
Thuraya Al Salmi, *Assistant Quality Assurance Specialist College Admin*	2024	24146506
Abdulhamid Abdullah, *TJER Secretary*	2064	24141392
Issa Mattar Al-Saifi, *Storekeeper*	0063	24141307
Mohammed Said Al Sabti, *Textbook Storekeeper*	0017	24142562
Mahmood Nassir Al-Tobi, *Senior Engineer (B)*	1006	24142663
Khalfan Salim Al-Abri, *Engineer A*	1006	24141351
Rahma Salim Al Baloushi, *Computer Technician B*	1006	24141341
Issa Salem Al-Fori, *Clerk, DOA Office*	2016	24142584
Ahmed Al Aghbari, *Messenger*	2016	24142584

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Academic Calendar 2025/2026

Semester	Month	week	SUN	MON	TUE	WED	THU	FRI	SAT	Events
	August		31	1	2	3	4	5	6	Orientation Program & Foundation Program assessments Week 1 Fall 2025 Courses Timetable Announcment *
			7	8	9	10	11	12	13	Orientation Program & Foundation Program assessments Week 2 Fall 2025 online registration
Fall 2025	September	1	14	15	16	17	18	19	20	1st Week of Academic Classes Add/Drop Week Obtain Statement of Graduation period *
		2	21	22	23	24	25	26	27	
		3	28	29	30	1	2	3	4	
	October	4	5	6	7	8	9	10	11	
		5	12	13	14	15	16	17	18	
		6	19	20	21	22	23	24	25	
		7	26	27	28	29	30	31	1	
	November	8	2	3	4	5	6	7	8	
		9	9	10	11	12	13	14	15	Academic advising for probation students 12/11/2025 Start up of Math Exam Exit test to transfer between colleges *
		10	16	17	18	19	20	21	22	20/11/2025 End of Math Exam Exit test to transfer between colleges * 18/11/2025 National Day
		11	23	24	25	26	27	28	29	
		12	30	1	2	3	4	5	6	
	December	13	7	8	9	10	11	12	13	
		14	14	15	16	17	18	19	20	
		15	21	22	23	24	25	26	27	Last day of Academic Classes
		16	28	29	30	31	1	2	3	Final exams - Week 1
	January	17	4	5	6	7	8	9	10	Final exams - Week 2
			11	12	13	14	15	16	17	11/01/2026 -HM the Sultan Accession Day Spring 2026 Courses Timetable Announcment * 16/01/2026- Isra & Mi'raj
			18	19	20	21	22	23	24	Fall 2025 Results *
			25	26	27	28	29	30	31	Spring 2026 Online registration Internal transfer requests period Starts
Spring 2026	February	1	1	2	3	4	5	6	7	1st Week of Academic Classes Add/Drop Week
		2	8	9	10	11	12	13	14	Obtain Statement of Graduation period *
		3	15	16	17	18	19	20	21	18/02/2026 Ramadan
		4	22	23	24	25	26	27	28	
	March	5	1	2	3	4	5	6	7	
		6	8	9	10	11	12	13	14	
		7	15	16	17	18	19	20	21	20/03/2026 Eid Al-Fitr
		8	22	23	24	25	26	27	28	Summer2026 Courses Timetable Announcment *
		9	29	30	31	1	2	3	4	Academic advising for probation students
	April	10	5	6	7	8	9	10	11	
		11	12	13	14	15	16	17	18	
		12	19	20	21	22	23	24	25	
		13	26	27	28	29	30	1	2	
	May	14	3	4	5	6	7	8	9	
		15	10	11	12	13	14	15	16	Last day of Academic Classes
		16	17	18	19	20	21	22	23	Final exams - Week 1
		17	24	25	26	27	28	29	30	Final exams - Week 2 27/05/2026 Eid Al-Adha
			31	1	2	3	4	5	6	
	June		7	8	9	10	11	12	13	Spring 2026 Results *
			14	15	16	17	18	19	20	17/06/2026 Islamic New Year *
Summer 2026		1	21	22	23	24	25	26	27	1st Week of Academic Classes Add/Drop Week
		2	28	29	30	1	2	3	4	Obtain Statement of Graduation *
	July	3	5	6	7	8	9	10	11	
		4	12	13	14	15	16	17	18	12-23/07/2026 Math Exam Exit test period to transfer between colleges *
		5	19	20	21	22	23	24	25	
		6	26	27	28	29	30	31	1	
	August	7	2	3	4	5	6	7	8	Last day of Academic Classes
		8	9	10	11	12	13	14	15	Final examinations week
			16	17	18	19	20	21	22	Summer 2026 results *
			23	24	25	26	27	28	29	26/08/2026 - Prophets Birthday
			30	31	1	2	3	4	5	
	September		6	7	8	9	10	11	12	

Withdraw with a grade of (W) Period
Postponement period
Graduation Expectation Letter Request Period
Withdraw with a grade of (W) Period
Postponement period
Graduation Expectation Letter Request Period
Fall Vacation
Withdraw with a grade of (W) Period
transfer to Sultan Qaboos university period
Spring Vacation
Withdraw with a grade of (W) Period
transfer to Sultan Qaboos university period
Graduation Expectation Letter Request Period
Internal transfer requests period
Summer Vacation

1. GENERAL INFORMATION

1.1 History

The College of Engineering started its academic programs in 1986 when Sultan Qaboos University accepted its first batch of students. It serves to provide an engineering education to the Omani youth that will enable them to participate in the development of Oman. In 1991, its first batch of sixty engineers graduated. By the end of 2025, more than 8882 young Omani engineers have graduated from its halls.

The College of Engineering offers programs which lead to the Bachelor of Engineering degree in: Civil Engineering, Architectural Engineering, Mechanical Engineering, Industrial Engineering, Petroleum & Natural Gas Engineering, Chemical & Process Engineering, Electrical & Computer Engineering (Communications & Signal Processing), Electrical & Computer Engineering (Power & Systems Energy), Electrical & Computer Engineering (Computer Systems & Networks), Electrical & Computer Engineering (Electronic Instrumentation and Control) and Mechatronics Engineering. The College also offers Master's Degree Programs in Civil Engineering (Water Resources), Civil Engineering, Mechanical Engineering, Industrial Engineering, Electrical and Computer Engineering and Petroleum and Natural Gas Engineering. The college also offers Agriculture Engineering as a joint program with the College of Agriculture and Marine Science.

The College has steadily increased its new student admission. The number of students admitted in the first batch in 1986 was 86 students, while about 460 students were admitted in 2024 with 20% females. The student population in the College is now near 2597 students in undergraduate programs and around 203 in Postgraduate programs.

1.2 Vision and Mission

VISION

To continue its leading role in engineering education, innovative research and community service in the region and beyond.

MISSION

To excel in engineering education, research and innovation, and community service by promoting the principles of engineering analysis, design and creative thinking, and participating in the exchange of knowledge with national and international communities.

Objectives:

- To prepare highly qualified engineers who are capable of assuming professional careers and pursuing graduate studies.
- To conduct scientific research to expand knowledge in the scientific and engineering fields, and to find engineering solutions to problems faced by society.
- To provide continuing education and to disseminate engineering knowledge through conferences, short courses, workshops, consultation and seminars.
- To promote regional and international cooperation with reputable universities throughout the world.

2.STRUCTURE

2.1 Deanship

The College operates within the Charter of the University. At present, the College structure comprises the Office of the Dean, the College Board and four Departments.

The *Dean* heads the College and is responsible for managing the Academic, Administrative and Financial Affairs of the College. He is assisted by three Assistant Deans, a Director of Administration and coordinators.

The *Assistant Dean for Undergraduate Studies (ADUS)* provides information regarding academic regulations and curricula. He coordinates and follows up the academic affairs of students, such as preparation of degree programs, timetabling, advising and registration. This is done in coordination with the Deanship of Admissions and Registration, other Colleges, the Centre of Preparatory Studies, Deanship of Students Affairs and among the College Departments. The ADUS office prepares and maintains student records, prepares lists of student examination results for each semester for the College Board.

The *Assistant Dean for Postgraduate Studies and Research (ADPGSR)* manages the research activities of the College by coordinating with the Office of Post-Graduate Studies and Research, other Colleges, Centres and non-University organizations. The Office allocates College research funds to research projects and prepares the annual research report. The Office supervises and coordinates the administration of graduate programs in the College. The Assistant Dean for Postgraduate Studies and Research also liaises with the University administration on the organization of conferences, seminars, workshops and exhibitions. In addition, the office also follows up the progress of Demonstrators and Assistant Lecturers on scholarships and study leave.

The *Assistant Dean for Training and Community Service (ADTCS)* exposes the students to the actual engineering practice via industrial training where this training is compulsory for every student graduating from the College. Through industrial training students are able to correlate what they have learnt at the University with what is being practiced in industry. The trainees are usually involved in a range of activities during training. These activities include design, analysis, manufacturing, testing, regulatory affairs, etc.

ADTCS keeps its Alumni records to continuously cooperate with them and keep them aware of the educational, research and social activities within the College. Moreover, the ADTCS office keeps a close tie and continuous interaction with the
industry.

The *Director of Administration* (DoA) liaises with the University Administration on administrative, personnel and financial affairs related to the College. The director is responsible for recruitment, public relation, transportation, and maintenance of the College facilities. The director is responsible for the College staff records and files.

PRE-SPECIALIZATION ACADEMIC ADVISING UNIT (PAAU) -

Location of PAAU (وحدة الإرشاد الأكاديمي قبل التخصص**)**

“Pre-specialization Academic Advising Unit '' [PAAU] at the College of Engineering is the first unit of its kind at SQU. PAUU was established in Fall 2014. The rationale behind the creation or the main purpose of establishing the unit is to address the need of proper on-time advice to those students whose major is not specified or allocated yet. This transition period for students might take 1-2 years after admission at SQU. Also, its task is to coordinate with the Foundation Program office and Admission and Registration office of SQU for smooth registration of those students. The College of Engineering has developed its functions and allocated a temporary place at the college till the new building is constructed. It has been operational since Fall-2014 for all the students who have not specialized yet. Two faculty members from each department, with experience in curriculum and advice, are assigned to the unit.

Four members (one from each department) will be available to give advice for three weeks including the period of add and drop in each semester. After this period, advisors can be contacted in their office during office hours.

Current members:

Seq	*Staff Name*	*Department*
1	*Dr. Hamoud Al Hadrami*	*PCE*
2	*Dr. Belal Tarboush*	*PCE*
3	*Prof. Alaa Al Muhtaseb*	*PCE*
4	*Dr. Suleiman Al Obaidani*	*MIE*
5	*Dr. Khurshid Alam*	*MIE*
6	*Dr. Emad Summad*	*MIE*
7	*Dr. Mohammed El-Diasty*	*CAE*
8	*Dr. Mohammad Reza*	*CAE*
9	*Dr. Hayder Mirza*	*CAE*
10	*Dr. Ahmed Chiheb Ammari*	*ECE*
11	*Dr. Rami Al Hmouz*	*ECE*
12	*Dr. Lazhar Khriji*	*ECE*

2.2 Departments

At present, the College has four departments:

1. Department of Civil and Architectural Engineering.
2. Department of Electrical and Computer Engineering.
3. Department of Mechanical and Industrial Engineering.
4. Department of Petroleum and Chemical Engineering.

Each department has a Head of Department (HoD) who is also part of the academic staff. Other staff members include a secretary and academic and technical staff. Each department has a board that consists of HoD as a chair, all members of the academic staff and a senior member of the technical staff. The Departmental Board normally meets once a month.

2.3 Committees

Students are represented in the following two committees:

2. Departmental Staff/Student Liaison Committee:

Composition: Head of Department (Chair), two major students, preferably one senior male and one senior female where applicable per cohort, selected by the students. Those students should be in a good standing and not under any current disciplinary action. At least one faculty member selected by the Department Board should be a member of the Committee.

Functions :

i. The main purpose of the committee is to provide a forum for students to express their views on academic issues in their department, related to their programs and courses, and the teaching and learning environment.

ii. Issues are addressed through discussion, and where appropriate follow-up with the appropriate individuals and departments.

iii. Issues of an individual student nature or a specific student grade are not addressed in this committee.

iv. The committee meets at least once per semester. Meetings are minuted.

3. College Staff/Student Liaison Committee:

Composition: Dean (Chair), Assistant Dean for Undergraduate Studies, two students preferably one male and one female per cohort, selected from members of the Department Committees, two students, one male and one female, selected from students not yet assigned to a major (pre-major). Two faculty members selected by the College Board.

Functions : i. The main purpose of the committee is to provide a forum for students to express their views on matters affecting their learning experience. These may be related to their department, other departments or colleges. Typically, these would include items or issues referred by the department committees.

ii. Depending on the nature of the issues under discussion, the committee may invite staff from the college or other units of the University to hear their views.

iii. The committee may refer items to the College Board for discussion and/or action.

v. Issues of an individual student nature or a specific student grade fall outside this committee's remit.

vi. The committee meets at least once a semester. Meetings are minuted and the minutes are submitted to the College Board.

The College of Engineering also has 18 other major committees which meet at least twice per semester. Chairs report on the activities of their committees to the College Board. Other standing or Adhoc Committees may be formed by the Dean or the College Board. The list of these committees is as follows:

College Executive Committee
College Space Allocation Committee
College Postgraduate Studies & Research Committee
College Information & Communication Technology Committee
College Quality Assurance & Academic Accreditation Committee
College Industrial Training & Community Service Committee
College Risk Management Committee
College Publication & Web Committee
College Academic Advisory Committee
College of Engineering Society Advisors Committee
College Social Activity Committee
College Student-Staff Liaison Committee
College Strategic Planning & Development Committee
College Steering Committee for Mechatronics Engineering Program
College Agriculture-Engineering Program Committee
College Pre-Specialization Academic Advising Unit (PAAU)
College Technical Staff Training Committee
College Examination Committee
College Media Committee
College Renewable & Sustainable Energy Committee
College IR4 Committee
College Industrial Advisory Board

3. UNDERGRADUATE PROGRAMS

3.1 Admission

Admission to the College of Engineering is conducted through the Deanship of Admissions and Registration. The College places particular emphasis on quality education and admission criteria ensures the selection of the best students. Students must have passed the General High School Examination (Science Section) with a minimum grade of B in Mathematics and Physics and a minimum grade of C in Chemistry.

3.1.1 University Entrance

One week before classes start in September, new students go through an orientation program that is organized by the Deanship of Students Affairs in coordination with all the Colleges, Centres and Deanship of Admissions and Registration. Students are welcome to the University and its campus to make their change to the new University environment more comfortable. Identification Cards are issued to them. Students get to know their accommodation and important University facilities such as cafeteria, clinic, library, computer center and recreational facilities. Students are also introduced to the different University Rules and Academic Advising, such as course registration procedures and academic rules. Students visit their Colleges and meet their academic advisors during the orientation week. They also take Placement Tests to determine their aptitude in the English Language, Mathematics and Computing skills (See section on GFP)

3.1.2 Centre for Preparatory Studies Foundation Program (CPSFP)- English

The Center for Preparatory Studies (CPS) at Sultan Qaboos University (SQU) offers Foundation Program (FP) courses, a pre-requisite qualification for entrance to the degree programs in the university, in conformity with the requirements of Oman Academic Standards. The program was introduced at SQU in the 2010/2011 academic year. The FP has been designed to help adequately prepare admitted students undertake university level education by helping them achieve the prescribed learning outcomes in the four areas: English language, Mathematics, Information Technology and General Study Skills. The Center for Preparatory Studies at SQU consists of course work in three areas: English language, Mathematics and IT. All students should satisfy the FP requirements by either showing accepted alternative qualifications in these areas or achieving exit test standards. The exit test standards in these courses are measured in terms of prescribed student learning outcomes. Students can achieve the exit standards by passing the tests at the beginning of the program or taking the courses and passing them. The relevant learning outcome standards in General Study Skills will be integrated into the other three areas.

Website Information

website: https://www.squ.edu.om/cps

3.1.3 Centre for Preparatory Studies Foundation Program (CPSFP) - Arabic

البرنامج التأسيسي

أصبح البرنامج التأسيسي بجامعة السلطان قابوس مدخلاً إلزامياً للدراسة بجميع كليات الجامعة ابتداء من العام الدراسي ٢٠١١/٢٠١٠. ولقد صمم البرنامج لإعداد الطلاب المقبولين بالجامعة للدراسة الجامعية من خلال تحقيق مخرجات التعلم المطلوبة وفقاً للمعايير الأكاديمية العمانية، حيث يؤهل البرنامج الطالب في أربعة جوانب وهي اللغة الإنجليزية والرياضيات وتقنية المعلومات ومهارات التعلم. وسوف لن يسمح للطالب بدء الدراسة الجامعية قبل التسجيل في البرنامج التأسيسي.

3.1.4 Admission into Major

Students select their major normally before their third semester of credit courses. Deadlines for submitting applications are announced by the Office of the Assistant Dean for Students Academic Affairs. The minimum requirements to specialization are:

- Student must complete at least 25 credit hours before specialization.
- The student should complete the following four courses:
  - MATH2107 Calculus I (4 credits)
  - PHYS2107 Physics for Engineering I (4 credits)
  - CHEM1071 General Chemistry for Engineering (3 credits)
  - ENGR1501 Introduction to Engineering (1 credit)
- A student under probation cannot apply for specialization unless he/she has finished 40 credits hours.

Generally, admission into a major is based on the student's preference. However, when there are more applications to a major than available spaces, selection is based on the best grades. Subject to space availability, a student can apply to change from an engineering major to another engineering major if the change will not cause much delay in his/her graduation and if his cumulative GPA allows him for this transfer.

Students wishing to change to another College need to contact the Admissions & Registration for details and Application Forms.

3.2 Academic Rules and Regulations

The Deanship of Admissions & Registration issues a booklet on Academic Regulations which contains all procedures, rules and regulations related to academic matters. For additional information, please refer to this booklet, or visit the website at:

https://www.squ.edu.om/Portals/26/PDF%20files/Admission%20files/undergraduate%20academic%20R%2028-10-2018.pdf?ver=2020-06-23-100143-790

3.2.1 Academic Advising & Registration

3.2.1.1 Academic Advising

Following admission to the University, each student is assigned an academic advisor whose role is to:

a) help the student discover his/her potential and capabilities.

b) approve the student's choice of courses each semester in accordance with the Degree Program and Academic Regulations.
c) assist the student in exploring alternative paths to the degree if for any reason the normal pace of the degree is disrupted.
d) advise the student on other matters affecting his/her studies.

The advisor must approve a student's proposed registration each semester and help develop a recovery plan for students on academic probation in consultation with the academic Assistant Dean. A student may be re-assigned to a new advisor upon selection/change of major.

Advising Remarks

Issues that an academic advisor should make sure that his/her advisees are aware of:

- Students should make sure that they have a copy of their degree plans and familiarize themselves with its details.
- Advisor's approval is required in most forms (i.e. Registration, Add & Drop, Postponement, etc.)
- Students should arrange to go and see their advisors whenever necessary and not only during registration.
- Attendance is mandatory, students should be familiar with the attendance policy of the University.
- A delay in taking pre-requisite courses will delay progress. Students should avoid dropping a pre-requisite course as much as possible.
- When the GPA is poor, it should be discussed with the advisor on reducing the course load as a high load will be a heavy burden and might lower the student's GPA even further.
- Students should watch deadlines and notices on the boards.
- Advisors expect students to do their best.
- Students are responsible for knowing the academic regulations and their degree plan and all its requirements.

Registration

Registration is the process by which a student selects courses according to the guidance of his/her advisor and formally enrolls in those courses.

Information regarding the schedule, location and deadlines of the registration period and timetables are given to students and advisors in advance of the scheduled registration period. Online registration is available at the Deanship of Admissions and Registration web or SIS web page (look for A&R announcement).

3.2.2 Degree Plans

Requirements for completing a degree shall be stated for each year of entry (cohort) as the total number of credits needed with specific instructions regarding University, College, major and minor, program credits, electives and other specific requirements. The total number of credits required for a Bachelor of Engineering is 136 credits (only the Architectural Engineering program requires 156

credits). Given normal scheduling patterns, the program can be completed within 13 semesters excluding the GFP. A time limit of four additional semesters may be allowed. The Degree plan and the changes made to it is binding on students in terms of graduation requirements.
Degree plans of all engineering programs can be downloaded from the College website through departments/programs.

Degree requirements are classified into three groups:

a) **University Requirements and University Electives**

All degree plans include 6 credit hours of the following University Requirements and 6 credit hours of University Electives:

- 2 credits in Arabic Language (ARAB1060)
- 2 credits in Oman and Islamic Civilization (HIST1010) or Islamic Culture (ISLM1010)
- 2 credit in Omani: State & People (SOCY1005)
- 6 credits in General University Elective courses.

General Electives are standard regular courses offered by any College in the University which the student may freely choose to take (subject to fulfilling pre-requisite requirements), but which do not form part of his or her College or Specialization requirements and electives. They may not be restricted to a subset of courses at the College level. The courses chosen must not duplicate others already taken. It is recommended to select humanity courses as university electives.

b) **College Requirements and Electives**

A total of 32 credit hours are required for all students in the College and 3 credits hours as a College programming language Elective (ENGR2217 or COMP2002).

c) **Departmental and Major Requirements & Electives**

A total of 89 credit hours are required for the Departmental and Major requirements and electives for all programs except for Architectural Engineering (AREN):

- Departmental Requirements:
  All students in the same department must take these requirements.

- Major Requirements:
  All students in the same major must take these requirements.

(See section on Department/Major for the list of these courses.)

- Major Requirements:
- Only credits earned in courses which fall within the degree plan for the major shall be counted towards the total required for a degree.

- The degree requirements specified when a student is admitted to his/her degree program shall remain in effect until the degree is completed.

. Degree plan description for each department can be found in the section on departments in this document.

First Two Semesters Degree Plan (Pre-Specialization Plan)

Every student should follow the following degree plan in the first two semesters after finishing the Foundation Program.

This two-semester degree plan is common in all departments so regardless of which department the student will select and join, he/she can follow this degree plan

Cohort 2025 (Scheme I)

	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
Scheme I FP1 Fall 2025		General Foundation Program	0		UR
		Total Credits	**0**		

	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
Scheme I Semester 1 Spring 2026	HIST1010 or ISLM1010	Oman and Islamic Civilization or Islamic Culture	2		UR
	ENGR1501	Introduction to Engineering	1	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	ENGR1600	Workshop I	1	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	CHEM1071	General Chemistry for Engineering	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT 0108	CR
	LANC2160	English for Engineering I	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	MATH2107	Calculus I	4	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT0108	CR
	Total Credits		**14**		

	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
Scheme I Semester 2 Fall 2026		University Elective	2		UE
	ARAB1060**	Arabic	2		UR
	SOCY1005**	Contemporary Omani State and People	2		UR
	LANC2161	English for Engineering II	3	LANC2160	CR
	MATH2109	Calculus II for Science and Eng.	3	MATH2107	CR
	PHYS2107	Physics for Engineering I	4	MATH2107*, FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT0108	CR
	Total Credits		**16**		

3.2.3 Industrial Training Program

All engineering students are required to take an Industrial Training Program (ENGR4007). ENGR4007 is planned in the Summer after the students complete their fourth year. For a period of 6-8 weeks the students receive training from a private company or government ministries related to their specialization. The student, supervised by the training organization, has to submit at the end of the training period a report to his/her department. At present, it is a non-credit course and is graed “PASS” or “NOT PASS.” The industrial training program is coordinated by the Assistant Dean for Industrial Training and Alumni.

3.3 Student Information System

3.3.1 College of Engineering Website

The College of Engineering has a website that can be accessed through Intranet and Internet. Each department of the College of Engineering is contributing in developing and maintaining the website. Important information about each department such as degree plans, faculty, and facilities can be obtained by browsing the web site. Members of the College Web Committee are responsible for

maintaining and updating the website. The College website can be accessed through the University Home Page www.squ.edu.om or directly on www.squ.edu.om/engineering.

All recent degree plans are available within each department web page. Follow the instructions shown at the end of this document to access the Degree Plans.

3.3.2 Admissions and Registration Website

The Admission and Registration website provides information on matters related to the admissions and registration for the students and members of the staff. Information on Admissions, Academic Regulations, University degree plans, Timetables, Section Counts, Statistics, student status, and related matters are presented on the web site. The Admissions and Registration web site can be accessed through the link on the University Home Page or through the address https://www.squ.edu.om/admissions

Students are encouraged to browse these websites on a regular basis in order to update themselves with the academic regulations and matters concerning their academic affairs.

3.4 Departments/Programs

3.4.1 Department of Civil and Architectural Engineering

Introduction

The Department of Civil and Architectural Engineering is one of four departments in the College of Engineering at Sultan Qaboos University. The Department currently has 26 highly qualified academic staff and 10 technical and administrative staff. The specialization and expertise of the academic staff span two major specializations: Civil Engineering and Architectural Engineering. Civil Engineering includes Structural Engineering, Materials, Construction Management, Transportation Engineering, Environmental Engineering, Coastal Engineering, Geotechnical Engineering, Water Resources and Geomatics Engineering. Architectural engineers are required to study a wide range of science, technical, artistic and humanities subjects to understand the socio-economic, cultural, aesthetic and technical aspects of a building.

Civil Engineering Academic Staff

Name/Position/ Email	Ext.	Academic Qualification	Specialization
Dr. Mubarak Al-Alawi *Associate Professor and HoD* *alawim@squ.edu.om*	1332	PhD (Canada) 17	Construction Engineering
Prof. Ali Al-Nuaimi *Professor* *alnuaimi@squ.edu.om*	1337	PhD (UK) 00	Structural Engineering
Prof. Ali Salim Al-Harthy *Professor* *alharthy@squ.edu.om*	1365	PhD (USA) 92	Structural Engineering

Name/Position/ Email	Ext.	Academic Qualification	Specialization
Prof. Khalifa Al-Jabri *Professor* *aljabri@squ.edu.om*	1335	PhD (USA) 00	Structural Engineering
Dr. Khalid Al-Shamsi *Associate Professor* *alshamsi@squ.edu.om*	2670	PhD (USA) 06	Transportation Engineering
Dr. Ghazi Al-Rawas *Associate Professor & Dean of Research* *ghazi@squ.edu.om*	2522	PhD (Canada) 10	Remote Sensing and Water Resources Engineer
Dr. Hossam Hassan *Associate Professor* *hossam@squ.edu.om*	1336	PhD (USA) 96	Transportation Engineering
Dr. Mohammed Al-Aghbari *Associate Professor* *aghbari1@squ.edu.om*	1334	PhD (UK) 99	Geotechnical Engineering
Dr. Issa Al-Harthy *Associate Professor* *aissa@squ.edu.om*	1339	PhD (Japan) 00	Environmental Engineering (Acoustics)
Dr. Ashraf Elazouni *Associate Professor* *elazouni@squ.edu.om*	2505	PhD (USA) 93	Construction Management
Dr. Yahia Mohamedzein *Associate Professor* *yahiaz@squ.edu.om*	2577	PhD (USA) 89	Geotechnical Engineering
Dr. Syed Muhammad Bilal Waris Ali *Associate Professor* *waris@squ.edu.om*	2589	PhD (Japan) 10	Structural Engineering
Dr. Kazi Abu Sohel *Associate Professor* *kmasohel@squ.edu.om*	3752	PhD (Singapore) 09	Structural Engineering
Dr. Mohammed Kandil El-Diasty *Associate Professor* *m.eldiasty@squ.edu.om*	3759	PhD (Canada) 00	Geomatics Engineering
Dr. Mohammad Reza Mahmoud *Associate Professor* *m.reza@squ.edu.om*	2598	PhD (Iran) 12	Water Resources and Environmental Systems Analysis and Planning
Dr. *Tahir Mehmood* *Associate Professor* *t.mehmood@squ.edu.om*	1342	PhD (Thailand) 15	Structural Engineering
Dr. Talal Etri *Assistant Professor* *t.etri1@squ.edu.om*	1340	PhD (Germany) 07	Hydraulic and Coastal Engineering

Name/Position/ Email	Ext.	Academic Qualification	Specialization
Dr. Zeinab Yavari *Assistant Professor* *z.yavari@squ.edu.om*	3752	PhD (Iran) 16	Environmental Engineering
Dr. Ronald Ekyalimpa *Assistant Professor* *r.ekyalimpa@squ.edu.om*	2678	PhD (Canada) 15	Construction Management

Architectural Engineering Academic Staff

Name/Position/Email	Ext.	Academic Qualification	Specialization
Dr. Saleh Al Saadi *Associate Professor and Coordinator AE Program* *salsaadi@squ.edu.om*	2697	PhD (USA) 14	Architectural Engineering
Dr. Hanan Al-Khatri *Associate Professor* *khatri@squ.edu.om*	3752	PhD (UK) 19	Architecture (Science)
Dr. Chaham Alalouch *Associate Professor* *c.alalouch@squ.edu.om*	2656	PhD (UK) 09	Architectural Engineering and Design
Dr. Mohamed Salah Eldin *Assistant Professor* *msaleh@squ.edu.om*	2674	PhD (Egypt) 11	Building Construction
Dr. Hayder Khan *Assistant Professor* *khan@squ.edu.om*	1342	PhD (UK) 15	Mechanical Engineering
Dr. Aliya Al-Hashim *Assistant Professor* *aliya@squ.edu.om*	2671	PhD (USA) 20	Architectural Engineering

Laboratory Facilities

1. Architectural Printing Laboratory
2. Building Construction Model-Making Laboratory
3. Construction Materials and Structures Laboratory
4. Geomatics Engineering Laboratory
5. Geotechnical Engineering Laboratory
6. Highway Materials Laboratory
7. Hydraulics and Hydrology Laboratory
8. Environmental Engineering Laboratory
9. Model Workshop
10. Building Energy Laboratory

The Department of Civil and Architectural Engineering offers Bachelor of Engineering in Civil Engineering and Bachelor of Engineering in Architectural Engineering. The student may select the degree in Civil Engineering or Architectural Engineering upon fulfilling the University and College requirements.

The Bachelor of Engineering in Civil Engineering is awarded upon fulfillment of not less than 136 credit hours of coursework.

The Bachelor of Engineering in Architectural Engineering is awarded upon fulfillment of not less than 156 credit hours of coursework.

3.4.2 Department of Electrical and Computer Engineering

Introduction

The Department of Electrical and Computer Engineering aims to provide a comprehensive education to equip students for subsequent challenging and highly competitive positions in the Electrical and Computer Engineering related sectors. This is achieved through a well-tailored and progressive sequence of topics in which emphasis is placed on a sound understanding of basic principles, reasoning, and the application of problem-solving skills. Students should, therefore, have proven aptitude for applied science and engineering.

Electrical and Computer Engineering is taught principally in the three final years of the five-year program, following essential courses in the physical sciences (mathematics, physics, etc.) and engineering. The program has a degree plan covering a wide range of topics.

Academic Staff

Most of the academic staff in the Department of Electrical and Computer Engineering hold PhD degrees covering a broad range of specializations and industrial experience. Equally, technical staff members are also highly qualified with many years of experience.

Name/Position/Email	Ext.	Academic Qualification	Specialization
Dr. Ahmed Al Maashri *HoD* *amaashari@squ.edu.om*	*1363/ 1330*	*PhD (Pennsylvania State University), 2012*	*Computer Engineering*
Prof. Abdullah Al Badi *Professor* *albadi@squ.edu.om*	*1324*	*PhD (UMIST, UK), 1998*	*Distributed generation, Power quality, Power system analysis, Power electronics and drives, and Renewable Energy.*

Prof. Abdulnasir Y. Hossen *Professor* *abhossen@squ.edu.om*	*1303*	*PhD (Ruhr-University, Germany), 1994*	*Digital Signal Processing*
Prof. Hadj Bourdoucen *Professor* *hadj@squ.edu.om*	*1325*	*PhD (Ecole Centrale de Lyon, France), 1987*	*Electronic & Optical Communication*
Dr. Amer Al Hinai *Professor, DVC-PSR* *hinai@squ.edu.om*	*1356*	*PhD (West Virginia University), 2005*	*Power System Operation & Control, Renewable Energy Integration, Distributed Generation & Microgrid*
Dr. Joseph Jervase *Associate Professor* *jervase@squ.edu.om*	*1323*	*PhD (University of Khartoum), 1985*	*Microwave Antennas & Propagation*
Dr. Arif Saeed Malik *Associate Professor.* *asmalik@squ.edu.om*	*2566*	*PhD (Imperial College London), 1991*	*Power System Economics, Reliability & Planning*
Dr. Tariq Jamil *Associate Professor* *tjamil@squ.edu.om*	*2515*	*PhD (Florida Institute of Technology, USA), 1996*	*Computer Architecture, Parallel Processing, Computer Arithmetic, Data Encryption, Digital Systems*
Dr. Zia Nadir *Associate Professor & Asst. HoD* *nadir@squ.edu.om*	*2536*	*PhD (University of Science & Technology Lille1 France), 1999*	*Electronics-RF Communications-Computational Electromagnetics*
Dr. Lazhar Khriji *Associate Professor* *lazhar@squ.edu.om*	*1329*	*PhD (Tampere University of Technology, Finland), 1999*	*Digital Signal and Image Processing, Machine Learning*
Dr. Faical Mnif *Associate Professor* *mnif@squ.edu.om*	*2534*	*PhD Polytechnic Institute of Montreal, Canada, 1996*	*Control Systems & Robotics, & Industrial Electronics*
Dr. Hasan Yousef *Associate professor* *hyousef@squ.edu.om*	*2554*	*PhD (University of Pittsburgh, USA), 1989*	*Control Systems applications*

Dr. Muhammad Shafiq *Associate professor* *mshafiq@squ.edu.om*	*2662*	*PhD (Chiba University, Japan), 1997*	*Control Systems Engineering*
Dr. Mostefa Mesbah *Associate Professor* *m.mesbah@squ.edu.om*	*2542*	*Ph. D. (University of Colorado at Boulder, USA), 1993*	*Control Systems and Signal Processing*

Dr. Mohamed Bait-Suweilam *Associate Professor* *msuwailem@squ.edu.om*	*2571*	*PhD (University of Waterloo, Canada) 20*	*Electromagnetics, Antennas, RF Microwave Engineering*
Dr. Ahmed Chiheb Ammari *Associate Professor* *chiheb@squ.edu.om*	*2661*	*PhD (National Polytechnic Institute, Grenoble, France), 1996*	*Embedded Real Time Systems, Computational Intelligence, Systems Optimizations*
Dr. Jawher Ghommam *Associate Professor* *jawher@squ.edu.om*	*3765*	*PhD(University of Orleans, France), 2008*	*Guidance, Navigation and Cooperative Control of Multi-Autonomous Vehicle*
Dr. Dawood Al-Abri *Associate Professor* *alabrid@squ.edu.om*	*2538*	*PhD (University of Florida, USA), 2008*	*Computer Networking, Social Networks, Network Security*
Dr. Nasser Tarhuni *Associate Professor* *tarhuni@squ.edu.om*	*2537*	*PhD (University of Technology, Finland), 2007*	*Wireless Radio Resource Management, Optical CDMA, DSP Applications to Power System*
Dr. Rami Al-Hmouz *Associate Professor* *r.alhmouz@squ.edu.om*	*2590*	*PhD (University of Technology, Sydney, Australia),2008*	*Computer Engineering/Computational Intelligence*
Dr. Razzaqul Ahshan *Associate Professor* *razzaqul@squ.edu.om*	*1314*	*PhD (Memorial University of Newfoundland, St. John's, Canada), 2013*	*Renewable Energy Systems and their Integration, Microgrids, Modelling and Control of Renewable Energy Systems, Wind Energy, Bio-energy, Electrical Drives, Application of Signal Processing Techniques to Power Systems*

Dr. Muhammed Rizwan *Associate Professor* *m.mughal1@squ.edu.om*	*1327*	*PhD (Politecnico di Torino)2014*	*Electronics and Communication Engineering*
Dr. Hafiz Muhammad Asif *Associate Professor* *h.asif@squ.edu.om*	*2664*	*PhD (Lancaster University, UK), 2012*	*Communication Systems*
Dr. Mohamed Eladawy *Associate Professor* *m.eladawy@squ.edu.om*	*2519*	*PhD (University of Poitiers, France) 2011*	*High Voltage Engineering*
Dr. Samir Al Busaidi *Assistant Professor* *albusaid@squ.edu.om*	*2572*	*PhD (Curtin University, WA, Australia)*	*Telecommunication*
Dr. Hassan Al Lawati *Assistant Professor and ADUS* *hlawati@squ.edu.om*	*2518*	*PhD (UK), 2014*	*CP Antennas, Applied Electromagnetism and AMC surfaces*
Dr. Abdelsalam Elhaffar *Assistant Professor* *a.elhaffar@squ.edu.om*	*2533*	*PhD (Helsinki University of Technology, Finland), 2008*	*Power system protection, Distributed generation, smart grids, and fault location in power systems*
Dr. Ibrahim Al Naimi *Assistant Professor* *i.alnaimi@squ.edu.om*	*3767*	*PhD (De Montfort University, Leicester, UK), 2011*	*Mechatronics Engineering*
Dr. Gulam Khan *Assistant Professor* *G.khan@squ.edu.om*	*2535*	*PhD(University of Newcastle, Australia), 2019*	*Automation and control of nonlinear Systems*
Dr. Said Al-Abri *Assistant Professor* *ssabry@squ.edu.om*	*2532*	*PhD (Georgia Institute of Technology, USA), 2019)* *MSc (University of Central Florida, USA), 2013*	*Control Engineering*

Dr. Taha Mubarak Al-Saadi *Lecturer* *taha@squ.edu.om*	*1346*	*PhD (University of Sheffield, UK), 2024*	*Advanced Control and System Engineering*
Engr. Salem Al-Hinai *Demonstrator* *salems@squ.edu.om*	*2578*	*B. Eng, SQU, 2001*	*Power Systems*

Technical Staff

Name/Position/Email	Ext.	Academic Qualification	Specialization
Sulaiman Al Sinani *Chief Engr.(superintendent)* *ssinani@squ.edu.om*	*1306*	*BEng. (SQU, Oman), 2002*	*Electrical & Electronics Engineering*
Jaber Al-Bulushi *Senior Engineer* *jabir@squ.edu.om*	*2540*	*MSc (Computer Engineering SQU, Oman), 2003*	*Electronics & Communication Engineering*
Yousef Al Shuaili *Senior Engineer* *shaili@squ.edu.om*	*2516*	*BEng. (SQU, Oman). 2001*	*Electrical & Electronics Engineering*
Abbas Abdelrahman Teirab *Engineer* *abbas@squ.edu.om*	*2563*	*BEng. (SQU, Oman)*	*Electronics & Communication Engineering*
Naeema Al Gaithi *Engineer* *gaithi@squ.edu.om*	*2565*	*BSc (Higher College of Technology, Oman), 2008*	*Telecommunications*
Rona George Allwyn *Engineer* *rona@squ.edu.om*	*2565*	*BTech (Kerala University, India)_, 2002*	*Electrical and Electronics Engineering*
Nabil Hamza *Lab Supervisor* *nabilh@squ.edu.om*	*2551*	*MSc (National Engineering School of Sfax, ENIS, Tunisia), 2003*	*Electronics and Telecommunications*

Salwa Al Bahri *Technician* *salwa2@squ.edu.om*	*2565*	*Bachelor (Global College of Engineering and Technology.),2022*	*Engineering - Electronics communication*
Saud Badar Al Salmi *Engineer* *s.alsalmi@squ.edu.om*	*2564*	*BEng (UTAS-Muscat) 2022)*	*Computer Engineering*
Abdulsallam Muslem Aloraimi *Engineer* *a.aloraimi@squ.edu.om*	*2564*	*BEng (LIT) 2018)*	*Electrical Power System*
Wisal Juma Said Al-Dohani *Engineer* *w.aldohani@squ.edu.om*	*2565*	*BEng, (UTAS-Muscat) 2021*	*Electrical Power Engineering*
Mr. Sami Al Jaafari *Technician* *samij@squ.edu.om*	*2564*	*Diploma in Electrical Power Engineering, (Ibra College of Technology), 2010*	*Power Engineering*
Mr. Said Al Hajri *Technician* *alhajri_s@squ.edu.om*	*2578*	*BSc (Sultan Qaboos University, Oman), 2013*	*Computer Science*

The Bachelor of Engineering in Electrical and Computer Engineering program covers broad education in basic sciences, mathematics, and courses in specialized areas of Electrical & Computer Engineering. The program includes four specializations; namely, Electronic Instrumentation and Control (EIC), Power Systems and Energy (PSE), Embedded Computing and Networks (ECN), and Telecommunications & Wireless Systems (TWS). Also, the department offers a program in Mechatronics jointly with the Department of Mechanical and Industrial Engineering**.**

Specialization coordinators:

Dr. Dawood Al Abri : Embedded Computing and Networks
Prof. Abdulla Al Badi : Power Systems and Energy
Prof. Hadj Bourdoucen : Telecommunications & Wireless Systems
Dr. Hassan Yousef : Electronic Instrumentation and Control
Dr. Riadh Zaier : Mechatronics Program

The ECE Department is equipped with highly sophisticated laboratories to train students in drones and machine vision, electrical and electronics circuits, electrical drives and machines, digital design,

embedded systems, communications, computer networking, power systems, high voltage, and control systems.

See degree/study plans for full details of courses in the department.

3.4.3 Mechatronics Engineering Program

Introduction

Mechatronics Engineering (MCE) is a focus area in engineering that is rapidly gaining importance as industries move toward smarter and more integrated technologies. It represents a synergistic integration of mechanical systems, control systems, and computer engineering. Typical mechatronic systems combine sensors (such as position, speed, and temperature sensors), actuators (including electric motors, hydraulic cylinders, and control valves), and computing platforms (ranging from PLCs to custom-built controllers) into cohesive, intelligent solutions that serve both industry and society. The program fosters a deep interdisciplinary understanding, enabling students to design, develop, and operate a wide range of applications from advanced robotics and smart consumer electronics to intelligent infrastructure and automated oilfield technologies. Mechatronics engineers trained at Sultan Qaboos University are equipped with the creativity, analytical thinking, and systems-level insight necessary to lead in the development of emerging technologies. The Mechatronics Engineering program is a five (5) year Bachelor's Degree program, oriented toward future trends in industrial development within the Sultanate of Oman and the Gulf.

Academic staff

The Mechatronic Engineering Program is a joint program managed by two departments; namely, Electrical & Computer Engineering (ECE) and Mechanical & Industrial Engineering (MIE). The program includes basic courses from both ECE and MIE programs and major courses. Major courses include but are not limited to: Robotics, Mechatronics System Design, Control Systems Engineering, Real-time control and interfacing, Modeling and Simulation, Power Electronics and Drives, Electromechanical Systems and Actuators, etc. The MCE curriculum is crowned, typically within the last year, with a capstone design experience, where students need to undergo a Final year Project spanned over two semesters. These courses are offered complementarily by academic staff from both ECE and MIE departments. Consult degree/study plans for full details of courses in this program.

Name/Position/E-Mail	Ext.	Academic Qualification	Specialization
Dr. Nasr Al-Hinai *Associate Professor, Chair* *nhinai@squ.edu.om*	1352	PhD (University of Manitoba, Canada), 2011	Operations Research, Production Planning and Scheduling, Operations Management, Product Design and Project Management.

Name/Position/E-Mail	Ext.	Academic Qualification	Specialization
Dr. Ahmed Al Maashri *Associate Professor, Co- Chair* amaashari@squ.edu.om	1363/ 1330	PhD (Pennsylvania State University), 2012	Computer Engineering
Dr. Amur Al-Yahmedi *Associate Professor,* *amery@squ.edu.om*	1358	PhD (University of California, USA), 2001	Modeling and Simulation, Multibody Dynamics, Robot and autonomous Vehicle Navigation.
Dr. Riadh Zaier *Associate Professor* *zaier@squ.edu.om*	2547	PhD (Nagoya Institute of Technology, Japan), 1999	Mechatronic Systems Design, Automation, Robotics, Control Systems, Bioinspired Control, Instrumentation, Measurement.
Dr. Musaab Hassan Zarog *Assistant Professor* *musaabh@squ.edu.om*	2489	PhD (University of Newcastle Upon Tyne, UK), 2006	Micro/Nanoelectromechanical, Systems (MEMS/NEMS)& Microsystems, Vibration energy harvesting, AI-based Machine Condition Monitoring and Fault diagnosis, piezo sensors, & sensors for oil and gas
Dr. Mohammed Al-Lawati *Assistant Professor* *mlawati@squ.edu.om*	1353	PhD (University of Alberta, Canada), 2025	Mechatronics Engineering, Control systems and robotics.
Dr. Hassan Al Lawati Assistant Professor and ADUS hlawati@squ.edu.om	2518	PhD (UK), 2014	CP Antennas, Applied Electromagnetism and AMC surfaces
Dr. Faical Mnif Associate Professor mnif@squ.edu.om	2534	PhD (Polytechnic Institut Montreal, Canada), 1996	Control Systems & Robotics, & Industrial Electron
Dr. Ibrahim Al Naimi Assistant Professor i.alnaimi@squ.edu.om	3767	PhD (De Montfort University, Leicester, UK) 2011	Mechatronics Engineering
Dr. Muhammad Shafiq Associate professor mshafiq@squ.edu.om	2662	PhD (Chiba University, Japan), 1997	Control Systems Engineering

Program Management

The management of the program is assured by both ECE and MIE departments. The two departments take turns in managing the program, where each management cycle is 3 years in duration.

Laboratories

In addition to the different lab units from both ECE and MIE departments used in almost every course of the program, the College of Engineering has granted the program a specific lab used, namely for program courses. The MCE lab is equipped with the last up-to-date equipment such as robots, drones, etc.

See degree/study plans for full details of courses in this program.

3.4.4 Department of Mechanical and Industrial Engineering

Introduction

The Department of Mechanical and Industrial Engineering is dedicated to achieving excellence in both education and research, while also serving the needs of industry. Its vision is to be a regional and international leader in producing high-quality graduates, advancing research, and fostering innovation. The Department offers comprehensive Bachelor's, Master's, and Ph.D. programs in Mechanical and Industrial Engineering, as well as a joint Mechatronics Engineering program in collaboration with the Department of Electrical and Computer Engineering. All undergraduate programs are accredited by the Engineering Accreditation Commission of ABET, https://www.abet.org, reflecting their commitment to high academic standards.
The Department aims to develop future leaders for industry, academia, government, and society in Oman, emphasizing a strong foundation in knowledge, creativity, analytical skills, and professional ethics. Through a blend of coursework and practical projects, students are equipped to apply scientific and engineering principles in multidisciplinary settings, demonstrate leadership, and uphold ethical standards. The Department's graduates have gone on to hold prominent positions in government, major companies, and academic institutions both in Oman and the wider region.

Academic Staff

The faculty of the Mechanical and Industrial Engineering (MIE) Department are engaged in diverse areas such as applied mechanics, design, dynamics, control, thermo-fluids, materials, manufacturing, automation, robotics, ergonomics, and safety. They are actively involved in teaching, research, and service activities. The Department is supported by a dedicated team of technical staff who assist in laboratory management, equipment maintenance, and support both faculty and students in practical and research activities. The Department has experienced significant growth in research since its inception and has recently established several collaborative programs with local industries in Oman, focusing on research, product development, and training. This reflects the Department's commitment to advancing both academic and industry-oriented innovation.

Name/Position/E-Mail	Ext.	Academic Qualification	Specialization
Dr. Nasr Al-Hinai *Associate Professor, HoD* *nhinai@squ.edu.om*	1352	PhD (University of Manitoba, Canada), 2011	Operations Research, Production Planning and Scheduling, Operations Management, Product Design and Project Management.
Dr. Abdullah Al-Shabibi *Associate Professor, (Asst HoD)* *ashabibi@squ.edu.om*	2567	PhD (The University of Michigan, Ann Arbor, USA), 2001	Applied Mechanics, Finite Element Modeling of Engineering Problems, Thermoelastic Instability, Mechanics of Composite Materials, Experimental Mechanics.
Dr. Majid H. Al-Maharbi *AssociateProfessor, ADPGSR* *majidm@squ.edu.om*	2541 1333	PhD (Texas A&M University, USA), 2009	Metallurgy, Corrosion, Severe Plastic Deformation of Metallic Materials, Crystallographic Texture and Microstructure Engineering.
Prof. Tasneem Pervez *Professor* *tasneem@squ.edu.om*	1315	PhD (University of Minnesota, USA), 1991	Materials Modeling, Application of FEM, Material Homogenization, Composites, Expandable Tubular and Elastomers
Prof. Sayyad Zahid Qamar *Professor* *sayyad@squ.edu.om*	1349	PhD (King Fahd University of Petroleum & Minerals, KSA), 2004	Applied materials and manufacturing; Applied mechanics and design; Reliability engineering; Engineering education; Analytical, numerical, and stochastic modeling; Development of experimental facilities; Metalforming (extrusion) process, dies and tools, and product defects; Expandable and other specialty steels; Swelling elastomers and novel polymers for oil and gas industry; Sustainable engineering.
Prof. Khalid Alzebdeh *Professor* *alzebdeh@squ.edu.om*	2556	PhD (Michigan State University, USA), 1994	Micromechanics of Composites, Stochastic Modelling, Advanced Materials, Bio-composites, Manufacturing, Project Management & Economics.
Dr. Nabeel Z Al-Rawahi *Associate Professor, Dean* *alrawahi@squ.edu.om*	1300	PhD (University of Michigan, Ann Arbor, USA), 2002	Fluid Mechanics, Computational Fluid Dynamics, Multiphase Flow, Water

			Desalination, Renewable Energy.
Dr. Amur Al-Yahmedi *Associate Professor,* *amery@squ.edu.om*	1358	PhD (University of California, USA), 2001	Modeling and Simulation, Multibody Dynamics, Robot and autonomous Vehicle Navigation.
Dr. Nasser A. Al-Azri *Associate Professor,* *nalazri@squ.edu.om*	1355	PhD (Texas A&M University, USA), 2008	Solar thermal energy, metrological and solar data, carbon capture, optimization and business automation.
Dr. Riadh Zaier *Associate Professor* *zaier@squ.edu.om*	2547	PhD (Nagoya Institute of Technology, Japan), 1999	Mechatronic Systems Design, Automation, Robotics, Control Systems, Bioinspired Control, Instrumentation, Measurement.
Dr. Mahmood A. Al-Kindi *Associate Professor* *kindim@squ.edu.om*	1312	PhD (University of Illinois Urbana Champaign, USA), 2010	Operation excellence Risk Management Optimization.
Dr. Farooq Al-Jahwari *Assistant Professor,* *farooq@squ.edu.om*	1350/ 2455	PhD (University of Toronto, Canada), 2016	Finite Element Analysis and Design, Processing, Analysis and Characterization of Polymers and Composites; Molecular Dynamics, Impact Mechanics, Smart Materials, Cellular Structures, Design and Fabrication of High Damping Materials for Impact Attenuation.
Dr. Hakan Gultekin *Associate Professor* *hgultekin@squ.edu.om*	3757	PhD (Bilkent University, Turkey), 2007	Applied Optimization, Decision Support Systems, Scheduling, Exact and heuristic algorithm development, particularly for problems arising in modern manufacturing, energy, logistics, and communication systems.
Dr. Afzal Husain *Associate Professor* *afzal19@squ.edu.om*	1322	PhD (Inha University, South Korea), 2010	Renewable energy generation, Solar energy, Wind power, Hydrogen generation, Heat recovery, Waste energy management, Thermal design optimization, Computational fluid dynamics, Microfluidics, Artery blood flows, Micro-scale heat transport, Electronics cooling, and Thermal management.

Dr. Khurshid Alam *Associate Professor* *kalam@squ.edu.om*	3753	PhD (Loughborough University, UK), 2009	Orthopaedics, Bone Mechanics, FE modeling, Material Characterization, Material Modeling, Fracture Mechanics, Wind Turbine.
Dr. Niyazi Bakir *Associate Professor* *n.bakir@squ.edu.om*	2502	PhD (Texas A&M University, USA), 2004	Applied Probability, Decision and Risk Analysis, Homeland Security.
Dr. Abdullah Al Janabi *Associate Professor* *ab.aljanabi@squ.edu.om*	3761	PhD (Stuttgart University, Germany), 2011	Renewable Energy Technologies, Energy & Environment, Thermal Energy Storage Systems (TESS), Electrical Vehicles, Low-Grade Heat Recovery Systems, Passive & Active Cooling Techniques, Fouling Mitigation Techniques.
Dr. Kassim Al-Rubaie *Associate Professor* *k.alrubaie@squ.edu.om*	1313	PhD (Ruhr University Bochum, Germany), 1995	Additive Manufacturing, Materials and Manufacturing Processes, Corrosion, Tribology, Fatigue and Fracture Mechanics, Mechanical Behaviour of Materials, Physical Metallurgy, Phase Transformations in Materials, Advanced Metallic Materials.
Dr. Ahmed Elwardani *Associate Professor* *a.elwardani@squ.edu.om*	1392	PhD (University of Brighton, UK), 2012	Carbon neutral-, Alternative and Low-Grade Fuels, Morphology and Nanostructure of Soot, Spray and Liquid Atomization, Droplet Heating and Evaporation, Combustion engines processes simulations using CONVERGE and ANSYS, Biomass Gasification and Carbonization, Gasification simulations using MFIX and ANSYS, Nanoparticles Synthesis using CI engines and Flames.
Dr. Ahmed Shaban Khalifa *Associate Professor* *a.khalifa@squ.edu.om*	1310	PhD (Sapienza University of Rome, Italy), 2014	Industrial Engineering, Operations Research, Quality Control, Supply Chains, Energy Systems, Simulation, Modeling and Optimization.
Dr. Sulaiman Al-Obaidani *Assistant Professor* *sobeidani@squ.edu.om*	1311	PhD (University of Calabria, Italy), 2009	Membrane Technology, Desalination, Membrane Distillation, Water treatment, Heat Transfer.

Dr. Musaab Hassan Zarog *Assistant Professor* *musaabh@squ.edu.om*	2489	PhD (University of Newcastle Upon Tyne, UK), 2006	Micro/Nanoelectromechanical, Systems (MEMS/NEMS)& Microsystems, Vibration energy harvesting, AI-based Machine Condition Monitoring and Fault diagnosis, piezo sensors, & sensors for oil and gas
Dr. Moosa Al-Kharusi *Assistant Professor* *m.alkharusi1@squ.edu.om*	2845	PhD (Sultan Qaboos University, Oman), 2017	Finite element analysis, Mechanics of nano-composites, Mutli-scale Modeling using computational mechanics, Design and modeling of rubber seals used for oil well application, Nano and micro mechanics of Carbon nanotube based nano-composite materials, Energy methods, Continuum mechanics, Mechanical characterization of graphene materials.
Dr. Emad Summad *Assistant Professor* *esummad@squ.edu.om*	3751	PhD (Durham University, UK), 2001	Innovation and Entrepreneurship, Social Networks & Diffusion, Complexity Methods, AI-Augmented Innovation, System Reliability.
Dr. Nasra Al-Maskari *Assistant Professor* *maskaria@squ.edu.om*	2500	PhD (Texas A&M University, USA), 2016	Mechanical Engineering Design, Product Design, Design of Drones and UAVs , Bioinspired Design, Bio-memetic, Bioinspired Material Design, Bioinspired Design Optimization, Design of Turbodrill for Oil and Gas Industry.
Dr. Omar Al Abri *Assistant Professor* *o.alabri@squ.edu.om* *omar.alabri@squ.edu.om*	1064	PhD (Sultan Qaboos University, Oman), 2016	Applied Mechanics, Mechanics of Materials, Finite Element Analysis, Crystals Plasticity, CPFEM.
Dr. Hussein Obeid *Assistant Professor* *h.obeid@squ.edu.om*	1316	PhD (University of Technology of Belfort Montbeliard, France), 2018	Robust and adaptive control/observers, Energy management optimization of microgrids and electric vehicles using model-based and data-driven approaches, and Diagnosis and prognosis of energy storage systems.
Dr. Mohammed Al-Lawati *Assistant Professor* *mlawati@squ.edu.om*	1353	PhD. (University of Alberta, Canada), 2025	Mechatronics Engineering, Control systems and robotics.

Technical Staff

Name/Position/Email	Ext.	Academic Qualification	Specialization
Said Al-Qarni *Department Superintendent* *Said.qarni@squ.edu.om*	*2580*	BSc (Sultan Qaboos University, Oman), 2009	Properties of Materials, Steam and Heat Engines, Refrigeration and Air-Conditioning.
Mohamed Abdullah Al Hadhrami *Chief Engineer A* *hadhrami@squ.edu.om*	1304	Msc (Sultan Qaboos University, Oman), 2003	Solid Mechanics, Ergonomics, Mechanical Workshops.
Mohammed Ali Al-Hadhrami *Chief Engineer A* *mohali@squ.edu.om*	2503	BSc (Caledonian College of Engineering, Oman), 2008	Fluid Mechanics, Thermodynamics.
Abdullah Al Omrani Senior Engineer (C) *omrani@squ.edu.om*	3792	BSc (Sultan Qaboos University, Oman), 2005	CNC's, Manufacturing, 3D printers.
Mahmood Al Riyami *Engineer A* *malriyami@squ.edu.om*	1391	MSc (Sultan Qaboos University, Oman), 2022	System Dynamics & Control, Mechatronics, Mechanical Systems.
Hamed Al Subhi *Engineer B* *h.alsubhi@squ.edu.om*	2583	BSc (Florida Institute of Technology, USA), 2023	Thermodynamics, Heat Transfer, AC & Refrigeration, Fluid Mechanics, CNC's, Properties of Materials.
Nour Al Rasbi *Engineer A* *Nour@squ.edu.om*	3758	BSc (Sultan Qaboos University, Oman), 2008	Heat Transfer, Human Factors and Work Analysis.
Nusiba Al Kharusi Engineer A nusiba@squ.edu.om	3758	BSc (Sultan Qaboos University, Oman), 2010	Mechatronics, Instrumentation and Measurement, Control Systems.
Hawraa Alajmi *Engineer B* *hawraa@squ.edu.om*	2508	BSc (Sultan Qaboos University, Oman), 2015	Thermodynamics, Heat Transfer, AC & Refrigeration.

Mohammed Al Salmi *Workshops Supervisor (Senior Technician (A))* *alsalmi1@squ.edu.om*	1308	GNVQ (University of Technology and Appli Sciences, Oman), 199	Workshops Supervisor, Workshop Instructor, Research Assistance, Machinery Specialist.
Yahya Al Agbari *Technician A* *yahyaa@squ.edu.om*	1343	BSC (National University of Science and Technology, Oman), 2023	Mechanical workshop technician and instructor
Faisal Al-Darmaki *Technician B* *f.aldarmaki1@squ.edu.om*	1343	BSc (Dhofar University, Oman), 2016	Mechanical workshop technician and instructor
Mahfoudh Al Sharji *Senior Technician A* *sharji@squ.edu.om*	1343	NVQ (Muscat Technical training Institute, Oman), 1997	*Mechanical workshop technician and instructor. Welder*
Hamoud Al Mahrizi *Senior Technician A* *hood@squ.edu.om*	3796	Tech. Dip (Al Seeb Vocational Training Institute, Oman), 1990	Carpenter
Saleh Al Malki *Technician B* *almalky@squ.edu.om*	3796	SSC (Oman), 1996	Carpenter
Sultan Al Hammadi *Technician B* *Sultan.salim@squ.edu.om*	1343	BSC (University of Technology and Applied Sciences, Oman), 2023	Mechanical workshop technician and instructor
Fawzi Al Maashri *Technician B* *f.almaashri@squ.edu.om*	1343	Voc. Dip. (Saham Vocational Training Institute, Oman), 2010	Mechanical workshop technician and instructor. Welder
Issa Al Saifi *Storekeeper B* *imasaifi@squ.edu.om*	1307	Tech. Dip (National University of Science and Technology, Oman), 2011	Stores Management

Laboratory Facilities

1. Properties of Materials Laboratory
2. Steam and Heat Engines Laboratory
3. Refrigeration and Air-Conditioning Laboratory
4. Solid Mechanics Laboratory
5. Fluid Mechanics Laboratory
6. Systems Dynamics and Control Laboratory
7. Mechanics of Machines Laboratory
8. Computer Integrated Manufacturing (CIM) Laboratory
9. Human Factors and Work Analysis Laboratory
10. Industrial Information Systems Laboratory
11. Computer Laboratories
12. Metrology Laboratory
13. Mechatronics Laboratory
14. MIE Research Laboratory
15. Engineering Research (ENGR) Laboratory
16. Central Workshop
17. Training Workshop
18. Carpentry Workshop

The Mechanical and Industrial Department offers two undergraduate programs as follows:

- Bachelor of Engineering in Mechanical Engineering
- Bachelor of Engineering in Industrial Engineering

The Department Requirements (DR, 11 Cr) Are:

Probability and Statistics for Engineers, Engineering Economics, Engineering Tools and Graphics, Innovation and Entrepreneurship.

1) Mechanical Engineering Major Requirements (AR, 63 Cr) Are:

Engineering Mechanics, Solid Mechanics, Product Design, Machine Dynamics, Thermodynamics I, Thermodynamics II, Materials Science and Engineering, Electromechanical Systems, Design of Machine Elements, Engineering Systems and Control, Control Systems Design, Instrumentation and Measurements, Fluid Mechanics, Heat Transfer, Manufacturing Processes, Modern Materials and Manufacturing, Numerical Methods for Engineers, Data Analytics in Engineering, Design of Thermal Systems, Capstone Design, Project I, Project II

2) Industrial Engineering Major Requirements (AR, 60 Cr) Are:

Introductory Applied Mechanics, Mechatronics Systems, Theory of Modeling and Optimization, Industrial Information System, Work System Analysis and Design, Ergonomics and Safety, Optimal Experimental Design, Integer and Stochastic Optimization in Practice, Production Planning and Inventory Management, Quality Engineering and Management, Data Science and Engineering Analytics, Facilities Design and Planning, Materials and Manufacturing Technology, Simulation

Models, Engineering Management, Smart Manufacturing, Supply Chain and Logistics Engineering, Product Design and Manufacturing, Automated Industrial Systems, Project I, Project II

See degree/study plans for full details of the list of courses for both programs offered in the department.

3.4.5 Department of Petroleum and Chemical Engineering

Introduction

The undergraduate programs in the Petroleum & Chemical Engineering Department (PCED) in the College of Engineering at Sultan Qaboos University are carefully designed to meet the needs of the Sultanate of Oman in the growing fields of oil and gas industry as well as the chemical and process industries. The department's vision is to be considered among the top departments in the region that produces graduates receiving worldwide recognition and is able to attract top-notch faculty. As such, the Department aims at providing a comprehensive state-of-the-art education for its students and thus equipping them with the needed skills for the competitive job market. This is achieved through a progressive sequence of subjects well-tailored to build a deep and sound understanding of the basic principles of engineering, emphasizing reasoning and engineering application in problem solving. The department offers two different Bachelor of Engineering Degrees (BEng) in Petroleum & Natural Gas Engineering (PNGE) and Chemical & Process Engineering (CHPE). Both PNGE and CHPE programs are accredited by the Accreditation Board of Engineering and Technology (ABET) which is an internationally recognized accreditation body. The Bachelor programs are solidly constructed, with an excellent technology based, to provide sound and internationally acclaimed undergraduate engineering education. They are designed in such a way to allow broad perspective, engendering social, cultural, ethical components, all combined to produce the engineers, who are expected to serve as a leading role model in the community.

Postgraduate programs at the Masters level (MSc) and PhD level are also offered in PNGE and CHPE. These degrees prepare students to pursue careers in petroleum, chemical and process engineering in a variety of related fields.

Academic Staff

All academic staff hold doctoral (PhD) degrees covering a broad range of specializations. Likewise, the technical support staff are highly qualified with many years of experience.

Name/Position/Email	Ext.	Academic Qualification	Specialization
Dr. Rashid Al-Hajri *Associate Professor, HoD* *rashid@squ.edu.om*	1318	PhD (UK), 2010	Hydrogen production, CO2 capture and utilization, NG treatment, Catalytic reaction engineering, Chemical/Thermal enhanced oil recovery
Prof. Rashid Al-Maamari *Professor* *rsh@squ.edu.om*	1361	PhD (USA), 2000	Enhanced oil recovery, Treatment and utilization of oilfield produced water
Prof. Farouk S. Mjalli *Professor* *farouqsm@squ.edu.om*	2558	PhD (UK), 2003	Green Engineering
Prof. Gholamreza Vakili-Nejad *Professor* *vakili@squ.edu.om*	2587	PhD (Iran), 1999	Thermodynamics and Thermophysical Properties of Fluids
Prof. Alaa Al-Muhtaseb *Professor* *muhtaseb@squ.edu.om*	1321	PhD (UK), 2004	Biofuels, Bioenergy, Sustainable energy, Biomass Utilisation, Catalysis, Wastewater Treatment
Dr. Hamoud Al-Hadrami *Associate Professor* *hadrami@squ.edu.om*	2527	PhD (USA), 2000	Drilling Engineering, Wellbore stability, Formation damage, Geological modelling
Dr. Jamil Naser *Associate Professor* *naserj@squ.edu.om*	1347	PhD (US), 1998	CO_2 Capture, Environmentally friendly solvents, Solar desalination
Dr. Khashayar Nasrifar *Associate Professor* *Nasrifar@squ.edu.om*	2560	PhD (Iran), 2001	Fluid Phase Equilibria and Gas Hydrate Engineering
Dr. Ashish M Gujarathi *Associate Professor* *ashishg@squ.edu.om*	1320	PhD (India), 2010	Process modelling and Optimisation, Artificial intelligence, Machine learning
Dr. Ghulam Murshid *Associate Professor* *murshid@squ.edu.om*	2546	PhD (Malaysia), 2012	Synthesis of Green Solvents for CO2 capture and Utilization.
Dr. Mohammed Al-Abri *Associate Professor* *alabri@squ.edu.om*	**1364**	PhD (UK), 2007	Desalination, Water Treatment, Membrane Technology, Nanotechnology Applications in Water Treatment and Renewable Energy
Dr. Tarek Ganat *Associate Professor* *t.ganat@squ.edu.om*	1319	PhD (Malaysia), 2016	Petroleum Engineering, Enhanced oil recovery, Treatment of oilfield produced water, Production engineering (design and optimization),

			Reservoir engineering studies, Formation damage, and Nanotechnology.
Dr. Emre Artun Associate Professor *e.artun@squ.edu.om*	15011	PhD (USA), 2008	Petroleum and Natural Gas Engineering. Reservoir Management, data analytics, machine learning
Dr. Belal Abu Tarboush *Associate Professor* *belal@squ.edu.om*	1317	PhD (Canada), 2014	Material synthesis and applications and Membrane separation.
Dr. Muhammad Abdul Qyyum *Assistant Professor* *m.qyyum@squ.edu.om*	2517	PhD (South Korea), 2020	Process Design, Simulation, and Analysis (i.e., TEA, LCA); Green Hydrogen Economy, Decarbonization; LNG value chain; Integrated Energy Systems
Dr. Alireza Hasan Kazemi *Assistant Professor* *a.kazemi@squ.edu.om*	2560	PhD (UK), 2012	Petroleum Engineering, Reservoir modelling and Simulation, Numerical modelling
Dr. Faras Al Balushi *Assistant Professor* *f.albalushi5@squ.edu.om*	1344	PhD (USA), 2023	Pore-scale modeling of porous media, geomechanics, geothermal energy, energy storage
Dr. Ali Taqi *Assistant Professor* *a.taqi@squ.edu.om*	2582	Ph.D. (UK), 2022	• Multipurpose Scientific Computing. • Carbon capture, Green Hydrogen & Water Desalination. • Microwave & RF technologies for enhanced Bio-Refineries & Telecommunications. • Interferometry-based imaging for Radio Astronomy & Medical applications.

To obtain a Bachelor Degree in Petroleum and Natural Gas Engineering or Chemical and Process Engineering at the Department of Petroleum and Chemical Engineering, a student must successfully complete 136 credit hours that include university requirements, university electives, college requirements, college electives, major requirements, department requirements and major electives.

The Department requirements and major requirements needed for the fulfillment of the PNGE and CHPE programs are listed below:

- **LIST OF DEPARTMENT REQUIRED COURSES:**

Engineering Thermodynamics, Fluid Flow, Numerical Methods, Professional Practice, Statistics for Engineers, Engineering Economy and Management for PCE.

- **LIST OF PETROLEUM & NATURAL GAS ENGINEERING REQUIRED COURSES**

Introduction to Geology I, Introductory Applied Mechanics, Chemistry for Petroleum Engineering, Introduction to Petroleum and Natural Gas Engineering, Rock and Fluid Properties, Heat and Mass Transfer, Petroleum Geology for Engineers, Drilling Technology, Drilling Technology Lab, Reservoir Engineering, General Geophysics, Formation Evaluation, Well Testing, Reservoir Simulation, Production Engineering, Project I, Secondary and Enhanced Oil Recovery, Health, Safety and Environment (HSE), Field Processing of Natural Gas and Project II. In addition, students need to select 4 courses from the list of major electives provided in the degree plan.

- **LIST OF CHEMICAL & PROCESS ENGINEERING REQUIRED COURSES**

General Chemistry II, Principles of Chemical Processes, Organic Chemistry, Materials Engineering, Heat Transfer, Industrial Electrochemistry, Chemical Engineering Thermodynamics, Unit Operations I, Unit Operations II, Chemical Engineering Lab I, Chemical Engineering Lab II Chemical Engineering Lab III, Computer Aided Design, Chemical Reaction Engineering, Plant and Process Design, Chemical Process Control, Chemical Process Safety, Project I, Project II. In addition, students need to select 5 courses from the list of major electives provided in the degree plan.

The Petroleum and Natural Gas engineering graduates are qualified to serve in the petroleum engineering facets of drilling, well logging, reservoir, production and gas processing. The Chemical and Process engineer graduates on the other hand can serve in a diverse range of chemical and petrochemical industries.

The job market for an SQU Petroleum and Natural Gas Engineering, and Chemical and Process Engineering graduate is vast. A graduate can work in the public or private sector. Prospective employers in Oman include: Ministries, Municipalities, PDO, Oman LNG, Petroleum Refineries, Oil companies (Schlumberger, Halliburton, British Petroleum, Shell, etc…), Chemical, Petrochemical, Food Companies, Desalination Plants, Power Generation Plants, and many Consulting companies. Several students each year also pursue graduate degrees from reputed universities across the globe.

For full details of courses offered in the department, see the enclosed degree plans in the Appendix**.**

For information about the department, faculty members and course descriptions visit the department website at: https://www.squ.edu.om/engineering/About/Departments/Petroleum-and-Chemical-Engineering

3.5 APPLICATION FORMS FOR:

3.5.1 SPECIALIZATION OR ADMISSION TO ENGINEERING PROGRAMS AND CHANGE OF PROGRAM

The selection for specialization will be based on the cumulative GPA after every semester.

ADUS normally calls for specialization application every end of the semester. An electronic form (a unique hyperlink) will be sent to the students to register online. This form can be used to apply for NEW or CHANGE of specialization

More details about the specialization requirements and guidelines can be found in the following link: https://www.squ.edu.om/engineering/Students/Specialization-Requirements.

3.5.2 GRADE APPEAL

Procedures:

1- Please contact the course instructor to discuss your grade before applying for a grade appeal.
2- Grade appeal is only accepted via Assistant Dean's Office Email: adus.engr@squ.edu.om.
3- Carefully read the instructions at the top of the first page of the attached appeal form.
4- If you decide to apply, then fill out the sections in the first page of the appeal form.
5- You need to pay a fee of (5 OMR) via bank transfer to SQU Bank account number (0304008086870018) in Bank Muscat.
6- Send the appeal form and a copy of the Bank transfer receipt to the email mentioned above.
7- The Assistant Dean office will send the application to the concerned Head of Department.
8- The Head of Department will form a departmental committee to study the application and provide suggestions.

Once the committee suggestion is approved, the Assistant Dean Office will inform the student with the final decision via email.

For more information:
The Office of Assistant Dean for Undergraduate Studies
Phone number: 24142686/24145292

Sultan Qaboos University
College of Engineering
Grade Appeal Form

A. Grade Appeal Information and Procedure:

General Information of SQU Academic Regulations for Grade Appeal:

1- Students have the right to appeal against course grade within *30 days* from the official announcement of the results.
2- Student shall discuss his/her grade *first* with the Instructor concerned. If the Instructor rejects to review the grade, the student shall have the right to appeal using this form, following the procedure shown below.
3- Students should understand that the appealed grade might change to a lower or a higher grade or remain unchanged.

Grade Appeal Procedure:

1- Student to fill out Sections **B**, **C**, and **D** of this form. Please print out both pages and sign the form.
2- Student to submit the signed form to the Assistant Dean for Undergraduate Studies (ADUS), Room # 2020.
3- ADUS shall forward the appeal form to the concerned Head of Department (HoD).
4- The Head of the Department shall form an Ad-hoc Committee to consider the appeal.
5- The Instructor of the course shall be one of the members of the committee.
6- The Instructor shall make the relevant material available to the Ad-hoc committee.
7- The committee shall report its recommendations to the Head of the Department in writing using this form.
8- Based on the report of the Ad-hoc committee, the Head of the Department shall make a decision on the appeal.
9- The decision of the Head of the Department shall be forwarded to the Dean through ADUS for approval.
10- Head of the Department shall inform the student about the final decision of the appeal.
11- Student can appeal to the Vice Chancellor (VC) against the College's decision.

B. Student Information: *(student to fill)*

Student Name: ID/Cohort:
Cumulative GPA: Semester GPA: Load Status:

C. Course Information: *(student to fill)*

Semester/year:
Course Title:
Course Code: Section:
Marks before Final Exam: Current Grade Letter:
Instructor:

D. Reasons for Appeal: *(student to fill)(please attach supporting letter or documents if needed)*

Student Signature: _____ Date: _____

For ADUS Office use only: *(Student Receipt of Grade Appeal Request)*

Student Name: ID:
Course Code: Section: Semester:
Date Received: STAMP

E. Ad-Hoc Committee Members: *(formed by HoD)*

S	Names:	Signature: *(for the given decision)*
1.		
2.		
3.		

F. Committee Decision: *(Ad-Hoc Committee to fill)*

G. Student Final Grade After Committee Decision: *(HoD to fill)*

The final appealed grade is: Lower ☐ Raised ☐ Unchanged ☐

The FINAL grade letter is: _____

HoD Signature: _____ Date: _____

H. Dean's Approval *(Dean to fill)*

The FINAL grade is: Approved ☐ Denied ☐

Comments:

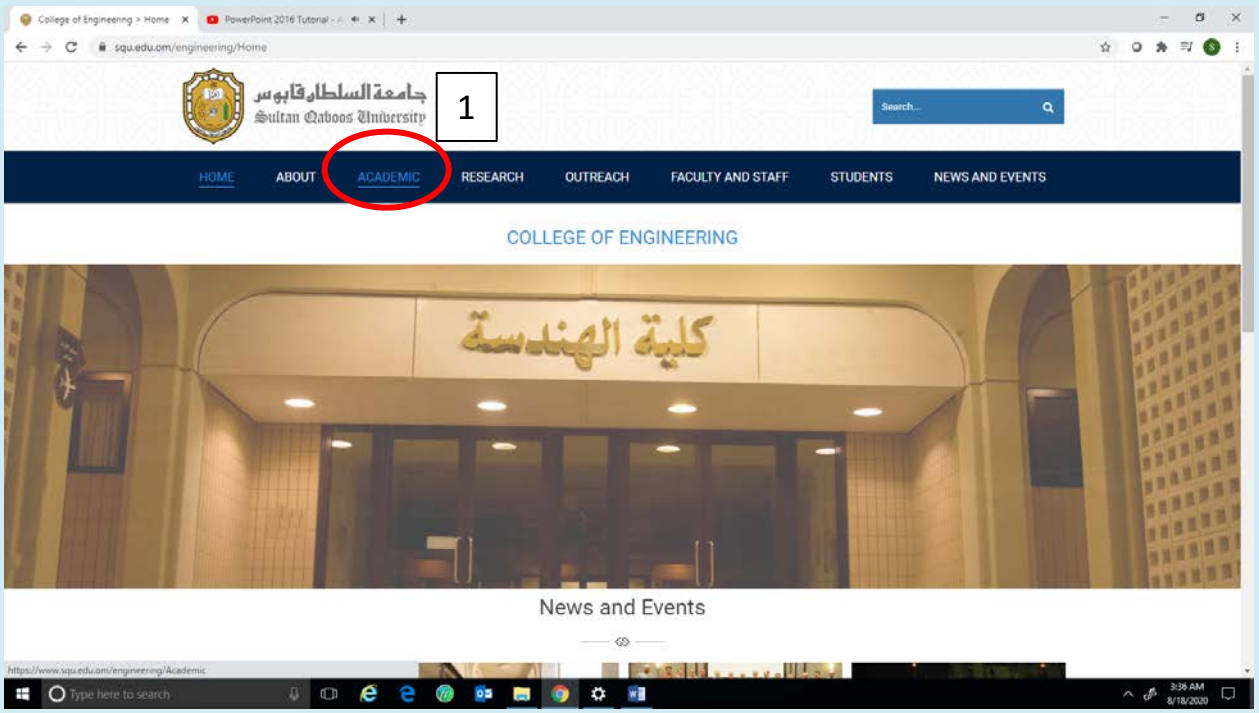
College Stamp

Dean Signature: _____ Date: _____

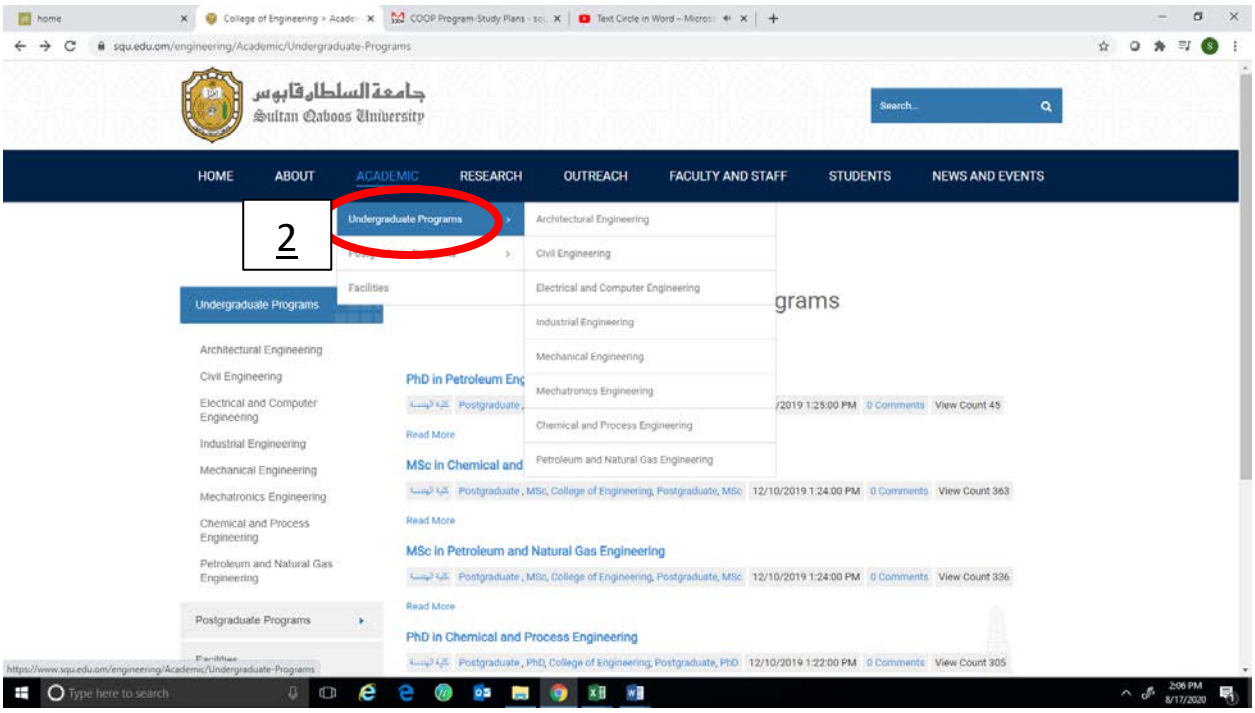
3.6 APPENDIX

DEGREE AND STUDY PLANS

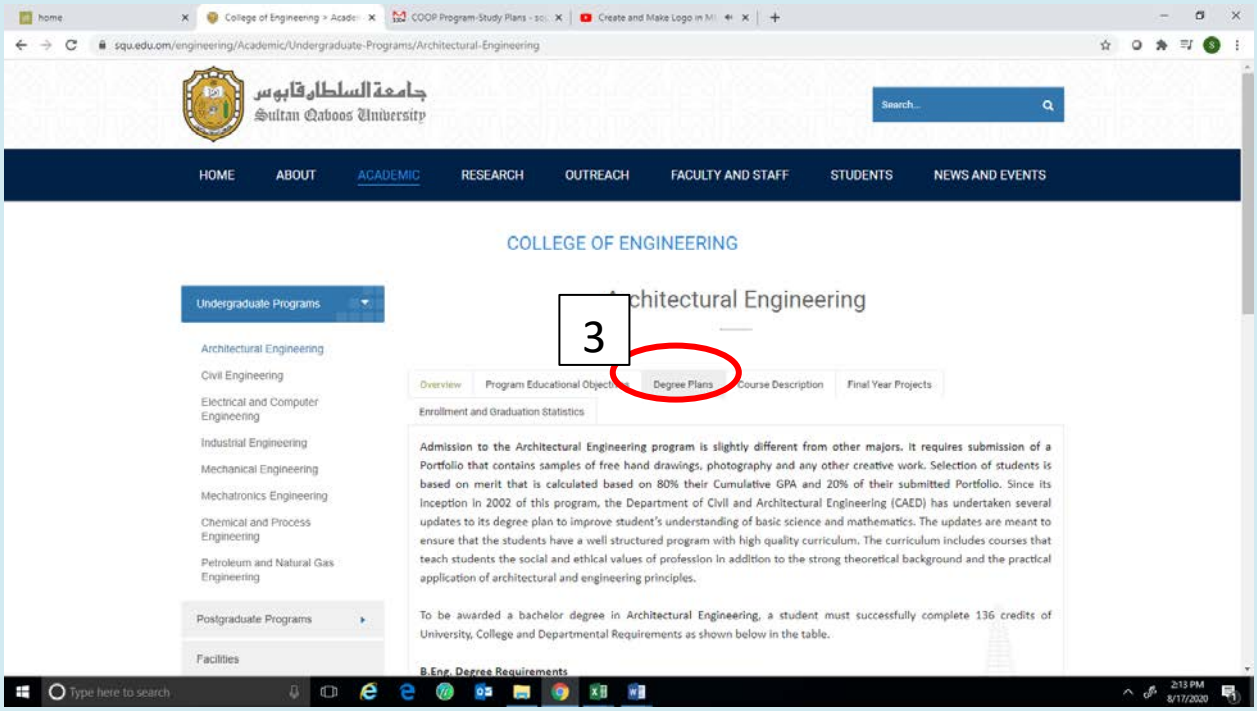
To access the Degree plan, please follow the steps:



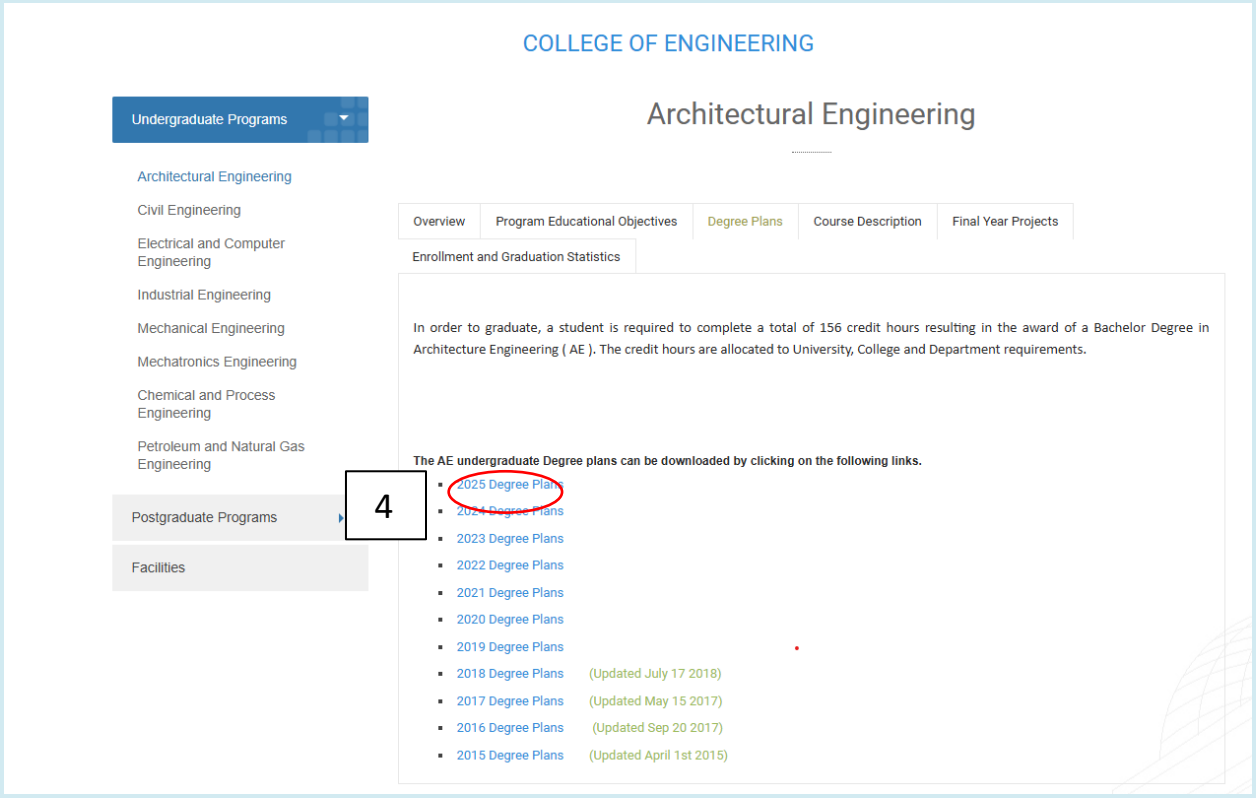
1. Open College of Engineering Webpage: www.squ.edu.om/engineering. Then click on ACADEMIC



2. Choose UNDERGRADUATE. Choose your program



3 Choose DEGREE PLAN



4. Choose the preferred YEAR of Degree Plan

***or email us at adus.engr@squ.edu.om to provide you with the degree plans.**

SULTAN QABOOS UNIVERSITY

Degree and Study Plan

College	ENGINEERING
Department	PETROLEUM AND CHEMICAL ENGINEERING
Cohort	**2025**
Degree	BACHELOR OF ENGINEERING
Major	PETROLEUM AND NATURAL GAS ENGINEERING

SUMMARY OF CREDITS:		**Cr.**
General Foundation Program		**0**
University Requirements (UR)		**6**
Arabic	2	
Oman: State and People	2	
Oman & Islamic Civilization or Islamic Culture	2	
University Electives (UE) See List A		**6**
College Requirements (CR) See list B		**32**
College Electives (CE) See list C		**3**
Department Requirements (DR) See list D		**20**
Department Electives (DE) See list E		**0**
Major Requirements (AR) See list F		**57**
Major Electives (AE) See list G		**12**
TOTAL		**136**

For reference contact: HoD Ext. 1318

HoD Date: 16/03/2025

Dean's Office Date 19/04/2025

Admission and Registration Date

Department of Petroleum and Chemical Engineering
Petroleum and Natural Gas Engineering Program
Study Plan for Cohort 2025 (Scheme **I**: One Semester of Foundation)

IMPORTANT: **Bold font** courses are offered only ONCE a year in the semesters they are listed in.

SEMESTER **1** [FALL 2025]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	General Foundation Program	0		UR
Total Credits		**0**		

SEMESTER **2** [SPRING 2026]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
HIST 1010 ISLM1010	Oman & Islamic Civilization or Islamic Culture	2		UR
LANC2160	English for Engineering I	3		CR
CHEM1071	General Chemistry for Engineering	3		CR
ENGR1501	Introduction to Engineering	1		CR
ENGR1600	Workshop I	1		CR
MATH2107	Calculus I	4		CR
Total Credits		**14**		

SEMESTER **3** [FALL 2026]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	University Elective	2		UE
ARAB1060	Arabic	2		UR
LANC2161	English for Engineering II	3	LANC2160	CR
SOCY1005#	Oman: State and People	2		UR
MATH2109	Calculus II for Science & Engineering	3	MATH2107	CR
PHYS2107	Physics for Engineering I	4	MATH2107*	CR
Total Credits		**16**		

 # Non Omani students should take SOCY1007

SEMESTER **4** [SPRING 2027]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	University Elective	2		UE
ENGR2217 or COMP2002	Programming for Engineers	3		CE
MATH4174	Differential Equations for Engineers	3	MATH2109, LANC2161	CR
PHYS2108	Physics for Engineering II	4	PHYS2107	CR
MEIE3203	Introductory Applied Mechanics	3	PHYS2107	AR
Total Credits		**15**		

SEMESTER **5** [FALL 2027]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
MATH3171	Linear Algebra and Multivariate Calculus for Engineers	3	MATH2109	CR
CHPE3102	Engineering Thermodynamics	3	CHEM1071, MATH2107	DR
ERSC2101	Introduction to Geology I	4		AR
PNGE3111	Chemistry for Petroleum Engineering	3	CHEM1071	AR
PNGE3112	Introduction to Petroleum and Natural Gas Engineering	2		AR
Total Credits		**15**		

SEMESTER **6** [SPRING 2028]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
CHPE3103	Professional Practice	2	LANC2161	DR
CHPE3302	Fluid Flow	3	CHPE3102	DR
PNGE3202	Numerical Methods	3	MATH3171, ENGR2217 or COMP2002	DR
ERSC3081	Petroleum Geology for Engineers	3	ERSC2101, LANC2161	AR
PNGE3212	Rock and Fluid Properties	3	PNGE3112, PNGE3111	AR
Total Credits		**14**		

SEMESTER **7** [FALL 2028]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	University Elective	2		UE
PNGE4101	Statistics for Engineers	3	MATH2107	DR
PNGE3312	Heat and Mass Transfer	3	CHPE3302, MATH4174	AR
PNGE4212	Drilling Technology	3	MEIE3203, PNGE4312*	AR
PNGE4312	Drilling Technology Lab	1	PNGE4212*	AR
PNGE4412	Reservoir Engineering	3	PNGE3212, ERSC3081	AR
Total Credits		**15**		

SEMESTER **8** [SPRING 2029]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
GEOP3041	General Geophysics	3	PHYS2107, MATH2107, ERSC2101, LANC2161	AR
PNGE5103	Engineering Economy	3	MATH 2107	DR
PNGE4512	Formation Evaluation	3	PNGE3212	AR
PNGE4612	Well Testing	3	PHYS2108, PNGE4412	AR
PNGE4712	Reservoir Simulation	3	PNGE4412, PNGE3202	AR
Total Credits		**15**		

[SUMMER 2029] *"ENGR4007 is not required for COOP students"*

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
ENGR4007	Industrial Training	0	Assistant Dean's Approval	CR
Total Credits		**0**		

COOP **I** *[FALL] "Cooperative Training is optional; students will be selected on competitive basis"*

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
PNGE5001	Cooperative Training I	0	Assistant Dean's Approval	AE
Total Credits		**0**		

COOP **II** [SPRING]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
PNGE5002	Cooperative Training II	6	PNGE5001	AE
Total Credits		**6**		

SEMESTER **9** [FALL 2029]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	Major Elective I**	3		AE
	Major Elective II**	3		AE
PNGE5102	Health, Safety and Environment	3	CHPE3103	AR
PNGE5112	Production Engineering	3	PNGE4412	AR
PNGE5115	Project I	2	PNGE4212, PNGE4512, PNGE4612, PNGE4712, CHPE3103	AR
PNGE5212	Secondary and Enhanced Oil Recovery	3	PNGE4412, PNGE3312	AR
Total Credits		**17**		

SEMESTER **10** [SPRING 2030]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	Major Elective III**	3		AE
	Major Elective IV**	3		AE
PNGE5203	Management for PCE	3	PNGE5103	DR
PNGE5215	Project II	3	PNGE5115	AR
PNGE5412	Field Processing of Natural Gas	3	PNGE5112	AR
Total Credits		**15**		

** *COOP students need to take two Major Electives.*

Department of Petroleum and Chemical Engineering
Petroleum and Natural Gas Engineering Program
Study Plan for Cohort 2025 (Scheme **II**: Two Semesters of Foundation)

IMPORTANT: **Bold font** courses are offered only ONCE a year in the semesters they are listed in.

SEMESTER **1** [FALL 2025]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	General Foundation Program	0		UR
	Total Credits	**0**		

SEMESTER **2** [SPRING 2026]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	General Foundation Program	0		UR
	Total Credits	**0**		

SEMESTER **3** [FALL 2026]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
SOCY1005#	Oman: State and People	2		UR
LANC2160	English for Engineering I	3		CR
CHEM1071	General Chemistry for Engineering	3		CR
ENGR1501	Introduction to Engineering	1		CR
ENGR1600	Workshop I	1		CR
MATH2107	Calculus I	4		CR
	Total Credits	**14**		

 # Non Omani students should take SOCY1007

SEMESTER **4** [SPRING 2027]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	University Elective	2		UE
ARAB1060	Arabic	2		UR
LANC2161	English for Engineering II	3	LANC2160	CR
HIST1010 ISLM1010	Oman & Islamic Civilization or Islamic Culture	2		UR
MATH2109	Calculus II for Science & Engineering	3	MATH2107	CR
PHYS2107	Physics for Engineering I	4	MATH2107*	CR
	Total Credits	**16**		

[SUMMER 2027]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	University Elective	2		UE
ENGR2217 or COMP2002	Programming for Engineers	3		CE
	Total Credits	**5**		

SEMESTER **5** [FALL 2027]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
MATH3171	Linear Algebra and Multivariate Calculus for Engineers	3	MATH2109	CR
CHPE3102	Engineering Thermodynamics	3	CHEM1071, MATH2107	DR
ERSC2101	Introduction to Geology I	4		AR
PNGE3111	Chemistry for Petroleum Engineering	3	CHEM1071	AR
PNGE3112	Introduction to Petroleum and Natural Gas Engineering	2		AR
	Total Credits	**15**		

SEMESTER **6** [SPRING 2028]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
MATH4174	Differential Equations for Engineers	3	MATH2109, LANC2161	CR
CHPE3103	Professional Practice	2	LANC2161	DR
MEIE3203	Introductory Applied Mechanics	3	PHYS2107	AR
PNGE3202	Numerical Methods	3	MATH3171, ENGR2217 or COMP2002	DR
ERSC3081	Petroleum Geology for Engineers	3	ERSC2101, LANC2161	AR
PNGE3212	Rock and Fluid Properties	3	PNGE3112, PNGE3111	AR
	Total Credits	**17**		

[SUMMER 2028]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	University Elective	2		UE
CHPE3302	Fluid Flow	3	CHPE3102	DR
Total Credits		**5**		

SEMESTER **7** [FALL 2028]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
PHYS2108	Physics for Engineering II	4	PHYS2107	CR
PNGE3312	Heat and Mass Transfer	3	CHPE3302, MATH4174	AR
PNGE4101	Statistics for Engineers	3	MATH2107	DR
PNGE4212	Drilling Technology	3	MEIE3203, PNGE4312*	AR
PNGE4312	Drilling Technology Lab	1	PNGE4212*	AR
PNGE4412	Reservoir Engineering	3	PNGE3212, ERSC3081	AR
Total Credits		**17**		

SEMESTER **8** [SPRING 2029]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
GEOP3041	General Geophysics	3	PHYS2107, MATH2107, ERSC2101, LANC2161	AR
PNGE4512	Formation Evaluation	3	PNGE3212	AR
PNGE4612	Well Testing	3	PHYS2108, PNGE4412	AR
PNGE4712	Reservoir Simulation	3	PNGE4412, PNGE3202	AR
PNGE5103	Engineering Economy	3	MATH2107	DR
Total Credits		**15**		

[SUMMER 2029] *"ENGR4007 is not required for COOP students"*

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
ENGR4007	Industrial Training	0	Assistant Dean's Approval	CR
Total Credits		**0**		

COOP **I** [FALL] *"Cooperative Training is optional; students will be selected on competitive basis"*

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
PNGE5001	Cooperative Training I	0	Assistant Dean's Approval	AE
Total Credits		**0**		

COOP **II** [SPRING]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
PNGE5002	Cooperative Training II	6	PNGE5001	AE
Total Credits		**6**		

SEMESTER **9** [FALL 2029]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	Major Elective I**	3		AE
	Major Elective II**	3		AE
PNGE5102	Health, Safety and Environment	3	CHPE3103	AR
PNGE5112	Production Engineering	3	PNGE4412	AR
PNGE5115	Project I	2	PNGE4212, PNGE4512, PNGE4612, PNGE4712, CHPE3103	AR
PNGE5212	Secondary and Enhanced Oil Recovery	3	PNGE4412, PNGE3312	AR
Total Credits		**17**		

SEMESTER **10** [SPRING 2030]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	Major Elective III**	3		AE
	Major Elective IV**	3		AE
PNGE5203	Management for PCE	3	PNGE5103	DR
PNGE5215	Project II	3	PNGE5115	AR
PNGE5412	Field Processing of Natural Gas	3	PNGE5112	AR
Total Credits		**15**		

***COOP students need to take two Major Electives.*

Department of Petroleum and Chemical Engineering
Petroleum and Natural Gas Engineering Program
Degree Plan for Cohort 2025

LIST A – UNIVERSITY ELECTIVES (6 Credits)

List of allowed University Electives that can be taken by Engineering Students *"This list will continuously be updated by the Assistant Dean's office for new university electives"*	https://www.squ.edu.om/engineering/Students/University-Elective-courses-allowed-for-Engineering-students

LIST B: COLLEGE REQUIREMENTS (32 credits)

Course Code	Course Title	Credits	Pre-Requisite / Co-req. *
CHEM1071	General Chemistry for Engineering	3	
ENGR1501	Introduction to Engineering	1	
ENGR1600	Workshop I	1	
LANC2160	English for Engineering I	3	
LANC2161	English for Engineering II	3	LANC 2160
MATH2107	Calculus I	4	
MATH2109	Calculus II for Science & Engineering	3	MATH 2107
MATH3171	Linear Algebra & Multivariate Calculus for Engineers	3	MATH2109
MATH4174	Differential Equations for Engineers	3	MATH2109, LANC2161
PHYS2107	Physics for Engineering I	4	MATH2107*
PHYS2108	Physics for Engineering II	4	PHYS 2107
ENGR4007	Industrial Training	0	
Total		**32**	

LIST C: COLLEGE ELECTIVES (3 credits)

Students should select ONE course (3 credits) from the following two courses

Course Code	Course Title	Credits	Pre-Requisite / Co-req. *
COMP2002	Introduction to Computer Programming for Engineers	3	
ENGR2217	Programming for Engineers	3	
Total		**3**	

LIST D: DEPARTMENT REQUIREMENTS (20 credits)

Course Code	Course Title	Credits	Pre-Requisite / Co-req. *
CHPE3102	Engineering Thermodynamics	3	CHEM1071, MATH2107
CHPE3103	Professional Practice	2	LANC2161
CHPE3302	Fluid Flow	3	CHPE3102
PNGE3202	Numerical Methods	3	MATH3171, ENGR2217 or COMP2002
PNGE4101	Statistics for Engineers	3	MATH2107
PNGE5103	Engineering Economy	3	MATH2107
PNGE5203	Management for PCE	3	PNGE5103
Total		**20**	

LIST F: MAJOR REQUIRMENTS (57 credits)

Course Code	Course Title	Credits	Pre-Requisite / Co-req. *
ERSC2101	Introduction to Geology I	4	
ERSC3081	Petroleum Geology for Engineers	3	ERSC2101, LANC2161
GEOP3041	General Geophysics	3	PHYS2107, MATH2107, ERSC2101, LANC2161
MEIE3203	Introductory Applied Mechanics	3	PHYS2107
PNGE3111	Chemistry for Petroleum Engineering	3	CHEM1071
PNGE3112	Introduction to Petroleum and Natural Gas Eng.	2	
PNGE3212	Rock and Fluid Properties	3	PNGE3112, PNGE3111
PNGE3312	Heat and Mass Transfer	3	CHPE3302, MATH4174
PNGE4212	Drilling Technology	3	MEIE3203, PNGE4312*
PNGE4312	Drilling Technology Lab	1	PNGE4212*
PNGE4412	Reservoir Engineering	3	PNGE3212, ERSC3081
PNGE4512	Formation Evaluation	3	PNGE3212
PNGE4612	Well Testing	3	PHYS2108, PNGE4412
PNGE4712	Reservoir Simulation	3	PNGE4412, PNGE3202
PNGE5102	Health, Safety and Environment (HSE)	3	CHPE3103
PNGE5112	Production Engineering	3	PNGE4412
PNGE5115	Project I	2	PNGE4212, PNGE4512, PNGE4612, PNGE4712, CHPE3103
PNGE5212	Secondary & Enhanced Oil Recovery	3	PNGE4412, PNGE3312
PNGE5215	Project II	3	PNGE5115
PNGE5412	Field Processing of Natural Gas	3	PNGE5112
Total		**57**	

LIST G: MAJOR ELECTIVES (12 Credits)

- Non-COOP students need to take **4** courses (12 Credits) from this list.
- COOP students need to take **2** courses (6 Credits) from this list, in addition to PNG5001 & PNGE5002.

Course Code	Course Title	Credits	Pre-Requisite / Co-req. *
PNGE5106	Machine Learning for Petroleum and Chemical Engineers	3	PNGE4101, ENGR2217 or COMP2002
PNGE5116	Underground Gas Storage	3	PNGE4712
PNGE5122	Introduction to Rock Mechanics	3	MEIE3203
PNGE5216	Special Topics	3	PNGE4412
PNGE5202	Well Stimulation	3	MEIE3203, PNGE3212
PNGE5302	Well Control	3	PNGE 4212
PNGE5402	Petroleum Data Analytics	3	PNGE410, ENGR2217 or COMP2002
GEOP4001	Applied Geophysics I	3	GEOP3041, PHYS3100
CHPE4102	Polymers	3	CHEM3324 or PNGE3111
CHPE4106	Introduction to Colloids and Interface Science	3	CHEM3324 or PNGE3111
CHPE4202	Corrosion Engineering	3	CHEM1071
CHPE4206	Introduction to Nanotechnology	3	CHEM3324 or PNGE3111
CHPE4302	Desalination	3	CHPE3402 or PNGE3312
CHPE4306	Wastewater Treatment	3	CHEM3324 or PNGE3111
CHPE4406	Sustainable Energy	3	CHPE3402 or PNGE3312
CHPE5106	Carbon Capture Utilization and Storage	3	CHPE3402 or PNGE3312
CHPE5206	Hydrogen Technology	3	PNGE5103
CHPE5207	Petroleum Refining Processes	3	CHEM3324 or PNGE3111
MEIE5288	Innovation and Entrepreneurship	3	PNGE5103
CHEM5537	Surfactants: Principles & Applications in the Petroleum Industry	3	CHPE3102
Total		**12**	

SULTAN QABOOS UNIVERSITY

Degree and Study Plan

College	ENGINEERING
Department	PETROLEUM AND CHEMICAL ENGINEERING
Cohort	**2025**
Degree	BACHELOR OF ENGINEERING
Major	CHEMICAL AND PROCESS ENGINEERING

SUMMARY OF CREDITS:		**Cr.**
General Foundation Program		**0**
University Requirements (UR)		**6**
Arabic	2	
Oman: State and People	2	
Oman & Islamic Civilization or Islamic Culture	2	
University Electives (UE) See List A		**6**
College Requirements (CR) See list B		**32**
College Electives (CE) See list C		**3**
Department Requirements (DR) See list D		**20**
Department Electives (DE) See list E		**0**
Major Requirements (AR) See list F		**54**
Major Electives (AE) See list G		**15**
TOTAL		**136**

For reference contact: HoD Ext. 1318

HoD Date: 16/03/2025

Dean's Office Date 26/3/2025

Admission and Registration Date

Department of Petroleum and Chemical Engineering
Chemical and Process Engineering Program
Study Plan for Cohort 2025 (Scheme **I**: One Semester of Foundation)

IMPORTANT: **Bold font** courses are offered only ONCE a year in the semesters they are listed in.

SEMESTER **1** [FALL 2025]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	General Foundation Program	0		UR
Total Credits		**0**		

SEMESTER **2** [SPRING 2026]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
HIST 1010 ISLM1010	Oman & Islamic Civilization or Islamic Culture	2		UR
LANC2160	English for Engineering I	3		CR
CHEM1071	General Chemistry for Engineering	3		CR
ENGR1501	Introduction to Engineering	1		CR
ENGR1600	Workshop I	1		CR
MATH2107	Calculus I	4		CR
Total Credits		**14**		

SEMESTER **3** [FALL 2026]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	University Elective	2		UE
ARAB1060	Arabic	2		UR
LANC2161	English for Engineering II	3	LANC2160	CR
SOCY1005#	Oman: State and People	2		UR
MATH2109	Calculus II for Science & Engineering	3	MATH2107	CR
PHYS2107	Physics for Engineering I	4	MATH2107*	CR
Total Credits		**16**		

 # Non Omani students should take SOCY1007

SEMESTER **4** [SPRING 2027]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
ENGR2217 or COMP2002	Programing for Engineers	3		CE
MATH4174	Differential Equations for Engineers	3	MATH2109, LANC2161	CR
CHEM2102	General Chemistry II	4	CHEM1071	AR
CHPE3102	Engineering Thermodynamics	3	CHEM1071, MATH2107	DR
CHPE3112	Principles of Chemical Processes	3	CHEM1071	AR
Total Credits		**16**		

SEMESTER **5** [FALL 2027]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
MATH3171	Linear Algebra & Multivariate Calculus for Engineers	3	MATH2109	CR
CHEM3324	Organic Chemistry	4	CHEM1071	AR
PHYS2108	Physics for Engineering II	4	PHYS2107	CR
CHPE3302	Fluid Flow	3	CHPE3102	DR
Total Credits		**14**		

SEMESTER **6** [SPRING 2028]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
CHPE3101	Materials Engineering	3	CHEM1071	AR
PNGE3202	Numerical Methods	3	MATH3171,COMP2002 or ENGR2217	DR
CHEM3339	Industrial Electrochemistry	3	CHEM2102	AR
PNGE4101	Statistics for Engineers	3	MATH2107	DR
CHPE3402	Heat Transfer	3	CHPE3112, CHPE3302, MATH4174	AR
Total Credits		**15**		

SEMESTER **7** [FALL 2028]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	Major Elective I**	3		AE
CHPE3103	Professional Practice	2	LANC2161	DR
CHPE4112	Chemical Engineering Thermodynamics	3	CHPE3102	AR
CHPE4212	Unit Operations I	3	CHPE3402	AR
CHPE4312	Chemical Engineering Lab I	2	CHPE3402	AR
PNGE5103	Engineering Economy	3	MATH2107	AR
Total Credits		**16**		

SEMESTER **8** [SPRING 2029]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	University Elective	2		UE
	Major Elective II**	3		AR
CHPE4114	Computer Aided Design	2	CHPE4512*, CHPE4612*	AR
CHPE4512	Chemical Reaction Engineering	3	CHEM3324	AR
CHPE4612	Unit Operations II	3	CHPE4112, CHPE4212	AR
CHPE5612	Chemical Process Safety	3	CHPE3302, PHYS2108	AR
Total Credits		**16**		

[SUMMER 2029] "ENGR4007 is not required for COOP students"

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
ENGR4007	Industrial Training	0	Assistant Dean's Approval	CR
Total Credits		**0**		

COOP **I** [FALL] *"Cooperative Training is optional; students will be selected on competitive basis"*

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
CHPE5001	Cooperative Training I	0	Assistant Dean's Approval	AE
Total Credits		**0**		

COOP **II** [SPRING]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
CHPE5002	Cooperative Training II	6	CHPE5001	AE
Total Credits		**6**		

SEMESTER **9** [FALL 2029]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	Major Elective III**	3		AE
CHPE4712	Chemical Engineering Lab II	2	CHPE4312, PNGE4101, CHPE4612, CHEM3348	AR
CHPE5112	Chemical Process Control	3	PNGE3202, CHPE4512	AR
CHPE5412	Plant and Process Design	3	CHPE4612, PNGE5103, CHPE4412, CHPE4512	AR
PNGE5203	Management for PCE	3	PNGE5103	DR
CHPE5312	Project I	2	CHPE3101, CHPE3103, CHPE4114, CHPE4512, CHPE4612	AR
Total Credits		**16**		

SEMESTER **10** [SPRING 2030]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	University Elective	2		UE
	Major Elective IV**	3		AE
	Major Elective V**	3		AE
CHPE5212	Chemical Engineering Lab III	2	CHPE4712, CHPE5112	AR
CHPE5512	Project II	3	CHPE5312, CHPE5412, CHPE5612	AR
Total Credits		**13**		

** *COOP students need to take three Major Electives.*

Department of Petroleum and Chemical Engineering
Chemical and Process Engineering Program
Study Plan for Cohort 2025 (Scheme **II**: Two Semesters of Foundation)

IMPORTANT: **Bold font** courses are offered only ONCE a year in the semesters they are listed in.

SEMESTER **1** [FALL 2025]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	General Foundation Program	0		UR
Total Credits		**0**		

SEMESTER **2** [SPRING 2026]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	General Foundation Program	0		UR
Total Credits		**0**		

SEMESTER **3** [FALL 2026]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
SOCY1005#	Oman: State and People	2		UR
LANC2160	English for Engineering I	3		CR
CHEM1071	General Chemistry for Engineering	3		CR
ENGR1501	Introduction to Engineering	1		CR
ENGR1600	Workshop I	1		CR
MATH2107	Calculus I	4		CR
Total Credits		**14**		

 # Non Omani students should take SOCY1007

SEMESTER **4** [SPRING 2027]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	University Elective	2		UE
ARAB1060	Arabic	2		UR
LANC2161	English for Engineering II	3	LANC2160	CR
HIST1010 ISLM1010	Oman & Islamic Civilization or Islamic Culture	2		UR
MATH2109	Calculus II for Science & Engineering	3	MATH2107	CR
PHYS2107	Physics for Engineering I	4	MATH2107*	CR
Total Credits		**16**		

[SUMMER 2027]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	University Elective	2		UE
ENGR2217 OR COMP2002	Programing for Engineers	3		CE
Total Credits		**5**		

SEMESTER **5** [FALL 2027]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
MATH4174	Differential Equations for Engineers	3	MATH2109, LANC2161	CR
PNGE4101	Statistics for Engineers	3	MATH2107	DR
CHEM2102	General Chemistry II	4	CHEM1071	AR
CHPE3102	Engineering Thermodynamics	3	CHEM1071, MATH2107	DR
CHPE3112	Principles of Chemical Processes	3	CHEM1071	AR
Total Credits		**16**		

SEMESTER **6** [SPRING 2028]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
MATH3171	Linear Algebra and Multivariate Calculus for Engineers	3	MATH2109	CR
PHYS2108	Physics for Engineering II	3	PHYS2107	CR
CHEM3339	Industrial Electrochemistry	3	CHEM2102	AR
CHPE3302	Fluid Flow	3	CHPE3102	DR
CHEM3324	Organic Chemistry	4	CHEM1071	AR
Total Credits		**16**		

[SUMMER 2028]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
CHPE3101	Materials Engineering	3	CHEM1071	AR
CHPE3402	Heat Transfer	3	CHPE3112, CHPE3302, MATH4174	AR
Total Credits		**6**		

SEMESTER **7** [FALL 2028]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	Major Elective I**	3		AE
CHPE3103	Professional Practice	2	LANC2161	DR
CHPE4112	Chemical Engineering Thermodynamics	3	CHPE3102	AR
CHPE4212	Unit Operations I	3	CHPE3112, CHPE3402	AR
CHPE4312	Chemical Engineering Lab I	2	CHPE3402	AR
PNGE3202	Numerical Methods	3	MATH3171,COMP2002 or ENGR2217	CR
Total Credits		**16**		

SEMESTER **8** [SPRING 2029]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	Major Elective II**	3		AE
CHPE4114	Computer Aided Design	2	CHPE4512*, CHPE4612*	AR
CHPE4512	Chemical Reaction Engineering	3	CHEM3324	AR
CHPE4612	Unit Operations II	3	CHPE4112, CHPE4212	AR
CHPE5612	Chemical Process Safety	3	CHPE3302, PHYS2108	AR
PNGE5103	Engineering Economy	3	MATH2107	DR
Total Credits		**17**		

[SUMMER 2029] "ENGR4007 is not required for COOP students"

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
ENGR4007	Industrial Training	0	Assistant Dean's Approval	CR
Total Credits		**0**		

COOP **I** [FALL] *"Cooperative Training is optional; students will be selected on competitive basis"*

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
CHPE5001	Cooperative Training I	0	Assistant Dean's Approval	AE
Total Credits		**0**		

COOP **II** [SPRING]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
CHPE5002	Cooperative Training II	6	CHPE5001	AE
Total Credits		**6**		

SEMESTER **9** [FALL 2029]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	Major Elective III**	3		AE
CHPE4712	Chemical Engineering Lab II	2	CHPE4312, PNGE4101, CHPE4612, CHEM3348	AR
CHPE5112	Chemical Process Control	3	PNGE3202, CHPE4512	AR
CHPE5412	Plant and Process Design	3	CHPE4612, PNGE5103, CHPE4412, CHPE4512	AR
PNGE5203	Management for PCE	3	PNGE5103	DR
CHPE5312	Project I	2	CHPE3101, CHPE3103, CHPE4114, CHPE4512, CHPE4612	AR
Total Credits		**16**		

SEMESTER **10** [SPRING 2030]

Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	University Elective	2		UE
	Major Elective IV**	3		AE
	Major Elective V**	3		AE
CHPE5212	Chemical Engineering Lab III	2	CHPE4712, CHPE5112	AR
CHPE5512	Project II	3	CHPE5312, CHPE5412, CHPE5612	AR
Total Credits		**13**		

***COOP students need to take three Major Electives.*

Department of Petroleum and Chemical Engineering
Chemical and Process Engineering Program
Degree Plan for Cohort 2025

LIST A – UNIVERSITY ELECTIVES (6 Credits)

List of allowed University Electives that can be taken by Engineering Students *" This list will continuously be updated by the Assistant Dean's office for new university electives"*	https://www.squ.edu.om/engineering/Students/University-Elective-courses-allowed-for-Engineering-students

LIST B: COLLEGE REQUIREMENTS (32 credits)

Course Code	Course Title	Credits	Pre-Requisite / Co-req. *
CHEM1071	General Chemistry for Engineering	**3**	
ENGR1501	Introduction to Engineering	**1**	
ENGR1600	Workshop I	**1**	
LANC2160	English for Engineering I	**3**	
LANC2161	English for Engineering II	**3**	LANC 2160
MATH2107	Calculus I	**4**	
MATH2109	Calculus II for Science & Engineering	**3**	MATH 2107
MATH3171	Linear Algebra & Multivariate Calculus for Engineers	**3**	MATH2109
MATH4174	Differential Equations for Engineers	**3**	MATH2109, LANC2161
PHYS2107	Physics for Engineering I	**4**	MATH2107*
PHYS2108	Physics for Engineering II	**4**	PHYS 2107
ENGR4007	Industrial Training	**0**	
Total		**32**	

LIST C: COLLEGE ELECTIVES (3 credits)

Students should select ONE course (3 credits) from the following two courses

Course Code	Course Title	Credits	Pre-Requisite / Co-req. *
COMP2002	Introduction to Computer Programming for Engineers	**3**	
ENGR2217	Programming for Engineers	**3**	
Total		**3**	

LIST D: DEPARTMENT REQUIREMENTS (20 credits)

Course Code	Course Title	Credits	Pre-Requisite / Co-req. *
CHPE3102	Engineering Thermodynamics	**3**	CHEM1071, MATH2107
CHPE3103	Professional Practice	**2**	LANC2161
CHPE3302	Fluid Flow	**3**	CHPE3102
PNGE3202	Numerical Methods	**3**	MATH3171, COMP2002 or ENGR2217
PNGE4101	Statistics for Engineers	**3**	MATH2107
PNGE5103	Engineering Economy	**3**	MATH2107
PNGE5203	Management for PCE	**3**	PNGE5103
Total		**20**	

LIST F: MAJOR REQUIRMENTS (54 credits)

Course Code	Course Title	Credits	Pre-Requisite / Co-req. *
CHEM2102	General Chemistry II	4	CHEM1071
CHEM3324	Organic Chemistry	4	CHEM1071
CHEM3339	Industrial Electrochemistry	3	CHEM2102
CHPE3101	Materials Engineering	3	CHEM1071
CHPE3112	Principles of Chemical Processes	3	CHEM1071
CHPE3402	Heat Transfer	3	CHPE3112, CHPE3302, MATH4174
CHPE4112	Chemical Engineering Thermodynamics	3	CHPE3102
CHPE4114	Computer Aided Design	2	CHPE4512*, CHPE4612*
CHPE4212	Unit Operations I	3	CHPE3402
CHPE4312	Chemical Engineering Lab I	2	CHPE3402
CHPE4512	Chemical Reaction Engineering	3	CHEM3324
CHPE4612	Unit Operations II	3	CHPE4112, CHPE4212
CHPE4712	Chemical Engineering Lab II	2	CHPE4312, PNGE4101, CHPE4612, CHEM3348
CHPE5112	Chemical Process Control	3	PNGE3202, CHPE4512
CHPE5212	Chemical Engineering Lab III	2	CHPE4712, CHPE5112
CHPE5312	Project I	2	CHPE3101, CHPE3103, CHPE4114, CHPE4512, CHPE4612
CHPE5412	Plant and Process Design	3	CHPE4612, PNGE5103, CHPE4412, CHPE4512
CHPE5512	Project II	3	CHPE5312, CHPE5412, CHPE5612
CHPE5612	Chemical Process Safety	3	CHPE3302, PHYS2108
Total		**54**	

LIST G: MAJOR ELECTIVES (15 Credits)

- Non-COOP students need to take **5** courses (15 Credits) from this list.
- COOP students need to take **3** courses (9 Credits) from this list, in addition to CHPE5001 & CHPE5002.

Course Code	Course Title	Credits	Pre-Requisite / Co-req. *
CHPE3212	Chemical Process Industries	3	CHEM3324
CHPE4102	Polymers	3	CHEM3324 or PNGE3111
CHPE4106	Introduction to Colloids and Interface Science	3	CHEM3324 or PNGE3111
CHPE4116	Green Hydrogen and Energy Storage	3	CHEM3339
CHPE4202	Corrosion Engineering	3	CHEM1071
CHPE4206	Introduction to Nanotechnology	3	CHEM3324 or PNGE3111
CHPE4302	Desalination	3	CHPE3402 or PNGE3312
CHPE4306	Wastewater Treatment	3	CHEM3324 or PNGE3111
CHPE4402	Natural Gas Processing	3	CHPE4112
CHPE4406	Sustainable Energy	3	CHPE3402 or PNGE3312
CHPE5106	Carbon Capture Utilization and Storage	3	CHPE3402 or PNGE3312
CHPE5116	Biochemical Engineering	3	CHPE4512
CHPE5206	Hydrogen Technology	3	PNGE5103
CHPE5207	Petroleum Refining Processes	3	CHEM3324 or PNGE3111
CHPE5216	Green Process Engineering	3	CHPE4512, CHPE4612
CHPE5316	Optimization in Chemical Engineering	3	CHPE4414
CHPE5416	Applied Separation Processes	3	CHPE4612
CHPE5516	Special Topics in Chemical Engineering	3	CHPE4212
CHPE5712	Process Integration, Synthesis and Simulation	3	CHPE4612
CHPE5812	Heterogeneous Catalysis and Reactor Design	3	CHPE4512
MEIE5288	Innovation and Entrepreneurship	3	PNGE5103
PNGE5106	Machine Learning for Petroleum and Chemical Engineers	3	PNGE4101, ENGR2217 or COMP2002
Total		**15**	

Degree and Study Plan

College: Engineering
Program: Mechatronics Engineering
Cohort: **2025**
Degree: Bachelor of Engineering
Major: Mechatronics Engineering

Summary of Credits		
1	University Requirements (UR)	**6**
	General Foundation Program	*(0)*
	Arabic language	*(2)*
	Contemporary Omani State and People	*(2)*
	Oman & Islamic Civilization or Islamic Culture	*(2)*
2	University Elective (UE)	**6**
3	College Requirements (CR) (see List B)	**32**
4	College Elective (CE) (see List C)	**3**
7	Major Requirements (AR) (see List F)	**77**
8	Major Elective (AE) (see List G)	**12**
Total credits		**136**

For reference contact: Dr. Nasr Al-Hinai Ext. 1316 Date: 5-4-2025

Dean's Office Date: 19/April/2025

Admission and Registration Date:

Important Information

- Students MUST follow one of the three schemes of the Degree Plan:
  - Scheme I is for students who completed the Foundation Program in one regular semester (Fall).
  - Scheme II is for students who completed the Foundation Program in two regular semesters (Fall & Spring).
  - Cooperative Training (COOP) Scheme is optional. It is designed for students who are following Scheme I or II and willing to take a one-year COOP program in semesters 9 and 10.
- Students are advised to regularly check the most updated degree plan on the College's website: https://www.squ.edu.om/engineering/Academic/Undergraduate-Programs/Mechatronics-Engineering
- Course description and exact prerequisite(s) can be found on SQU's Portal: https://sis.squ.edu.om/SQU_CoursesSchedule.aspx

Mechatronics Engineering Program

Study Plan for 2025 Cohort (SCHEME I – With One Semester General Foundation Program)

	Course Code	Course Title	Cr.	Pre-req.	Cat.
Fall-24	-	General Foundation Program	-	-	UR
Semester 2 Spring-25	HIST1010 or ISLM1010	Oman & Islamic Civilization or Islamic Culture	2		UR
	CHEM1071	General Chemistry for Engineering	3		CR
	ENGR1501	Introduction to Engineering	1		CR
	ENGR1600	Workshop I	1		CR
	LANC2160	English for Engineering I	3		CR
	MATH2107	Calculus I	4		CR
	Total		14		
Semester 3 Fall -25	ARAB1060	Arabic	2		UR
		University Elective	2		UE
	SOCY1005	Oman: State and People	2		UR
	LANC2161	English for Engineering II	3	LANC2160	CR
	MATH2109	Calculus II for Science and Engineering	3	MATH2107	CR
	PHYS2107	Physics for Engineering I	4	MATH2107*	CR
	Total		16		
Semester 4 Spring-26	MATH4174	Differential Equations for Engr.	3	(MATH2108 or MATH2109) and LANC2161	CR
	PHYS2108	Physics for Eng. II	4	PHYS2107	CR
	COMP2002 or ENGR2217	Intr. to Comp. Program. for Eng. or Programming for Engineers	3		CE
	ECCE2017	Electric Circuit Analysis	4	MATH2107	AR
	MEIE3103	Engineering Tools and Graphics	2		AR
	Total		16		
Semester 5 Fall -26	MATH3171	Lin. Alg. & Mult. Calc. for Eng.	3	MATH2108 or MATH2109	CR
	MCTE2129	Engineering Mechanics	3	PHYS2107 and MATH2107	AR
	MEIE3281	Probability & Statistics for Engineers	3	MATH2107	AR
	ECCE3206	Digital Logic Design	3		AR
	MCTE3250	Engineering System Design	3	MEIE3103	AR
	Total		15		
Semester 6 Spring-27	MCTE3230	Properties and Strength of Materials	3	MCTE2129 or MEIE2129	AR
	MCTE4185	Signals & Systems for Mechatronics	3	ECCE2017 or ECCE3016	AR
	MCTE3310	Electronics for Mechatronics	3	ECCE2017 or ECCE2016	AR
		University Elective	2		UE
	MEIE3122	Machine Dynamics	3	MCTE2129 or MEIE2129	AR
	Total		14		

Mechatronics Engineering Program

Study Plan for 2025 Cohort (SCHEME I – With One Semester General Foundation Program)

	Course Code	Course Title	Cr.	Pre-req.	Cat.
Semester 7 Fall-27	MCTE4102	Machine Design for Mechatronics	3	MCTE3230	AR
	MCTE4145	Instrumentation & Measurement	3	MCTE3110 or MCTE3310	AR
	MCTE3210	Electromechanical Sys. & Actuators	3	ECCE2017 or ECCE3016	AR
	ECCE4227	Embedded Systems	3	(COMP2002 or ENGR2217) and ECCE3206	AR
	MCTE4150	Modeling and Simulation	3	MATH4174	AR
	Total		**15**		
Semester 8 Spring-28	MCTE4210	Power Electronics & Drives	3	(MCTE3110 or MCTE3310) and MCTE3210	AR
		University Elective	2		UE
	MCTE4241	Thermofluids	3	PHYS2108 and MATH2109	AR
	MCTE4450	Control Systems Engineering	3	MCTE4150	AR
	ECCE5010	Engineering Economics and Project Management	3	MEIE3281	AR
	MEIE4183	Numerical Methods for Engineers	3	(COMP2002 or ENGR2217) and MATH3171	AR
	Total		**17**		
Summer-28	ENGR4007	Industrial Training	**0**		CR
	Total		**0**		
Semester 9 Fall-28	MCTE5191	Project I	2	MCTE3250 OR MCTE3240 and PR[1]	AR
	MCTE5210	Real-time control and interfacing	3	MCTE4450	AR
	MCTE4255	Mechatronics System Design	3	ECCE4227 and MCTE4145 and (MCTE3250 or MCTE3240)	AR
	MCTE5xxx	Program Elective 1	3		AE
	MCTE5xxx	Program Elective 2	3		AE
	Total		**14**		
Semester 10 Spring- 29	MCTE5291	Project II	3	MCTE5191	AR
	MCTE5xxx	Program Elective 3	3		AE
	MCTE5xxx	Program Elective 4	3		AE
	MCTE5142	Robotics	3	MEIE3122	AR
	MCTE5420	Pneumatic and Hydraulic Systems	3	MCTE3210	AR
	Total		**15**		

PR[1]: Internal regulation [enforced by the MCE Program]: **Complete 90 Cr.**
MCTE5191 is offered in Fall semesters ONLY.

Mechatronics Engineering Program

Study Plan for 2025 Cohort (SCHEME I – With One Semester General Foundation Program)
Co-Operative Scheme

	Course Code	Course Title	Cr.	Pre-req.	Cat.
Semester 7 Fall-27	MCTE4102	Machine Design for Mechatronics	3	MCTE3230	AR
	MCTE4145	Instrumentation & Measurement	3	MCTE3110 or MCTE3310	AR
	MCTE3210	Electromechanical Sys. & Actuators	3	ECCE2017 or ECCE3016	AR
	ECCE4227	Embedded Systems	3	(COMP2002 or ENGR2217) and ECCE3206	AR
	MCTE4150	Modeling and Simulation	3	MATH4174	AR
	Total		**15**		
Semester 8 Spring-28	MCTE4210	Power Electronics & Drives	3	(MCTE3110 or MCTE3310) and MCTE3210	AR
	MCTE4241	Thermofluids	3	PHYS2108 and MATH2109	AR
	MCTE4450	Control Systems Engineering	3	MCTE4150	AR
	MEIE4183	Numerical Methods for Engineers	3	(COMP2002 or ENGR2217) and MATH3171	AR
		University Elective	2		UE
	Total		**14**		
Fall 28 Coop-Sem.1	ENGR4007	Industrial Training	0		CR
	MCTE5001	Co-op Training I	0	ENGR4007	AE
Spring 28 Coop-Sem.2	MCTE5002	Co-op Training II	6	MCTE5001	AE
	Total		**6**		
Semester 9 Fall-29	MCTE5191	Project I	2	MCTE3240 or MCTE3250 and PR 1	AR
	MCTE5210	Real-time control and interfacing	3	MCTE4450	AR
	MCTE4255	Mechatronics System Design	3	ECCE4227 and MCTE4145 and (MCTE3250 or MCTE3240)	AR
	MCTE5xxx	Program Elective 1	3		AE
	MCTE5xxx	Program Elective 2	3		AE
	Total		**14**		
Semester 10 Spring- 29	MCTE5291	Project II	3	MCTE5191	AR
	MCTE5142	Robotics	3	MEIE3122	AR
	MCTE5420	Pneumatic and Hydraulic Systems	3	MCTE3210	AR
	ECCE5010	Engineering Economics and Project Management	3	MEIE3281	AR
	Total		**12**		

PR[1]: Internal regulation [enforced by the MCE Program]: **Complete 90 Cr.**
MCTE5191 is offered in Fall semesters ONLY.

Mechatronics Engineering Program

Study Plan for 2025 Cohort (SCHEME II – With Two Semester General Foundation Program)

	Course Code	Course Title	Cr	Pre-req.	Cat.
Fall-25	-	General Foundation Program	-	-	UR
Spring-26	-	General Foundation Program	-	-	UR
Semester 3 Fall-26	HIST1010 or ISLM1010	Oman& Islamic Civilization or Islamic Culture	2		UR
	CHEM1071	General Chemistry for Engineering	3		CR
	ENGR1501	Introduction to Engineering	1		CR
	LANC2160	English for Engineering I	3		CR
	ENGR1600	Workshop I	1		CR
	MATH2107	Calculus I	4		CR
	Total		**14**		
Semester 4 Spring-27	ARAB1060	Arabic	2		UR
	SOCY1005	Oman: State and People	2		UR
	LANC2161	English for Engineering II	3	LANC2160	CR
	MATH2109	Calculus II for Science and Engineering	3	MATH2107	CR
	PHYS2107	Physics for Engineering I	4	MATH2107	CR
		University Elective	2		UE
	Total		**16**		
Semester 5 Fall-27	ECCE2017	Electric Circuit Analysis	4	MATH2107	AR
	MATH4174	Differential Equations for Eng.	3	(MATH2108 or MATH2109) and LANC2161	CR
	PHYS2108	Physics for Eng. II	4	PHYS2107	CR
	MCTE2129	Engineering Mechanics	3	PHYS2107 and MATH2107	AR
	MEIE3103	Engineering Tools and Graphics	2		AR
	Total		**16**		
Semester 6 Spring-28	MCTE3310	Electronics for Mechatronics	3	ECCE2017 or ECCE2016	AR
	MCTE4185	Signals & Systems for Mechatronics	3	ECCE2017 or ECCE3016	AR
	COMP2002 or ENGR2217	Intr. to Comp. Program. for Eng. or Programming for Engineers	3		CE
		University Elective	2		UE
	ECCE3206	Digital Logic Design	3		AR
	MCTE3230	Properties and Strength of Materials	3	MCTE2129 or MEIE2129	AR
	Total		**17**		

Mechatronics Engineering Program

Study Plan for 2025 Cohort (SCHEME II – With Two Semester General Foundation Program)

	Course Code	Course Title	Cr.	Pre-req.	Cat.
Semester 7 Fall-27	MCTE4145	Instrumentation & Measurement	3	MCTE3110 or MCTE3310	AR
	MCTE4102	Machine Design for Mechatronics	3	MCTE3230	AR
	MCTE3210	Electromechanical Sys. & Actuators	3	ECCE2017 or ECCE3016	AR
	MCTE4150	Modeling and Simulation	3	MATH4174	AR
	ECCE4227	Embedded Systems	3	(COMP2002 or ENGR2217) and ECCE3206	AR
	MCTE3250	Engineering System Design	3	MEIE3103	AR
	Total		**18**		
Semester 8 Spring-28	MCTE4210	Power Electronics & Drives	3	MCTE3110 or MCTE3310 and MCTE3210	AR
	MATH3171	Lin. Alg. & Mult. Calc. for Eng.	3	(MATH2108) OR (MATH2109)	CR
	MEIE3122	Machine Dynamics	3	MCTE2129 or MEIE2129	AR
	MCTE4450	Control Systems Engineering	3	MCTE4150	AR
	MCTE4241	Thermofluids	3	PHYS2108 and MATH2109	AR
		University Elective	2		UE
	Total		**17**		
Summer-28	ENGR4007	Industrial Training	**0**		CR
	Total		**0**		
Semester 9 Fall-28	MCTE5191	Project I	2	MCTE3250 OR MCTE3240 and PR[1]	AR
	MEIE4183	Numerical Methods for Engineers	3	(COMP2002 or ENGR2217) and MATH3171	AR
	MEIE3281	Probability & Statistics for Engineers	3	MATH2107	AR
	MCTE4255	Mechatronics System Design	3	ECCE4227 and MCTE4145 and (MCTE3250 or MCTE3240)	AR
	MCTE51xx	Program Elective 1	3		AE
	MCTE5210	Real-time control and interfacing	3	MCTE4450	AR
	Total		**17**		
Semester 10 Spring - 29	MCTE5291	Project II	3	MCTE5191	AR
	ECCE5010	Engineering Economics and Project Management	3	MEIE3281	AR
	MCTE5420	Pneumatic and Hydraulic Systems	3	MCTE3210	AR
	MCTE5142	Robotics	3	MEIE3122	AR
	MCTE51xx	Program Elective 2	3		AE
	Total		**15**		
Summer -29	MCTE51xx	Program Elective 3	3		AE
	MCTE51xx	Program Elective 4	3		AE
	Total		**6**		

PR[1]: Internal regulation [enforced by the MCE program]: **Completed 90 Cr.**
Note: MCTE5191 is offered in Fall semesters ONLY.

Mechatronics Engineering Program

Study Plan for 2025 Cohort (SCHEME II – With Two Semester General Foundation Program)
Co-Operative Scheme

	Course Code	Course Title	Cr.	Pre-requisite	Cat.
Semester 7 Fall-27	MCTE4145	Instrumentation & Measurement	3	MCTE3110 or MCTE3310	AR
	MCTE4102	Machine Design for Mechatronics	3	MCTE3230	AR
	MCTE3210	Electromechanical Sys. & Actuators	3	ECCE2017 or ECCE3016	AR
	MCTE4150	Modeling and Simulation	3	MATH4174	AR
	ECCE4227	Embedded Systems	3	(COMP2002 or ENGR2217) and ECCE3206	AR
	MCTE3250	Engineering System Design	3	MEIE3103	AR
	Total		**18**		
Semester 8 Spring-28	MCTE4210	Power Electronics & Drives	3	(MCTE3110 or MCTE3310) and MCTE3210	AR
	MATH3171	Lin. Alg. & Mult. Calc. for Eng.	3	MATH2108 or MATH2109	CR
	MEIE3122	Machine Dynamics	3	MCTE2129 or MEIE2129	AR
	MCTE4450	Control Systems Engineering	3	MCTE4150	AR
	MCTE4241	Thermofluids	3	PHYS2108 and MATH2109	AR
	Total		**15**		
Fall 28 Coop-Sem.1	ENGR4007	Industrial Training	0		CR
	MCTE5001	Co-op Training I	0	ENGR4007	AE
Spring 29 Coop-Sem.2	MCTE5002	Co-op Training II	6	MCTE5001	AE
	Total		**6**		
Semester 9 Fall-29	MCTE5191	Project I	2	MCTE3250 or MCTE3240 and PR[1]	AR
	MCTE4255	Mechatronics System Design	3	ECCE4227 and (MCTE3250 or MCTE3240) and MCTE4145	AR
	MEIE4183	Numerical Methods for Engineers	3	(COMP2002 or ENGR2217) and MATH3171	
		University Elective	2		UE
	MCTE5210	Real-time control and interfacing	3	MCTE4450	AR
	Total		**13**		
Semester 10 Spring 30	MCTE5291	Project II	3	MCTE5191	AR
	ECCE5010	Engineering Economics and Project Management	3	MEIE3281	AR
	MCTE5142	Robotics	3	MEIE3122	AR
	MCTE5420	Pneumatic and Hydraulic Systems	3	MCTE3210	AR
	MEIE3281	Probability & Statistics for Engineers	3	MATH2107	AR
	Total		**15**		
Summer 30	MCTE51xx	Program Elective 1	3		AE
	MCTE51xx	Program Elective 2	3		AE
	Total		**6**		

PR[1]: Internal regulation [enforced by the MCE program]: **Complete 90 Cr.**
Note: MCTE5191 is offered in Fall semesters ONLY.

Mechatronics Engineering - Study Plan for Cohort 2025
LIST AT - UNIVERSITY ELECTIVES (6 Credits)

The list of University Elective Courses allowed for ENG students can be accessed by scanning the QR code shown below.

Mechatronics Engineering - Study Plan for Cohort 2025

LIST B: COLLEGE REQUIREMENTS (32 Credits)

Course Code	Course Title	Credit	Pre-Requisite
CHEM1071	General Chemistry for Engineering	3	
ENGR1501	Introduction to Engineering	1	
ENGR1600	Workshop I	1	
ENGR4007	Industrial Training	0	
LANC2160	English for Engineering I	3	
LANC2161	English for Engineering II	3	LANC2160
MATH2107	Calculus I	4	
MATH2109	Calculus II for Science and Engineering	3	MATH2107
MATH3171	Linear Algebra & Multivariate Calculus for Engineers	3	MATH2109 or MATH2108
MATH4174	Differential Equations for Engineers	3	(MATH2108 or MATH2109) and LANC2161
PHYS2107	Physics for Engineering I	4	
PHYS2108	Physics for Engineering II	4	PHYS2107 or PHYS2101
Total		**32**	

Mechatronics Engineering - Study Plan for Cohort 2025

LIST C: COLLEGE ELECTIVE (3 Credits)

Course Code	Course Title	Credit	Pre-Requisite
COMP2002 Or ENGR2217	Introduction to Computer Programming for Engineers Or Programming for Engineers	3	
Total		**3**	

Mechatronics Engineering Program

Mechatronics Engineering - Study Plan for Cohort 2025
LIST F: Major Requirements (77 Credits)

Course Code	Course Title	Credit	Pre-Requisite / Co-req. *
ECCE2017	Electric Circuit Analysis	4	MATH2107
MCTE3310	Electronics for Mechatronics	3	ECCE2017 or ECCE2016
MCTE2129	Engineering Mechanics	3	PHYS2107 and MATH2107
MCTE4145	Instrumentation & Measurement	3	MCTE3110 or MCTE3310
MCTE3230	Properties and Strength of Materials	3	MCTE2129 or MEIE2129
MEIE3281	Probability & Statistics for Engineers	3	MATH2107
MEIE3103	Engineering Tools and Graphics	2	
MCTE4102	Machine Design for Mechatronics	3	MCTE3230
MCTE4185	Signals & Systems for Mechatronics	3	ECCE2017 or ECCE3016
MCTE3210	Electromechanical Systems & Actuators	3	ECCE2017 or ECCE3016
ECCE3206	Digital Logic Design	3	
MCTE4210	Power Electronics & Drives	3	MCTE3110 or MCTE3310 and MCTE3210
MCTE4241	Thermofluids	3	PHYS2108 and MATH2109
ECCE4227	Embedded Systems	3	(COMP2002 or ENGR2217) and ECCE3206
ECCE5010	Engineering Economics and Project Management	3	MEIE3281
MCTE4150	Modeling & Simulation	3	MATH4174
MEIE4183	Numerical Methods for Engineers	3	(COMP2002 or ENG2217) and MATH3171
MEIE3122	Machine Dynamics	3	MCTE2129 or MEIE2129
MCTE5191	Project I	2	MCTE3250 or MCTE3240, PR[1]
MCTE3250	Engineering System Design	3	MEIE3103
MCTE5210	Real-time control and interfacing	3	MCTE4450
MCTE4450	Control Systems Engineering	3	MCTE4150
MCTE4255	Mechatronics System Design	3	ECCE4227 and (MCTE3250 or MCTE3240) and MCTE4145
MCTE5420	Pneumatic and Hydraulic Systems	3	MCTE3210
MCTE5291	Project II	3	MCTE5191
MCTE5142	Robotics	3	MEIE3122
Total		**77**	

PR[1]: Internal regulation [enforced by the MCE program]
Note: MCTE5191 is offered in Fall semesters ONLY.

Mechatronics Engineering – Study Plan for Cohort 2025
List G: MAJOR ELECTIVES (12 CREDITS)

Course Code	Course Title	Credit	Pre-requisite
MCTE5001	Coop-Training I	0	ENGR4007
MCTE5002	Coop-Training II	6	MCTE5001
ECCE5433	Modern Control Systems	3	MCTE4450 or MCTE4250
ECCE5453	Mobile Robot Control	3	MCTE4450
ECCE4436	Industrial Control Systems	3	MCTE4450 or MCTE4250
ECCE5223	Advanced Embedded Systems	3	ECCE4227
ECCE5445	Control System Design	3	MCTE4450 or MCTE4250
ECCE5432	Programmable Logic Controllers	3	ECCE4416 or MCTE4250 or MCTE4450
ECCE4253	Object Oriented Programming	3	COMP2002
ECCE4255	Applied Programming & Algorithms for Eng.	3	COMP2002
ECCE5443	Optimization Techniques in Eng.	3	MATH3171
MEIE5101	Engineering Vibration	3	MEIE3121 or MCTE2129 or MEIE2129
MEIE5131	Legged locomotion of robots and animals	3	MEIE3122
MEIE5127	Analysis and design of control system	3	MCTE4450
MEIE5122	Applied Multi-body Dynamics	3	MEIEI3122
MEIE5146	Renewable Energy	3	MEIE3142 or MEIE3159 or MCTE4230
MEIE5182	Fundamentals of Biomechanics	3	MEIE3102 and MEIE3121
MEIE5288	Innovation and Entrepreneurship	3	MEIE4285 or ECCE5010
MEIE5106	Pressure Vessel & Piping System Design	3	MEIE4102 or MCTE4102
MEIE5110	Applied Finite Element Methods	3	MEIE3102 or CIVL3086 or MCTE3230
MEIE5162	Corrosion Engineering	3	MCTE3230
ECCE5229	Embedded Real Time Systems	3	ECCE4227
ECCE5293	Embedded Vision Systems	3	ECCE4227
ECCE4216	Machine Learning for Engineers	3	(ENGR2217 and COMP2002) or (ECCE3352 and MCTE3210)
ECCE5219	Intelligent Applications in Robotics and Drones	3	ECCE4227
ECCE5231	Industrial Networks and Operating Systems	3	ECCE4227
MCTE5103	Selected topics in robotics and control	3	MCTE4450

Degree and Study Plan

College	Engineering
Department	Mechanical and Industrial Engineering
Cohorts	2025
Degree	Bachelor of Engineering (B. Eng.)
Major	Mechanical Engineering (ME)

Summary of Credits

Credit Category		Courses		Total credits
University Requirements	UR	General Foundation Program		06
		Arabic	(2 credits)	
		Contemporary Omani State and People	(2 credits)	
		Oman and Islamic Civilization or Islamic Culture	(2 credits)	
University Electives	UE	See list A		06
College Requirements	CR	See list B		32
College Electives	CE	See list C		03
Department Requirements	DR	See list D		11
Major Requirements	AR	See list E		63
Major Electives	AE	See list F		15
Total Credits				136

For reference contact:	**Dr. Nasr Al Hinai**	Ext. **1352**
HoD: **Dr. Nasr Al Hinai**		Date: **08/04/2025**
Dean's Office:		Date: **08/04/2025**
Admission and Registration:		Date:

Important Information

Student is to follow one of the three schemes of the Degree Plan:

Scheme I is for students who completed the Foundation Program in one regular semester (Fall).
Scheme II is for students who completed the Foundation Program in two regular semesters (Fall and Spring).
The Cooperative Training (COOP) Scheme is optional. It is designed for students who are following Scheme I or II and are willing totake a one-year COOP program in semesters 9 and 10.

Students are advised to regularly check the most updated degree plan on the Department's webpage.
This degree plan is last updated on April 8, 2025.
https://www.squ.edu.om/engineering/Academic/Undergraduate-Programs/Mechanical-Engineering

- Course description and exact prerequisite(s) can be found on SQU's SIS:
  https://sis.squ.edu.om/SQU_CoursesSchedule.aspx

Department of Mechanical and Industrial Engineering
Mechanical Engineering Study Plan
Cohort 2025 (Scheme I)

Scheme I FP1 Fall 2025	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
		General Foundation Program	0		UR
		Total Credits	0		

Scheme I Semester 1 Spring 2026	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	HIST1010 or ISLM1010	Oman and Islamic Civilization or Islamic Culture	2		UR
	ENGR1501	Introduction to Engineering	1	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	ENGR1600	Workshop I	1	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	CHEM1071	General Chemistry for Engineering	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT 0108	CR
	LANC2160	English for Engineering I	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	MATH2107	Calculus I	4	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT0108	CR
		Total Credits	14		

Scheme I Semester 2 Fall 2026	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
		University Elective	2		UE
	ARAB1060**	Arabic	2		UR
	SOCY1005**	Contemporary Omani State and People	2		UR
	LANC2161	English for Engineering II	3	LANC2160	CR
	MATH2109	Calculus II for Science and Eng.	3	MATH2107	CR
	PHYS2107	Physics for Engineering I	4	MATH2107*, FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT0108	CR
		Total Credits	16		

** For non-Arabic speaking or non-Omanis students, please refer to Appendix A.

Scheme I Semester 3 Spring 2027	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
		College Elective	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPCS (0101 or 0102)	CE
	MEIE3281	Probability and Statistics for Engineers	3	MATH2107	DR
	PHYS2108	Physics for Engineering II	4	PHYS2107	CR
	MEIE3100	Engineering Mechanics	3	PHYS2107, MATH2107	AR
	MEIE3103	Engineering Tools and Graphics	2	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	DR
		Total Credits	15		

Scheme I Semester 4 Fall 2027	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	MEIE3102	Solid Mechanics	3	MEIE3100	AR
	MEIE3109	Product Design	3	MEIE3103	AR
	MEIE3141	Thermodynamics I	3	PHYS2108*	AR
	MEIE3162	Materials Science and Engineering	3	CHEM1071	AR
	MEIE3181	Electromechanical Systems	3	MATH2107, PHYS2108	AR
		Total Credits	15		

Scheme I Semester 5 Spring 2028	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	MATH3171	Linear Algebra and Multivariate Calculus for Engineers	3	MATH2109	CR
	MEIE3122	Machine Dynamics	3	MEIE3100	AR
	MEIE3142	Thermodynamics II	3	MEIE3141	AR
	MEIE4141	Fluid Mechanics	3	PHY2108	AR
	MEIE4126	Instrumentation and Measurement	3	MEIE3181, MEIE3281	AR
		Total Credits	15		

Scheme I Semester 6 Fall 2028	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	MATH4174	Differential Equations for Engineers	3	MATH2109, LANC2161	CR
	MEIE4104	Design of Machine Elements	3	MEIE3102, MEIE3103	AR
	MEIE4183	Numerical Methods for Engineers	3	(COMP2002 or ENGR2217), MATH3171	AR
	MEIE4162	Manufacturing Processes	3	MEIE3162	AR
		University Elective	2		UE
		Total Credits	14		

Scheme I Semester 7 Spring 2029	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	MEIE4122	Engineering Systems and Control	3	MEIE3100, MATH4174	AR
	MEIE4144	Heat Transfer	3	MEIE4141, MEIE3141	AR
	MEIE4188	Data Analytics in Engineering	2	MEIE3281, (ENGR2217 or COMP2002)	AR
	MEIE4285	Engineering Economics	3	MATH2107	DR
	MEIE5149	Capstone Design	3	MEIE3109, MEIE4104	AR
		Total Credits	14		

Scheme I Summer 2029	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	ENGR4007	Industrial Training	0		CR
		Total Credits	0		

Scheme I Semester 8 Fall 2029	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	MEIE4123	Control Systems Design	2	MEIE4122	AR
	MEIE4163	Modern Materials and Manufacture	3	MEIE4162	AR
	MEIE5288	Innovation and Entrepreneurship	3	MEIE4285	DR
	MEIE5193[‡]	Project I	2	MEIE4104, MEIE4144	AR
	MEIE5xxx	Major Elective 1	3		AE
	MEIE5xxx	Major Elective 2	3		AE
		Total Credits	16		

[‡] MEIE5193 is offered in Fall semesters ONLY.

Scheme I Semester 9 Spring 2030	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
		University Elective	2		UE
	MEIE5145	Design of Thermal Systems	3	MEIE3142, MEIE4144, MEIE4183	AR
	MEIE5194	Project II	3	MEIE5193	AR
	MEIE5xxx	Major Elective 3	3		AE
	MEIE5xxx	Major Elective 4	3		AE
	MEIE5xxx	Major Elective 5	3		AE
		Total Credits	17		

Department of Mechanical and Industrial Engineering
Mechanical Engineering Study Plan
Cohort 2025 (Scheme II)

Scheme II FP1 Fall 2025	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
		General Foundation Program	0		UR
		Total Credits	0		

Scheme II FP2 Spring 2026	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
		General Foundation Program	0		UR
		Total Credits	0		

Scheme II Semester 1 Fall 2026	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	HIST1010 or ISLM1010	Oman and Islamic Civilization or Islamic Culture	2		UR
	ENGR1501	Introduction to Engineering	1	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	ENGR1600	Workshop I	1	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	CHEM1071	General Chemistry for Engineering	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT0108	CR
	LANC2160	English for Engineering I	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	MATH2107	Calculus I	4	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT0108	CR
		Total Credits	14		

Scheme II Semester 2 Spring 2027	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
		University Elective	2		UE
	ARAB1060**	Arabic	2		UR
	SOCY1005**	Contemporary Omani State and People	2		UR
	LANC2161	English for Engineering II	3	LANC2160	CR
	MATH2109	Calculus II for Science and Eng.	3	MATH2107	CR
	PHYS2107	Physics for Engineering I	4	MATH2107*, FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT0108	CR
		Total Credits	16		

** For non-Arabic speaking or non-Omanis students, please refer to Appendix **A.**

Scheme II Summer 2027***	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
		University Elective	2		UE
		College Elective	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPCS (0101 or 0102)	CE
		Total Credits	5		

*** Offering the summer semester is subject to the availability of the courses.

Scheme II Semester 3 Fall 2027	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	PHYS2108	Physics for Engineering II	4	PHYS2107	CR
	MEIE3100	Engineering Mechanics	3	PHYS2107, MATH2107	AR
	MEIE3103	Engineering Tools and Graphics	2	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	DR
	MEIE3141	Thermodynamics I	3	PHYS2108*	AR
	MEIE3281	Probability and Statistics for Engineers	3	MATH2107	DR
		Total Credits	15		

Scheme II Semester 4 Spring 2028	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	MATH3171	Linear Algebra and Multivariate Calculus for Engineers	3	MATH2109	CR
	MEIE3102	Solid Mechanics	3	MEIE3100	AR
	MEIE3109	Product Design	3	MEIE3103	AR
	MEIE3142	Thermodynamics II	3	MEIE3141	AR
	MEIE3162	Materials Science and Engineering	3	CHEM1071	AR
	MEIE3181	Electromechanical Systems	3	MATH2107, PHYS2108	AR
		Total Credits	18		

Scheme II Semester 5 Fall 2028	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	MATH4174	Differential Equations for Engineers	3	MATH2109, LANC2161	CR
	MEIE3122	Machine Dynamics	3	MEIE3100	AR
	MEIE4104	Design of Machine Elements	3	MEIE3102, MEIE3103	AR
	MEIE4141	Fluid Mechanics	3	PHYS2108	AR
	MEIE4162	Manufacturing Processes	3	MEIE3162	AR
	MEIE4183	Numerical Methods for Engineers	3	(COMP2002 or ENGR2217), MATH3171	AR
		Total Credits	18		

Scheme II Semester 6 Spring 2029	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	MEIE4122	Engineering Systems and Control	3	MEIE3100, MATH4174	AR
	MEIE4126	Instrumentation and Measurements	3	MEIE3181, MEIE3281	AR
	MEIE4144	Heat Transfer	3	MEIE4141, MEIE3141	AR
	MEIE4188	Data Analytics in Engineering	2	MEIE3281, (ENGR2217 or COMP2002)	AR
	MEIE4285	Engineering Economics	3	MATH2107	DR
	MEIE5149	Capstone Design	3	MEIE3109, MEIE4104	AR
		Total Credits	17		

Scheme II Summer 2029	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	ENGR4007	Industrial Training	0		CR
		Total Credits	0		

Scheme II Semester 7 Fall 2029	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	MEIE4123	Control Systems Design	2	MEIE4122	AR
	MEIE4163	Modern Materials and Manufacture	3	MEIE4162	AR
	MEIE5288	Innovation and Entrepreneurship	3	MEIE4285	DR
	MEIE5193[#]	Project I	2	MEIE4104, MEIE4144	AR
	MEIE5xxx	Major Elective 1	3		AE
	MEIE5xxx	Major Elective 2	3		AE
		Total Credits	16		

[#] MEIE5193 is offered in Fall semesters ONLY.

Scheme II Semester 8 Spring 2030	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
		University Elective	2		UE
	MEIE5145	Design of Thermal Systems	3	MEIE3142, MEIE4144, MEIE4183	AR
	MEIE5194	Project II	3	MEIE5193	AR
	MEIE5xxx	Major Elective 3	3		AE
	MEIE5xxx	Major Elective 4	3		AE
	MEIE5xxx	Major Elective 5	3		AE
		Total Credits	17		

Department of Mechanical and Industrial Engineering
Mechanical Engineering Study Plan

Cohort 2025 (COOP Scheme)

- The cooperative Training (COOP) Scheme is **optional**.
- **Scheme I** Students can enroll in this scheme starting from Semester **8** (Fall 2029) after the foundation program.
- **Scheme II** students can enroll in this scheme starting from Semester **7** (Fall 2029) after the foundation program.
- For enrollment terms, conditions, and registration procedure, please consult the Head of Department and the Assistant Dean for Training and Community Services Offices.

COOP Scheme Semester 1

Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
ENGR4007	Industrial Training	0		CR
MEIE5001	Mechanical Program Cooperative Training I	0	ENGR4007*	AE
	Total Credits	0		

COOP Scheme Semester 2

Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
MEIE5002	Mechanical Program Cooperative Training II	6	MEIE5001	AE
	Total Credits	6		

COOP Scheme Semester 3

Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
MEIE4123	Control Systems Design	2	MEIE4122	AR
MEIE4163	Modern Materials and Manufacture	3	MEIE4162	AR
MEIE5288	Innovation and Entrepreneurship	3	MEIE4285	DR
MEIE5193‡	Project I	2	MEIE4104, MEIE4144	AR
MEIE5xxx	Major Elective 1	3		AE
	Total Credits	13		

‡ MEIE5193 is offered in Fall semesters ONLY.

COOP Scheme Semester 4

Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	University Elective	2		UE
MEIE5145	Design of Thermal Systems	3	MEIE3142, MEIE4144, MEIE4183	AR
MEIE5194	Project II	3	MEIE5193	AR
MEIE5xxx	Major Elective 2	3		AE
MEIE5xxx	Major Elective 3	3		AE
	Total Credits	14		

Degree Plan
Cohort 2025
Appendix A
University Requirements for Non-Arabic or Non-Oman Students

No.	Cohorts 2018 and before	Credits	Cohorts 2018 and after	Credits	Notes
1	ARAB1001	3	ARAB1060	2	
2	SOCY1001	1	SOCY1005	2	For Omanis Only
3	--	--	SOCY1007	2	For Non-Omanis
4		ARAB1019		3	For non-Arabic Speaking Students. Offered only in Fall semesters

Notes:

- For the courses (SOCY1005, SOCY1007, HIST1010), the course materials and exams are in English for non-Arabic speaking students.
- Currently, there is no Arabic course with 2 credits for the non-Arabic speaking students of cohorts 2018 and after. Those students have to register the ARAB1019 as shown in the table above.

Department of Mechanical and Industrial Engineering
Degree Plan
Cohort 2025
LIST A
Uiversity Electives (UE) 6 Credits

Engineering students must register a humanity or social course (non-scientific and non-linguistic course) from any college as a University Elective. However, students are **NOT** allowed to register the following University Electives listed below.

No.	Course Code	Course Title	College
1	ENGGL1523	English Writing Skills	College of Arts
2	ENGR1524	English Reading Skills	College of Arts
3	ENGL1525	English Speaking and Listing Skills	College of Arts
4	CHEM1100	Everyday Chemistry	College of Science
5	COMP1210	Web Site Development	College of Science
6	CROP2020	Lab and Safety	College of Agriculture and Marine Science
7	MNGT2500	Entrepreneurship Creat. and Invo.	College of Economics and Political Sciences
8	MNGT2501	Entrepreneurship	College of Economics and Political Sciences
9	ECON1050	Introduction to Economics	College of Economics and Political Sciences
10	CHPE1000	Renewable Energy	College of Engineering
11	ECCE1000	Electricity Generation from Solar PV	College of Engineering
12	MEIE1000	Solar Calculations and Energy	College of Engineering
13	MCTE1000	Edutainment Robotic	College of Engineering
14	ECCE2000	Introduction to Artificial Intelligence	College of Engineering
15	COMP1003	Python for Everyone	College of Science

Department of Mechanical and Industrial Engineering
Degree Plan
Cohort 2025
LIST B
College Requirements (CR) 32 Credits

Course Code	Course Title	Credits	Pre-requisite / Co-requisite *
LANC2160	English for Engineering I	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)
LANC2161	English for Engineering II	3	LANC2160
ENGR1501	Introduction to Engineering	1	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)
ENGR1600	Workshop I	1	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)
MATH2107	Calculus I	4	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT (0105 or 0109)
MATH2109	Calculus II for Science and Engineering	3	MATH 2107
MATH3171	Linear Algebra and Multivariate Calculus	3	MATH2109
MATH4174	Differential Equations for Engineers	3	MATH2109, LANC2161
PHYS2107	Physics for Engineering I	4	MATH2107*, FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT (0105 or 0109)
PHYS2108	Physics of Engineering II	4	PHYS2107
CHEM1071	General Chemistry for Engineering	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT (0105 or 0109)
ENGR4007	Industrial Training	0	
	Total	**32**	

Department of Mechanical and Industrial Engineering
Degree Plan
Cohort 2025
LIST C
College Electives (CE) 3 Credits

The course will be offered from the following courses subject to availability

Course Code	Course Title	Credits	Pre-requisite / Co-requisite*
COMP2002	Introduction to Computer Programming for Engineers	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPCS (0101 or 0102)
ENGR2217	Programming for Engineers	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPCS (0101 or 0102)

Department of Mechanical and Industrial Engineering
Degree Plan
Cohort 2025
LIST D
Department Requirements (DR) 11 Credits

Course Code	Course Title	Credits	Pre-requisite / Co-requisite*
MEIE3281	Probability and Statistics for Engineers	3	MATH2107
MEIE4285	Engineering Economics	3	MATH2107
MEIE3103	Engineering Tools and Graphics	2	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)
MEIE5288	Innovation and Entrepreneurship	3	MEIE4285
	Total	11	

Department of Mechanical and Industrial Engineering
Degree Plan
Cohort 2025
LIST E
Major Requirements (AR) 63 Credits

Course Code	Course Title	Credits	Pre-requisite / Co-requisite*
MEIE3100	Engineering Mechanics	3	PHYS2107
MEIE3102	Solid Mechanics	3	MEIE3100
MEIE3109	Product Design	3	MEIE3103
MEIE3122	Machine Dynamics	3	MEIE3100
MEIE3141	Thermodynamics I	3	PHYS2108*
MEIE3142	Thermodynamics II	3	MEIE3141
MEIE3162	Materials Science and Engineering	3	CHEM1071
MEIE3181	Electromechanical Systems	3	MATH2107, PHYS2108
MEIE4104	Design of Machine Elements	3	MEIE3100, MEIE3103
MEIE4122	Engineering Systems and Control	3	MEIE3100, MATH4174
MEIE4123	Control Systems Design	2	MEIE4122
MEIE4126	Instrumentation and Measurements	3	MEIE3181, MEIE3281
MEIE4141	Fluid Mechanics	3	PHYS2108
MEIE4144	Heat Transfer	3	MEIE3141, MEIE4141
MEIE4162	Manufacturing Processes	3	MEIE3162
MEIE4163	Modern Materials and Manufacturing	3	MEIE4162
MEIE4183	Numerical Methods for Engineers	3	(COMP2002 or ENGR2217), MATH3171
MEIE4188	Data Analytics in Engineering	2	MEIE3281 and (ENGR2217 or COOMP2002)
MEIE5145	Design of Thermal Systems	3	MEIE3142, MEIE4144, MEIE4183
MEIE5149	Capstone Design	3	MEIE3109, MEIE4104
MEIE5193	Project I	2	MEIE4104, MEIE4144
MEIE5194	Project II	3	MEIE5193
	Total	63	

Department of Mechanical and Industrial Engineering
Degree Plan
Cohort 2025
LIST F
Major Electives (AE) 15 Credits

NOTES

- One 4000 or 5000 level course can be taken from another engineering program with the approval of the academic advisor and HoD.
- Students of Scheme I or II should register for FIVE elective courses.

Students of the COOP Scheme should register: Cooperative Training courses (MEIE5001 and MEIE5002) and THREE elective courses.

- The elective courses will be offered from the following and additional courses might be offered subject to availability.

Course Code	Course Title	Credits	Pre-requisite / Co-requisite *
MEIE5001	Mechanical Program Cooperative Training I	0	ENGR4007*
MEIE5002	Mechanical Program Cooperative Training II	6	MEIE5001
MEIE5013	Refrigeration and Air Conditioning	3	MEIE4144, MEIE3142
MEIE5128	Theory and Practice of Rotor Dynamics	3	MEIE3122
MEIE5019	Internal Combustion Engines and Control	3	MEIE3142
MEIE5101	Engineering Vibration	3	MEIE3100
MEIE5106	Pressure Vessel and Piping System Design	3	MEIE4104
MEIE5110	Applied Finite Element Methods	3	MEIE3102
MEIE5121	Modeling and Simulation of Engineering Systems	3	MATH4174
MEIE5122	Applied Multibody Dynamics	3	MEIE3122
MEIE5124	Condition Monitoring and Diagnosis	3	MEIE3122
MEIE5127	Analysis and Design of Control Systems	3	MEIE4122 or MCTE4450
MEIE5129	System Models and Identification	3	MEIE3281
MEIE5130	Mechatronics Systems and Applications	3	MEIE4126, MEIE4104
MEIE5131	Legged Locomotion of Robots and Animals	3	MEIE3122
MEIE5132	Smart Materials and Structures	3	MEIE4126 or MCTE4145
MEIE5141	Solar Energy Systems	3	MEIE4144
MEIE5142	Solar Thermal Processes	3	MEIE4144
MEIE5146	Renewable Energy	3	MEIE3142 or MCTE4230
MEIE5147	Energy Conservation and Management	3	MEIE3141
MEIE5148	Desalination	3	MEIE4144
MEIE5151	Fundamentals of Turbomachinery	3	MEIE3142, MEIE4141
MEIE5152	Fundamental of Thermal Energy Storage Sys.	3	MEIE3142
MEIE5162	Corrosion Engineering	3	MEIE4162
MEIE5165	Introduction to Fracture Mechanics	3	MEIE3162, (MEIE3102 or MCTE3230)
MEIE5166	Introduction to Nanotechnology Engineering	3	MEIE4162
MEIE5167	Mechanics of Composite Materials	3	MEIE3162, (MEIE3102 or MCTE3230)
MEIE5168	Introduction to Polymers	3	MEIE3161 or MEIE3162 or MEIE4263
MEIE5169	Fundamentals of Sustainable Engineering	3	MEIE4161, MEIE4162, MEIE4262, MEIE4163
MEIE5182	Fundamentals of Biomechanics	3	MEIE3102, MEIE3100
MEIE5183	Emerging Technologies in ME	3	MEIE4188 or MEIE4288
MEIE5184	Bioinspired Design for Engineers	3	
MEIE5190	Special Topics	3	
MEIE5264	CAD/CAM	3	MEIE3102, MEIE3103
MEIE5233	Maintenance and Reliability Engineering	3	MEIE3281
MEIE5287	Project Management	3	MEIE4161

Degree and Study Plan

College	Engineering
Department	Mechanical and Industrial Engineering
Cohorts	2025
Degree	Bachelor of Engineering (B. Eng.)
Major	Industrial Engineering (IE)

Summary of Credits

Credit Category		Courses	Total Credits Hours
University Requirements	**(UR)**	General Foundation Program	
		Arabic	2
		Contemporary Omani State and People	2
		Oman & Islamic Civilization or Islamic Culture	2
University Electives	**(UE)**	See List A	**6**
College Requirements	**(CR)**	See List B	**32**
College Electives	**(CE)**	See List C	**3**
Departmental Requirements	**(DR)**	See List D	**11**
Major Requirements	**(AR)**	See List E	**60**
Major Electives	**(AE)**	See List F	**18**
Total Credits			**136**

Important Information:

Student is to follow one of the three schemes of the degree plan:

1. **Scheme I** is for students who completed the foundation program in one regular semester (Fall).
2. **Scheme II** is for students who completed the foundation program in two regular semesters (Fall and Spring).
3. **Cooperative Training (COOP) Scheme** is optional. It is designed for students following Scheme I or II and willing to take a one-year COOP program in semesters 9 and 10.

- Students are advised to regularly check the most updated degree plan on the department webpage. This degree plan was last updated on April 9th, 2025.

- Course description and exact prerequisite(s) can be checked on:
http://sisinfo.squ.edu.om/cgi-bin/crs-en/allsub.cgi

For reference contact:	**Dr. Nasr Al Hinai**	Ext. **1352**
HoD: **Dr. Nasr Al Hinai**		Date: April, 9th 2025
Dean's Office:		Date: April 10th, 2025
Admission and Registration:		Date:

Department of Mechanical and Industrial Engineering
Industrial Engineering Study Plan: 2025 Cohort (Scheme I)

Scheme I FP1 Fall 2025	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
		General Foundation Program	0		UR
	Total Credits		**0**		

Scheme I Semester 1 Spring 2026	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	HIST1010 or ISLM1010	Oman and Islamic Civilization or Islamic Culture	2		UR
	ENGR1501	Introduction to Engineering	1		CR
	ENGR1600	Workshop I	1		CR
	CHEM1071	General Chemistry for Engineering	3		CR
	LANC2160	English for Engineering I	3		CR
	MATH2107	Calculus I	4		CR
	Total Credits		**14**		

Scheme I Semester 2 Fall 2026	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
		University Elective	2		UE
	ARAB1060**	Arabic	2		UR
	SOCY1005**	Contemporary Omani State and People	2		UR
	LANC2161	English for Engineering II	3	LANC2160	CR
	MATH2109	Calculus II for Science and Engineering	3	MATH2107	CR
	PHYS2107	Physics for Engineering I	4	MATH2107*	CR
	Total Credits		**16**		

Scheme I Semester 3 Spring 2027	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
		College Elective	3		CE
	MEIE3281	Probability & Statistics for Engineers	3	MATH2107	DR
	MATH3171	Linear Algebra & Multivariate Calculus for Engineers	3	MATH2108 or MATH2109	CR
	PHYS2108	Physics for Engineering II	4	PHYS2107	CR
	MEIE3103	Engineering Tools and Graphics	2		DR
	Total Credits		**15**		

** For non-Arabic speaking or non-Omanis students, please refer to Appendix **A**

Scheme I Semester 4 Fall 2027	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
		University Elective	2		UE
	MEIE3203	Introductory Applied Mechanics	3	PHYS2107	AR
	MEIE3292	Work System Analysis and Design	3	MEIE3281	AR
	MEIE3284	Industrial Information System	3	COMP2002 or ENGR2216 or ENGR2217	AR
	MEIE3279	Theory of Modeling and Optimization	3	(COMP2002 or ENGR2216 or ENGR2217) and MATH3171*	AR
	Total Credits 14				

Scheme I Semester 5 Spring 2028	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	MATH4174	Differential Equations for Engineers	3	(MATH2108 or MATH2109), LANC2161	CR
	MEIE3276	Mechatronics Systems	2	PHYS2108, COMP2002 or ENGR2217	AR
	MEIE4229	Integer and Stochastic Optimization in Practice	3	MEIE 3279	AR
	MEIE4263	Materials and Manufacturing Technology	3	CHEM1071	AR
	MEIE4219	Optimal Experimental Design	3	MEIE3281	AR
	MEIE4288	Data Science and Engineering Analytics	2	ENGR2217 or COMP2002	AR
	Total Credits 16				

Scheme I Semester 6 Fall 2028	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	MEIE4285	Engineering Economics	3	MATH2107	DR
	MEIE4233	Production Planning and Inventory Management	3	MEIE3281	AR
	MEIE4201	Ergonomics and Safety	3	MEIE3292	AR
	MEIE4286	Engineering Management	3		AR
	MEIE5xxx	Major Elective 1	3		AE
	Total Credits 15				

Scheme I Semester 7 Spring 2029	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	MEIE4255	Facilities Design and Planning	3	MEIE4233	AR
	MEIE4244	Quality Engineering and Management	3	MEIE3281	AR
	MEIE4272	Simulation Models	3	MEIE4229	AR
	MEIE5273	Product Design and Manufacturing	3	MEIE4263	AR
	MEIE5xxx	Major Elective 2	3		AE
	Total Credits 15				

Scheme I Summer 2029	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	ENGR4007	Industrial Training	0		CR
	Total Credits 0				

Scheme I **Semester 8** **Fall 2029**	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
		University Elective	2		UE
	MEIE5291	Project I	2	MEIE4255 or MEIE4272	AR
	MEIE5275	Automated Industrial Systems	3	MEIE3276	AR
	MEIE5244	Supply Chain and Logistics Engineering	3	MEIE4233	AR
	MEIE5xxx	Major Elective 3	3		AE
	MEIE5xxx	Major Elective 4	3		AE
	Total Credits		**16**		

Scheme I **Semester 9** **Spring 2030**	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	MEIE5225	Smart Manufacturing	3	MEIE4263	AR
	MEIE5288	Innovation and Entrepreneurship	3	MEIE4285	DR
	MEIE5292	Project II	3	MEIE5291	AR
	MEIE5xxx	Major Elective 5	3		AE
	MEIE5xxx	Major Elective 6	3		AE
	Total Credits		**15**		

Department of Mechanical and Industrial Engineering
Industrial Engineering Study Plan: 2025 Cohort (Scheme II)

Scheme II FP1 Fall 2025	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
		General Foundation Program	0		UR
	Total Credits		**0**		

Scheme II FP2 Spring 2026	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
		General Foundation Program	0		UR
	Total Credits		**0**		

Scheme II Semester 1 Fall 2026	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	HIST1010 or ISLM1010	Oman and Islamic Civilization or Islamic Culture	2		UR
	ENGR1501	Introduction to Engineering	1		CR
	ENGR1600	Workshop I	1		CR
	CHEM1071	General Chemistry for Engineering	3		CR
	LANC2160	English for Engineering I	3		CR
	MATH2107	Calculus I	4		CR
	Total Credits		**14**		

Scheme II Semester 2 Spring 2027	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
		University Elective	2		UE
	ARAB1060**	Arabic	2		UR
	SOCY1005**	Contemporary Omani State and People	2		UR
	LANC2161	English for Engineering II	3	LANC2160	CR
	MATH2109	Calculus II for Science and Engineering	3	MATH2107	CR
	PHYS2107	Physics for Engineering I	4	MATH2107*	CR
	Total Credits		**16**		

** For non-Arabic speaking or non-Omanis students, please refer to Appendix **A**

*Offering summer semester is subjected to the availability of the courses.

Scheme II Summer 2027	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
		University Elective*	2		UE
		College Elective*	3		CE
	Total Credits		**5**		

Scheme II Semester 3 Fall 2026	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	PHYS2108	Physics for Engineering II	4	PHYS2107	CR
	MEIE3281	Probability & Statistics for Engineers	3	MATH2107	DR
	MEIE3103	Engineering Tools and Graphics	2		DR
	MEIE3279	Theory of Modeling and Optimization	3	(COMP2002 or ENGR2216 or ENGR2217) and MATH3171*	AR
	MATH3171	Linear Algebra & Multivariate Calculus for Engineers	3	MATH2108 or MATH2109	CR
	MEIE4288	Data Science and Engineering Analytics	2	ENGR2217 or COMP2002	AR
	Total Credits 17				

Scheme II Semester 4 Spring 2028	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	MATH4174	Differential Equations for Engineers	3	(MATH2108 or MATH2109), LANC2161	CR
	MEIE4263	Materials and Manufacturing Technology	3	CHEM1071	AR
	MEIE3203	Introductory Applied Mechanics	3	PHYS2107	AR
	MEIE4219	Optimal Experimental Design	3	MEIE3281	AR
	MEIE3276	Mechatronics Systems	2	PHYS2108, COMP2002 or ENGR2217	AR
	MEIE4229	Integer and Stochastic Optimization in Practice	3	MEIE3279	AR
	Total Credits 17				

Scheme II Semester 5 Fall 2028	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	MEIE3284	Industrial Information System	3	COMP2002 or ENGR2216 or ENGR2217	AR
	MEIE3292	Work System Analysis & Design	3	MEIE3281	AR
	MEIE4286	Engineering Management	3		AR
	MEIE4233	Production Planning and Inventory Management	3	MEIE3281	AR
	MEIE4285	Engineering Economics	3	MATH2107	DR
	MEIE5xxx	Major Elective 1	3		AE
	Total Credits 18				

Scheme II Semester 6 Spring 2029	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	MEIE4255	Facilities Design and Planning	3	MEIE4233	AR
	MEIE4201	Ergonomics and Safety	3	MEIE3292	AR
	MEIE4244	Quality Engineering and Management	3	MEIE3281	AR
	MEIE5273	Product Design and Manufacturing	3	MEIE4263	AR
	MEIE4272	Simulation Models	3	MEIE4229	AR
	MEIE5xxx	Major Elective 2	3		AE
	Total Credits 18				

Scheme II **Summer 2028**	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	ENGR4007	Industrial Training	0		CR
	Total Credits 0				

Scheme II **Semester 7 Fall 2029**	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
		University Elective	2		UE
	MEIE5275	Automated Industrial Systems	3	MEIE3276	AR
	MEIE5291	Project I	2	MEIE4255 or MEIE4272	AR
	MEIE5244	Supply Chain and Logistics Engineering	3	MEIE4233	AR
	MEIE5xxx	Major Elective 3	3		AE
	MEIE5xxx	Major Elective 4	3		AE
	Total Credits 16				

Scheme II **Semester 8 Spring 2030**	Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	MEIE5225	Smart Manufacturing	3	MEIE4263	AR
	MEIE5288	Innovation and Entrepreneurship	3	MEIE4285	DR
	MEIE5292	Project II	3	MEIE5291	AR
	MEIE5xxx	Major Elective 5	3		AE
	MEIE5xxx	Major Elective 6	3		AE
	Total Credits 15				

Department of Mechanical and Industrial Engineering
Industrial Engineering Study Plan: 2025 Cohort (COOP Scheme)

- The Cooperative Training (COOP) Scheme is **optional.**
- **Scheme I** students can enroll in this scheme starting from semester 8 (Fall 2025) after the foundation program.
- **Scheme II** students can enroll in this scheme starting from semester 7 (Fall 2025) after the foundation program.
- For enrollment terms, conditions, and registration procedure, please consult the Head of Department and the Assistant Dean for Training and Community Services Offices.

COOP Scheme — COOP Semester 1

Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
ENGR4007	Industrial Training	0		CR
MEIE5210	Cooperative Training I	0	ENGR4007*	AE
	Total Credits	**0**		

COOP Scheme — COOP Semester 2

Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
MEIE5211	Cooperative Training II	6	MEIE5210	AE
	Total Credits	**6**		

COOP Scheme — COOP Semester 3

Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
	University Elective	2		UE
MEIE5275	Automated Industrial Systems	3	MEIE3276	AR
MEIE5291	Project I	2	MEIE4255 or MEIE4272	AR
MEIE5244	Supply Chain and Logistics Engineering	3	MEIE4233	AR
MEIE5xxx	Major Elective 3	3		AE
	Total Credits	**13**		

COOP Scheme — COOP Semester 4

Course Code	Course Title	Cr.	Pre-req./Co-requisite*	Cat.
MEIE5225	Smart Manufacturing	3	MEIE4263	AR
MEIE5288	Innovation and Entrepreneurship	3	MEIE4285	DR
MEIE5292	Project II	3	MEIE5291	AR
MEIE5xxx	Major Elective 4	3		AE
	Total Credits	**12**		

Department of Mechanical and Industrial Engineering
Degree Plan: Cohort 2025
Appendix A: UNIVERSITY REQUIREMNETS for Non-Arabic or Non-Oman Students

No.	Cohorts 2018 and before	Credits	Cohorts 2018 and after	Credits	Notes
1	ARAB1001	3	ARAB1060	2	
2	SOCY1001	1	SOCY1005	2	For Omanis Only
3	--	--	SOCY1007	2	For Non-Omanis
4	ARAB1019			3	For non-Arabic Speaking Students. Offered only in Fall semesters

Notes:

- For the courses (SOCY1005, SOCY1007, HIST1010), the course materials and exams are in English for non-Arabic speaking students.
- Currently, there is no Arabic course with 2 credits for the non-Arabic speaking students of cohorts 2018 and after. Those students have to register the ARAB1019 as shown in the table above.

Department of Mechanical and Industrial Engineering
Degree Plan: Cohort 2025
LIST A: UNIVERSITY ELECTIVES (UE)

Engineering students must register a humanity or social course (non-scientific & non-linguistic course) from any college as a University Elective. The list of University Elective Courses allowed for Engineering students can be found via the following link:

Department of Mechanical and Industrial Engineering
Degree Plan: Cohort 2025
LIST B: COLLEGE REQUIREMENTS (CR)

Code	Title	Credits	Pre-requisite / Co-requisite *
LANC2160	English for Engineering I	**3**	
LANC2161	English for Engineering II	**3**	LANC2160
ENGR1501	Introduction to Engineering	**1**	
ENGR1600	Workshop I	**1**	
MATH2107	Calculus I	**4**	
MATH2109	Calculus II for Science and Engineering	**3**	MATH 2107
MATH3171	Linear Algebra & Multivariate Calculus	**3**	MATH2108 or MATH2109
MATH4174	Differential Equations for Engineers	**3**	(MATH2108 or MATH2109), LANC2161

PHYS2107	Physics for Engineering I	**4**	MATH2107*
PHYS2108	Physics of Engineering II	**4**	PHYS 2107
CHEM1071	General Chemistry for Engineering	**3**	
ENGR4007	Industrial Training	**0**	
Total		**32**	

Department of Mechanical and Industrial Engineering
Degree Plan: Cohort 2025
LIST C: COLLEGE ELECTIVES (CE)

One course - 3 credit hours:

The elective course will be offered from the following courses subject to availability.

Code	Title	Credits	Pre-requisite / Co-requisite*
COMP2002	Introduction to Computer Programming for Engineers	**3**	
ENGR2217	Programming for Engineers	**3**	

Department of Mechanical and Industrial Engineering
Degree Plan: Cohort 2025
LIST D: DEPARTMENT REQUIREMENTS (DR)

Code	Title	Credits	Pre-requisite / Co-requisite*
MEIE3103	Engineering Tools and Graphics	2	
MEIE3281	Probability & Statistics for Engineers	3	MATH2107
MEIE4285	Engineering Economics	3	MATH2107
MEIE5288	Innovation and Entrepreneurship	3	MEIE4285
Total		**11**	

Department of Mechanical and Industrial Engineering
Degree Plan: Cohort 2025
LIST E: MAJOR REQUIREMENTS (AR)

Code	Title	Credits	Pre-requisite / Co-requisite*
MEIE3203	Introductory Applied Mechanics	3	PHYS2107
MEIE3276	Mechatronics Systems	2	PHYS2108, COMP2002 or ENGR2217
MEIE3279	Theory of Modeling and Optimization	3	(COMP2002 or ENGR2216 or ENGR2217) and MATH3171*
MEIE3284	Industrial Information System	3	COMP2002 or ENGR2216 or ENGR2217
MEIE3292	Work System Analysis and Design	3	MEIE3281
MEIE4201	Ergonomics and Safety	3	MEIE3292
MEIE4219	Optimal Experimental Design	3	MEIE3281
MEIE4229	Integer and Stochastic Optimization in Practice	3	MEIE 3279
MEIE4233	Production Planning and Inventory Management	3	MEIE3281
MEIE4244	Quality Engineering and Management	3	MEIE3281
MEIE4288	Data Science and Engineering Analytics	2	ENGR2217 or COMP2002
MEIE4255	Facilities Design and Planning	3	MEIE4233
MEIE4263	Materials and Manufacturing Technology	3	CHEM1071
MEIE4272	Simulation Models	3	MEIE4229
MEIE4286	Engineering Management	3	
MEIE5225	Smart Manufacturing	3	MEIE4263
MEIE5244	Supply Chain and Logistics Engineering	3	MEIE4233
MEIE5273	Product Design and Manufacturing	3	MEIE4263
MEIE5275	Automated Industrial Systems	3	MEIE3276
MEIE5291	Project I	2	MEIE4255 or MEIE4272
MEIE5292	Project II	3	MEIE5291
Total		**60**	

Department of Mechanical and Industrial Engineering
Degree Plan: Cohort 2025
LIST F: MAJOR ELECTIVES (AE)

18 credit hours[§]:

- **Scheme I or II: six courses**
- **COOP Scheme: Cooperative Training courses (MEIE5210 and MEIE5211) and four elective courses**

Code	Title	Credits	Pre-requisite / Co-requisite *
MEIE5201	Occupational Safety engineering	3	MEIE4201
MEIE5210	Cooperative Training I		ENGR4007*
MEIE5211	Cooperative Training II		MEIE5210
MEIE5222	Introduction to Healthcare Management	3	MEIE4233
MEIE5224	Six Sigma Methodology	3	MEIE4219
MEIE5251	Agent-Based Modeling	3	MEIE3281
MEIE5263	Design for Manufacturing	3	MEIE3103, MEIE4263
MEIE5287	Project Management	3	MEIE3279
MEIE5271	Decision Analysis Models and Applications	3	MEIE4229, MEIE4285

MEIE5285	Technology Transfer	3	
MEIE5290	Data Mining	3	
MEIE5233	Maintenance and Reliability Engineering	3	MEIE3281
MEIE5264	CAD/CAM	3	MEIE3103, (MEIE3102 or MEIE3203)
MEIE5265	Computer Integrated Manufacturing	3	MEIE4263
MEIE5280	Sustainable Manufacturing Systems	3	
MEIE5297	Special Topics	3	
MEIE4141*	Fluid Mechanics	3	PHYS2108
MEIE4183*	Numerical Analysis	3	MATH3171, COMP2002
MEIE5168	Introduction to Polymers	3	MEIE4263
MEIE5183	Emerging Technologies in ME	3	MEIE4288 or MEIE4183

* - One 4000-level or 5000-level course can be taken from another engineering program subjected to the approval of the academic advisor and the HoD.

Note:

- Students are advised to regularly check the most updated degree plan on the department webpage. This degree plan is last updated on April 9th, 2025.

- Course description and exact prerequisite(s) can be checked on:
  http://sisinfo.squ.edu.om/cgi-bin/crs-en/allsub.cgi

Degree and Study Plan

College: Engineering
Department: Electrical and Computer Engineering
Cohort: 2025
Degree: Bachelor of Engineering (B. Eng.)
Major: Electrical and Computer Engineering (ECE)
Specializations:
1. Telecommunications and Wireless Systems (TWS)
2. Embedded Computing and Networks (ECN)
3. Power Systems and Energy (PSE)
4. Electronic Instrumentation and Control (EIC)

Summary of Credits

Category		Courses	Total Credit Hours
University Requirements	(UR)	-General Foundation Program -Arabic -Contemporary Omani State and People -Oman & Islamic Civilization or Islamic Culture	0 2 2 2
University Elective	(UE)	List (A)	6
College Requirements	(CR)	List (B)	32
College Electives	(CE)	List (C)	3
Departmental Requirements	(DR)	List (D)	50
Departmental Electives	(DE)	List (E)[1]	0
Major Requirements	(AR)	List (F)[1]	0
Major Electives	(AE)	List (G)[1]	0
Specialization Requirements	(SR)	List (H)	30
Specialization Electives	(SE)	List (I)	9 (3-courses) **or** 3 (1-course) + 6 (of Co-Op)
Minor Requirement	(IR)	List (J)[1]	0
Minor Elective	(IE)	List (K)[1]	0
Total Credits			**136**

Important Information:

Co-Operative Training (Co-Op) pathway (introduced in April 2020) is optional. It is designed for students who are following a one-year Co-Op program after finishing semester 8 (College regulations apply).

For reference please contact: Dr. Ahmed Al Maashri (HoD) Ext: 1330/1390/1363

HoD: Date: 6th March 2025

For Dean: Date 26/3/2025

[1] *Not attached as no courses for ECE department*

Department of Electrical and Computer Engineering
Degree and Study Plan: 2025 Cohort

	Course Code	Course Title	Cr.	Pre-Requisites	Cat.
Sem-1 Fall 2025	-	General Foundation Program	-	-	UR
	Total Credits		-		
Semester-2 Spring 2026	HIST1010 or ISLM1010	Oman & Islamic Civilization **or** Islamic Culture	2		UR
	CHEM1071	General Chemistry for Engineering	3		CR
	ENGR1501	Introduction to Engineering	1		CR
	ENGR1600	Workshop I	1		CR
	LANC2160	English for Engineering I	3		CR
	MATH2107	Calculus I	4		CR
	Total Credits		**14**		
Semester-3 Fall 2026	ARAB1060**	Arabic	2		UR
		University Elective	2		UE
	SOCY1005**	Contemporary Omani State and People	2		UR
	LANC2161	English for Engineering II	3	LANC2160 OR LANC2162 OR LANC2035 OR LANC2140 OR LANC2058 OR LANC2033)	CR
	MATH2109	Calculus II for science and Engineering	3	MATH2107	CR
	PHYS2107	Physics for Engineering I	4	MATH2107(co-requisite)	CR
	Total Credits		**16**		
Semester-4 Spring 2027	ECCE2017	Electrical Circuit Analysis	4	MATH2107	DR
	ECCE3206	Digital Logic Design	3		DR
	MATH3171	Linear Algebra & Multivariate Calculus for Engineers	3	MATH2108 OR MATH2109	CR
	PHYS2108	Physics for Engineering II	4	PHYS2107 OR PHYS2101	CR
	Total Credits		**14**		
Semester-5 Fall 2027	ENGR2217[2]	Introduction to Computer Programming for Engineers	3		CE
	ECCE3153	Electronic Devices and Circuits	3	ECCE2017	DR
	ECCE4023	Engineering Electromagnetics	3	PHYS2108 AND MATH 3171	DR
	MATH4151	Disc. Math and Complex Analysis	3	MATH3171	DR
	MATH4174	Differential Equations for Engineers	3	(LANC2161 AND MATH2108) OR (LANC2161 AND MATH2109)	CR
	Total Credits		**15**		
Semester-6 Spring 2028	ECCE3142	Signals & Systems	3	ECCE2017	DR
	ECCE3352	Electrical Technology	3	ECCE2017	DR
	MATH4176	Numerical Analysis for Engineers	3	MATH3171 AND MATH4174 AND (COMP2002 OR ENGR2217)	DR
	ECCE4227	Embedded Systems	3	(COMP2002 OR ENGR2217) AND ECCE3206 AND (ECCE3153 OR MCTE3110 OR MCTE3310)	DR
	STAT2103	Probability for Engineers	3	MATH2107	DR
	Total Credits		**15**		

[2] *ENGR 2217-Programming for Engineers*

** *Please refer to the end of the document*

Degree and Study Plan: 2025 Cohort
Telecommunications and Wireless Systems Specialization (TWS)

	Course Code	Course Title	Cr.	Pre-Requisites	Cat.
Semester-7 Fall 2028	ECCE3038	Elect. Measurements & Instr.	2	ECCE3153	DR
	ECCE4122	Principles of Analog & Digital Communication	3	ECCE3142	DR
	ECCE4242	Introduction to Computer Networks	3	ECCE4227 [Incompatible with ECCE5411]	SR
	ECCE4153	Modern Digital Electronics	3	ECCE3153	SR
	ECCE4142	Digital Signal Processing	3	ECCE3142	SR
	ECCE4010	Engineering Design and Professional Ethics	2	ECCE3142 AND ECCE3352 AND ECCE3153 AND ECCE3206	DR
	Total Credits		**16**		
Jan 29	ECCE3006	Skills Training	-	ECCE3153 OR MCTE3110	DR
	Total Credits		**0**		
Semester-8 Spring 2029	ECCE4082	Professional Skills	1	LANC2161	DR
	ECCE4127	Advanced Digital Communication	3	ECCE4122	SR
	ECCE4416	Linear Control Systems	3	ECCE3142	DR
	ECCE5113	Antenna Theory and Radio wave Propagation	3	ECCE4023	SR
	ECCE5010	Engineering Economics and Project Management	3	STAT2103 OR MEIE3281	DR
		University Elective	2		UE
	Total Credits		**15**		
Summer **2029**	ENGR4007	Industrial Training	-	ECCE3006	CR
	Total Credits		**0**		
Semester-9 Fall 2029	ECCE5009	Project (Part I)	2	ECCE4010 AND PR[3]	DR
	ECCE5123	Optical Communications	3	ECCE4122	SR
	ECCE5124	Wireless Communications	3	ECCE4122	SR
	ECCE5xxx[4]	Specialization Elective	3	Offered course-specific	SE
	ECCE5114	Telecom Systems Security	3	ECCE4122	SR
	ECCE5xxx[4]	Specialization Elective	3	Offered course-specific	SE
	Total Credits		**17**		
Semester-10 Spring 2030	ECCE5099	Project (Part II)	3	ECCE5009	DR
	ECCE5143	Advanced Digital Signal Proc.	3	ECCE4142	SR
	ECCE5130	Modern Communication Systems Design	3	ECCE4153	SR
	ECCE5xxx[4]	Specialization Elective	3	Offered course-specific	SE
		University Elective	2		UE
	Total Credits		**14**		

[3] Internal regulation [enforced by the ECE Department]. ECCE5009 will be available only in each Fall semester.
[4] A course authorized by the department/advisor

Degree and Study Plan: 2025 Cohort
Embedded Computing and Networks Specialization (ECN)

	Course Code	Course Title	Cr.	Pre-Requisites	Cat.
Semester-7 Fall 2028	ECCE3038	Elect. Measurements & Instr.	2	ECCE3153	DR
	ECCE4122	Principles of Analog & Digital Communication	3	ECCE3142	DR
	ECCE4216	Machine Learning for Engineers	3	(ENGR2217 OR COMP2002) AND (ECCE3352 OR MCTE3210)	SR
	ECCE4416	Linear Control Systems	3	ECCE3142	DR
		University Elective	2		UE
		University Elective	2		UE
	Total Credits		**15**		
Jan 29	ECCE3006	Skills Training	-	ECCE3153 OR MCTE3110	DR
	Total Credits		**0**		
Semester-8 Spring 2029	ECCE4010	Engineering Design and Professional Ethics	2	ECCE3142 AND ECCE3352 AND ECCE3153 AND ECCE3206	DR
	ECCE4082	Professional Skills	1	LANC2161	DR
	ECCE4242	Introduction to Computer Networks	3	ECCE4227 [Incompatible with ECCE5411]	SR
	ECCE4257	Applied Algorithms for ECE	3	COMP2002 OR ENGR2217	SR
	ECCE4254	Operating Systems	3	COMP2002 OR ENGR2217	SR
	ECCE5217	Reconfigurable Computing	3	ECCE4227	SR
	Total Credits		**15**		
Summer **2029**	ENGR4007	Industrial Training	-	ECCE3006	CR
	Total Credits		**0**		
Semester-9 Fall 2029	ECCE5232	Computer Architecture and Organization	3	ECCE4227	SR
	ECCE5009	Project (Part I)	2	ECCE4010 AND PR[5]	DR
	ECCE5218	Routing and switching	3	ECCE4242	SR
	ECCE5293	Embedded Vision Systems	3	ECCE4227	SR
	ECCE5xxx[6]	Specialization Elective	3	Offered course-specific	SE
	ECCE5010	Engineering Economics and Project Management	3	STAT2103 OR MEIE3281	DR
	Total Credits		**17**		
Semester-10 Spring 2030	ECCE5099	Project (Part II)	3	ECCE5009	DR
	ECCE5229	Embedded Real Time Systems	3	ECCE4227	SR
	ECCE5219	Intelligent Applications in Robotics and Drones	3	ECCE4227	SR
	ECCE5xxx[6]	Specialization Elective	3	Offered course specific	SE
	ECCE5xxx[6]	Specialization Elective	3	Offered course-specific	SE
	Total Credits		**15**		

[5] Internal regulation [enforced by the ECE Department]. ECCE5009 will be available only in each Fall semester.

[6] A course authorized by the department/advisor

Degree and Study Plan: 2025 Cohort

Power Systems and Energy Specialization (PSE)

	Course Code	Course Title	Cr.	Pre-Requisites	Cat.
Semester-7 Fall 2028	ECCE3038	Elect. Measurements & Instr.	2	ECCE3153	DR
	ECCE4122	Principles of Analog & Digital Communication	3	ECCE3142	DR
	ECCE4312	Power System Analysis I	3	ECCE3352	SR
	ECCE4358	Electrical Machines	3	ECCE3352	SR
	ECCE4010	Engineering Design and Professional Ethics	2	ECCE3142 AND ECCE3352 AND ECCE3153 AND ECCE3206	DR
		University Elective	2		UE
	Total Credits		**15**		
Jan 29	ECCE3006	Skills Training	-	ECCE3153 OR MCTE3110	DR
	Total Credits		**0**		
Semester-8 Spring 2029	ECCE4082	Professional Skills	1	LANC2161	DR
	ECCE4361	Renewable Electricity generation	3	ECCE3352	SR
	ECCE4316	Power System Analysis II	3	ECCE4312	SR
	ECCE4416	Linear Control Systems	3	ECCE3142	DR
	ECCE5010	Engineering Economics and Project Management	3	STAT2103 OR MEIE3281	DR
	ECCE4467	Power Electronics & Drives	3	(ECCE3153 OR MCTE3110 OR MCTE3310) AND (ECCE3352 OR MCTE3210)	SR
	Total Credits		**16**		
Summer 2029	ENGR4007	Industrial Training	-	ECCE3006	CR
	Total Credits		**0**		
Semester-9 Fall 2029	ECCE5009	Project (Part I)	2	ECCE4010 AND PR[7]	DR
	ECCE5302	Power Systems Protection	3	ECCE4312	SR
	ECCE5332	High Voltage Engineering	3	ECCE4312	SR
	ECCE5303	Power Distribution System Eng.	3	ECCE4312	SR
	ECCE5xxx[8]	Specialization Elective	3	Offered course specific	SE
		University Elective	2		UE
	Total Credits		**16**		
Semester-10 Spring 2030	ECCE5099	Project (Part II)	3	ECCE5009	DR
	ECCE5322	Electrical Power Systems Quality	3	ECCE4312	SR
	ECCE5315	Smart Grid	3	ECCE4312	SR
	ECCE5xxx[8]	Specialization Elective	3	Offered course specific	SE
	ECCE5xxx[8]	Specialization Elective	3	Offered course specific	SE
	Total Credits		**15**		

[7] Internal regulation [enforced by the ECE Department]. ECCE5009 will be available only in each Fall semester.

[8] A course authorized by the department/advisor

Degree and Study Plan: 2025 Cohort

Electronic Instrumentation and Control Specialization (EIC)

	Course Code	Course Title	Cr.	Pre-Requisites	Cat.
Semester-7 Fall 2028	ECCE3038	Elect. Measurements & Instr.	2	ECCE3153	DR
	ECCE4122	Principles of Analog & Digital Communication	3	ECCE3142	DR
	ECCE4153	Modern Digital Electronics	3	ECCE3153	SR
	ECCE4416	Linear Control Systems	3	ECCE3142	DR
	ECCE4467	Power Electronics & Drives	3	(ECCE3153 OR MCTE3110 OR MCTE3310) AND (ECCE3352 OR MCTE3210)	SR
		University Elective	2		UE
	Total Credits		**16**		
Jan 29	ECCE3006	Skills Training	-	ECCE3153 OR MCTE3110	DR
	Total Credits		**0**		
Semester-8 Spring 2029	ECCE4082	Professional Skills	1	LANC2161	DR
	ECCE4455	Sensors and Actuators	3	ECCE3038	SR
	ECCE4436	Industrial Control Systems Design	3	ECCE4416	SR
	ECCE4010	Engineering Design and Professional Ethics	2	ECCE3142 AND ECCE3352 AND ECCE3153 AND ECCE3206	DR
	ECCE4142	Digital Signal Processing	3	ECCE3142	SR
	ECCE4216	Machine Learning for Engineers	3	(ENGR2217 OR COMP2002) AND (ECCE3352 OR MCTE3210)	SR
	Total Credits		**15**		
Summer **2029**	ENGR4007	Industrial Training	-	ECCE3006	CR
	Total Credits		**0**		
Semester-9 Fall 2029	ECCE5009	Project (Part I)	2	ECCE4010 AND PR[9]	DR
	ECCE5452	Computer-Aided Instrumentation	3	(ECCE4456 OR ECCE4455) AND ECCE4227	SR
	ECCE5411	Introduction to Industrial Network Practices	3	ECCE4436 [Incompatible with ECCE4242 and ECCE5231]	SR
	ECCE5xxx[10]	Specialization Elective	3	Offered course-specific	SE
	ECCE5xxx[10]	Specialization Elective	3	Offered course-specific	SE
	ECCE5010	Engineering Economics and Project Management	3	STAT2103 OR MEIE3281	DR
	Total Credits		**17**		
Semester-10 Spring 2030	ECCE5099	Project (Part II)	3	ECCE5009	DR
		University Elective	2		UE
	ECCE5410	Intelligent Control Systems	3	ECCE4416	SR
	ECCE5445	Control System Design	3	ECCE4416 OR MCTE4250	SR
	ECCE5xxx[10]	Specialization Elective	3	Offered course-specific	SE
	Total Credits		**14**		

[9] Internal regulation [enforced by the ECE Department]. ECCE5009 will be available only in each Fall semester.

[10] A course authorized by the department/advisor

The Co-Operative Training (Co-Op) pathway is **optional**. Students can enroll in this after finishing semester-8. Late students would have to adjust as per course(s) offering. For enrollment terms, conditions, please consult the Head of Department and the Assistant Dean for Training and Community Services Offices

Co-Operative Pathway					
Co-Op Co-Op Sem-1 Fall-2029	**Course Code**	**Course Title**	**Cr.**	**Pre-Requisites/Co-Requisite***	**Cat.**
	ENGR4007	Industrial Training	-	ECCE3006	CR
	ECCE5501	Co-Operative Training, I	0	ENGR4007 *(co-requisite)	AE
	Total Credits		**0**		
Co-Op Co-Op Sem-2 SP-2030	**Course Code**	**Course Title**	**Cr.**	**Pre-Requisites/Co-Requisite***	**Cat.**
	ECCE5502	Co-Operative Training II	6	ECCE5501	AE
	Total Credits		**6**		
Telecommunications and Wireless Systems Specialization (TWS)					
Semester-9 Fall 2030	ECCE5009	Project (Part I)	2	ECCE4010 AND PR[11]	DR
	ECCE5123	Optical Communications	3	ECCE4122	SR
	ECCE5124	Wireless Communications	3	ECCE4122	SR
	ECCE5xxx[12]	Specialization Elective	3	Offered course-specific	SE
	ECCE5114	Telecom Systems Security	3	ECCE4122	SR
	ECCE5xxx[12]	Specialization Elective	3	Offered course-specific	SE
	Total Credits		**17**		
Semester-10 Spring 2031	ECCE5099	Project (Part II)	3	ECCE5009	DR
	ECCE5143	Advanced Digital Signal Processing	3	ECCE4142	SR
	ECCE5130	Modern Communication Systems Design	3	ECCE4153	SR
	ECCE5xxx[12]	Specialization Elective	3	Offered course-specific	SE
		University Elective	2		UE
	Total Credits		**14**		
Embedded Computing and Networks Specialization (ECN)					
Semester-9 Fall 2030	ECCE5232	Computer Architecture and Organization	3	ECCE4227	SR
	ECCE5009	Project (Part I)	2	ECCE4010 AND PR[11]	DR
	ECCE5218	Routing and switching	3	ECCE4242	SR
	ECCE5293	Embedded Vision Systems	3	ECCE4227	
	ECCE5xxx[12]	Specialization Elective	3	Offered course-specific	SE
	ECCE5010	Engineering Economics and Project Management	3	STAT2103 OR MEIE3281	DR
	Total Credits		**17**		
Semester-10 Spring 2031	ECCE5099	Project (Part II)	3	ECCE5009	DR
	ECCE5229	Embedded Real Time Systems	3	ECCE4227	SR
	ECCE5219	Intelligent App. in Robotics and Drones	3	ECCE4227	SR
	ECCE5xxx[12]	Specialization Elective	3	Offered course-specific	SE
	ECCE5xxx[12]	Specialization Elective	3	Offered course-specific	SE
	Total Credits		**15**		

[11] Internal regulation [enforced by the ECE Department]. ECCE5009 will be available only in each Fall semester.

[12] A course authorized by the department/advisor

Power Systems and Energy Specialization (PSE)

Semester-9 Fall 2030	ECCE5009	Project (Part I)	2	ECCE4010 AND PR[11]	DR
	ECCE5302	Power Systems Protection	3	ECCE4312	SR
	ECCE5332	High Voltage Engineering	3	ECCE4312	SR
	ECCE5303	Power Distribution System Eng.	3	ECCE4312	SR
	ECCE5xxx[12]	Specialization Elective	3	Offered course specific	SE
		University Elective	2		UE
	Total Credits		**16**		
Semester-10 Spring 2031	ECCE5099	Project (Part II)	3	ECCE5009	DR
	ECCE5322	Electrical Power System Quality	3	ECCE4312	SR
	ECCE5315	Smart Grid	3	ECCE4312	SR
	ECCE5xxx[12]	Specialization Elective	3	Offered course specific	SE
	ECCE5xxx[12]	Specialization Elective	3	Offered course specific	SE
	Total Credits		**15**		

Electronic Instrumentation and Control Specialization (EIC)

Semester-9 Fall 2030	ECCE5009	Project (Part I)	2	ECCE4010 AND PR[11]	DR
	ECCE5452	Computer-Aided Instrumentation	3	(ECCE4456 OR ECCE4455) AND ECCE4227	SR
	ECCE5411	Introduction to Industrial Network Practices	3	ECCE4436 [Incompatible with ECCE4242 and ECCE5231]	SR
	ECCE5xxx[12]	Specialization Elective	3	Offered course specific	SE
	ECCE5xxx[12]	Specialization Elective	3	Offered course specific	SE
	ECCE5010	Engineering Economics and Project Management	3	STAT2103 OR MEIE3281	DR
	Total Credits		**17**		
Semester-10 Spring 2031	ECCE5099	Project (Part II)	3	ECCE5009	DR
		University Elective	2		UE
	ECCE5410	Intelligent Control Systems	3	ECCE4416	SR
	ECCE5445	Control System Design	3	ECCE4416 OR MCTE4250	SR
	ECCE5xxx[12]	Specialization Elective	3	Offered course specific	SE
	Total Credits		**14**		

UNIVERSITY REQUIREMNETS for Non-Arabic or Non-Omani Students

No.	Cohorts 2017 and before	Credits	Cohorts 2018 and after	Credits	Notes
1	ARAB1001	3	ARAB1060	2	
2	SOCY1001	1	SOCY1005	2	For Omanis Only
3	--	--	SOCY1007	2	For Non-Omanis
4	ARAB1019			3	For non-Arabic Speaking Students. Offered only in Fall semesters

Notes:

- For the courses (SOCY1005, SOCY1007, HIST1010), the course materials and exams are in English for non-Arabic speaking students.
- Currently, there is no Arabic course with 2 credits for the non-Arabic speaking students of cohorts 2018 and after. Those students have to register the ARAB1019 as shown in the table above.

List A: UNIVERSITY ELECTIVES (UE) – 6 Credits

- List of University Elective courses that are **ALLOWED** to register.
  Please scan the QR code, in front.

List B: COLLEGE REQUIREMENTS (CR) – 32 Credits

No.	Course Code	Course Title	Credits	Pre-Requisites
1	LANC2160	English for Engineering I	3	
2	LANC2161	English for Engineering II	3	LANC2160 OR LANC2162 OR LANC2035 OR LANC2140 OR LANC2058 OR LANC2033)
3	ENGR1501	Introduction to Engineering	1	
4	ENGR1600	Workshop I	1	
5	MATH2107	Calculus I	4	
6	MATH2109	Calculus II for science and Engineering	3	MATH 2107
7	MATH3171	Linear Algebra & Multivariate Calculus	3	MATH2108 OR MATH2109
8	MATH4174	Differential Equations for Engineers	3	(LANC2161 AND MATH2108) OR (LANC2161 AND MATH2109)
9	PHYS2107	Physics for Engineering I	4	MATH2107(co-requisite)
10	PHYS2108	Physics of Engineering II	4	PHYS2107 OR PHYS2101
11	CHEM1071	General Chemistry for Engineering	3	
12	ENGR4007	Industrial Training	0	ECCE3006

List C: COLLEGE ELECTIVES (CE) – 3 Credits

No.	Course Code	Course Title	Credits	
1	COMP2002	Intr. to Computer Prog. for Engineers	3	
2	ENGR2217	Programming for Engineers	3	

List D: DEPARTMENTAL REQUIREMENT (DR) – 50 Credits

No.	Course Code	Course Title	College	Pre-Requisite
1.	ECCE2017	Electrical Circuit Analysis	4	MATH2107
2.	ECCE3038	Electrical Measurements & Instrumentation	2	ECCE3153
3.	ECCE3142	Signals & Systems	3	ECCE2017
4.	ECCE3153	Electronic Devices and Circuits	3	ECCE2017
5.	ECCE3206	Digital Logic Design	3	
6.	ECCE3352	Electrical Technology	3	ECCE2017
7.	ECCE4010	Eng. Design and Professional Ethics	2	ECCE3142 AND ECCE3352 AND ECCE3153 AND ECCE3206
8.	ECCE4082	Professional Skills	1	LANC2161
9.	ECCE4023	Engineering Electromagnetics	3	PHYS2108 AND MATH 3171
10.	ECCE4122	Principles of Analog & Digital Comm	3	ECCE3142
11.	ECCE4227	Embedded Systems	3	(COMP2002 OR ENGR2217) AND ECCE3206 AND (ECCE3153 OR MCTE3110 OR MCTE3310)
12.	ECCE4416	Linear Control Systems	3	ECCE3142
13.	ECCE5010	Engineering Economics and Project Management	3	STAT2103 OR MEIE3281
14.	ECCE5009	Project (Part I)	2	ECCE4010 AND PR[1]
15.	ECCE5099	Project (Part II)	3	ECCE5009
16.	MATH4151	Discrete Math & Complex Analysis	3	MATH3171
17.	MATH4176	Numerical Analysis for Engineers	3	MATH3171 AND MATH4174 AND (COMP2002 OR ENGR2217)
18.	STAT2103	Probability for Engineers	3	MATH2107
19.	ECCE3006	Skills Training	0	ECCE3153 OR MCTE3110

List H: SPECIALIZATION REQUIREMENT (SR) – 30 Credits

Telecommunications and Wireless Systems Specialization

No.	Course Code	Course Title	College	Pre-Requisite
1.	ECCE4242	Introduction to Computer Networks	3	ECCE4227 [Incompatible with ECCE5411]
2.	ECCE4153	Modern Digital Electronics	3	ECCE3153
3.	ECCE4142	Digital Signal Processing	3	ECCE3142
4.	ECCE4127	Advanced Digital Communication	3	ECCE4122
5.	ECCE5113	Antenna Theory and Radio wave Propagation	3	ECCE4023
6.	ECCE5123	Optical Communications	3	ECCE4122
7.	ECCE5124	Wireless Communications	3	ECCE4122
8.	ECCE5114	Telecom Systems Security	3	ECCE4122
9.	ECCE5143	Advanced Digital Signal Processing	3	ECCE4142
10.	ECCE5130	Modern Communication Systems Design	3	ECCE4153

Embedded Computing and Networks Specialization

No.	Course Code	Course Title	College	Pre-Requisite
1.	ECCE4242	Introduction to Computer Networks	3	ECCE4227 [Incompatible with ECCE5411]
2.	ECCE4216	Machine Learning for Engineers	3	(ENGR2217 OR COMP2002) AND (ECCE3352 OR MCTE3210)
3.	ECCE4257	Applied Algorithms for ECE	3	(COMP2002 OR ENGR2217)
4.	ECCE4254	Operating Systems	3	(COMP2002 OR ENGR2217)
5.	ECCE5217	Reconfigurable Computing	3	ECCE4227
6.	ECCE5232	Computer Architecture and Organization	3	ECCE4227
7.	ECCE5218	Routing and switching	3	ECCE4242
8.	*ECCE5293*	Embedded Vision Systems	3	ECCE4227
9.	ECCE5229	Embedded Real Time Systems	3	ECCE4227
10.	ECCE5219	Intelligent App. in Robotics and Drones	3	ECCE4227

Power Systems and Energy Specialization

No.	Course Code	Course Title	College	Pre-Requisite
1.	ECCE4312	Power System Analysis I	3	ECCE3352
2.	ECCE4358	Electrical Machines	3	ECCE3352
3.	ECCE4467	Power Electronics & Drives	3	(ECCE3153 OR MCTE3110 OR MCTE3310) AND (ECCE3352 OR MCTE3210)
4.	ECCE4361	Renewable Electricity generation	3	ECCE3352
5.	ECCE4316	Power System Analysis II	3	ECCE4312
6.	ECCE5302	Power Systems Protection	3	ECCE4312
7.	ECCE5332	High Voltage Engineering	3	ECCE4312
8.	ECCE5303	Power Distribution System Eng.	3	ECCE4312
9.	ECCE5322	Electrical Power Systems Quality	3	ECCE4312
10.	ECCE5315	Smart Grid	3	ECCE4312

Electronic Instrumentation and Control Specialization

No.	Course Code	Course Title	College	Pre-Requisite
1.	ECCE4142	Digital Signal Processing	3	ECCE3142
2.	ECCE4153	Modern Digital Electronics	3	ECCE3153
3.	ECCE4467	Power Electronics & Drives	3	(ECCE3153 OR MCTE3110 OR MCTE3310) AND (ECCE3352 OR MCTE3210)
4.	ECCE4455	Sensors and Actuators	3	ECCE3038
5.	ECCE4436	Industrial Control Systems Design	3	ECCE4416
6.	ECCE5452	Computer-Aided Instrumentation	3	ECCE4456 OR 4455) AND ECCE4227
7.	ECCE4216	Machine Learning for Engineers	3	(ENGR2217 OR COMP2002) and (ECCE3352 OR MCTE3210)
8.	ECCE5445	Control System Design	3	ECCE4416 OR MCTE4250
9.	ECCE5411	Introduction to Industrial Network Practices	3	ECCE4436 [Incompatible with ECCE4242 and ECCE5231]
10.	ECCE5410	Intelligent Control Systems	3	ECCE4416

List I: SPECIALIZATION ELECTIVES (SE) – Minimum 9 Credits

No.	Course Code	Course Title	Pre-Requisite
1.	ECCE4005	Numerical Methods for Engineers	MATH3171 AND (COMP2002 OR ENGR2217 OR COMP2216)
2.	ECCE4023	Engineering Electromagnetics	PHYS2108 AND MATH 3171
3.	ECCE4127	Advanced Digital Communication	ECCE4122
4.	ECCE4142	Digital Signal Processing	ECCE3142
5.	ECCE4153	Modern Digital Electronics	ECCE3153
6.	ECCE4203	Advanced Logic Design	ECCE3206
7.	ECCE4213	Digital Electronics – Reliability and Testing	ECCE3153
8.	ECCE4216	Machine Learning for Engineers	(ENGR2217 OR COMP2002) AND (ECCE3352 OR MCTE3210)
9.	*ECCE4221*	Systems of Smart Cities	ENGR2217 OR COMP2002
10.	*ECCE4237*	Block chain and DLT	ENGR2217 OR COMP2002
11.	ECCE4242	Introduction to Computer Networks	ECCE4227 [Incompatible with ECCE5411]
12.	ECCE4254	Operating Systems	COMP2002 OR ENGR2217
13.	ECCE4257	Applied Algorithms for ECE	(COMP2002 OR ENGR2217)
14.	ECCE4282	Coding and Data Encryption	ECCE3122 OR ECCE4122
15.	ECCE4312	Power System Analysis I	ECCE3352
16.	ECCE4316	Power System Analysis II	ECCE4312
17.	ECCE4358	Electrical Machines	ECCE3352
18.	ECCE4361	Renewable Electricity Generation	ECCE3352
19.	ECCE4422	Digital Control Systems	ECCE4416
20.	ECCE4436	Industrial Control Systems Design	ECCE4416
21.	ECCE4455	Sensors and Actuators	ECCE3038
22.	ECCE4467	Power Electronics & Drives	(ECCE3153 OR MCTE3110 OR MCTE3310) AND (ECCE3352 OR MCTE3210)
23.	ECCE5001	Entrepreneurial Opportunities in Electrical and Computer Engineering	
24.	ECCE5002	Selected Topics in ECE	
25.	ECCE5006	Biomedical Signal Processing	ECCE3142
26.	ECCE5007	Biomedical Instrumentation Engineering	ECCE3142
27.	ECCE5010	Engineering Economics and Project Management	STAT2103 OR MEIE3281
28.	ECCE5113	Antenna Theory and Radio wave Propagation	ECCE4023
29.	ECCE5114	Telecom Systems Security	ECCE4122
30.	ECCE5122	Communications Systems	ECCE4126 OR ECCE4127
31.	ECCE5123	Optical Communications	ECCE4122
32.	ECCE5124	Wireless Communications	ECCE4122
33.	ECCE5128	Wireless Communication Networks	ECCE4127
34.	ECCE5129	Information Theory and Data Communications	ECCE4127
35.	ECCE5130	Modern Communication Systems Design	ECCE4153
36.	ECCE5131	Digital Cellular Systems	ECCE4142
37.	ECCE5133	Satellite Communications	ECCE4122
38.	ECCE5134	Selected Topics in Communications	ECCE4126 OR ECCE4127
39.	ECCE5136	Error Control Coding	ECCE4122
40.	ECCE5142	Image and Video Processing	ECCE4142
41.	ECCE5143	Advanced Digital Signal Processing	ECCE4142
42.	ECCE5160	Antenna Modeling and Measurement Techniques	ECCE4023
43.	ECCE5162	Microwave Engineering	ECCE4023
44.	ECCE5164	RF Comm. Circuits	ECCE4153
45.	ECCE5166	Introduction to EMI/EMC	ECCE4023
46.	ECCE5212	VLSI Design	ECCE4227
47.	ECCE5213	Fault-Tolerant Computing Systems	ECCE4227
48.	ECCE5214	Adv. Logic & Computer Interfacing	ECCE4227
49.	ECCE5215	Computing Systems for Eng. Applications	ECCE4242
50.	ECCE5217	Reconfigurable Computing	ECCE4227
51.	ECCE5218	Routing and switching	ECCE4242
52.	ECCE5219	Intelligent Applications in Robotics & Drones	ECCE4227
53.	ECCE5220	AI Accelerators	ECCE4227
54.	ECCE5222	Microprocessor Interfacing	ECCE4227
55.	ECCE5223	Adv. Embedded Systems Design	ECCE4227

56.	ECCE5224	Microprocessor Based Control Design	ECCE4227
57.	*ECCE5228*	Cloud & Edge Computing Infrastructure	ECCE4242
58.	*ECCE5229*	Embedded Real Time Systems	ECCE4227
59.	ECCE5231	Industrial Networks and Operating Systems	ECCE4227 AND COMP2002 [Incompatible with ECCE4242 AND ECCE4254 AND ECCE5411]
60.	ECCE5233	Computer Architecture and Organization II	ECCE5232
61.	*ECCE5234*	Industrial Systems Security	ECCE4242 OR ECCE5411
62.	*ECCE5236*	Practical Ethical Hacking	ECCE4242 OR ECCE5411
63.	ECCE5242	Advanced Computer Networks	ECCE4242
64.	ECCE5243	Network Software Design & Programming	ECCE4242
65.	ECCE5252	Software Engineering	ECCE4252 OR ECCE4255
66.	ECCE5265	Database Engineering and Applications	COMP2002 OR ENGR2217
67.	ECCE5282	Computer Network Security	ECCE4242 OR ECCE5231
68.	ECCE5283	Cryptography, Security & e-Commerce	ECCE4242
69.	ECCE5284	Digital Forensics	(ENGR2217 OR COMP2002) AND (ECCE4242 OR ECCE5411 OR ECCE5231)
70.	ECCE5291	Functional Verification of Hardware Designs	ECCE4227
71.	ECCE5292	Selected Topics in Computer Engineering	ECCE4227 AND (ECCE4242)
72.	ECCE5293	Embedded Vision Systems	ECCE4227
73.	ECCE5294	Introduction to Real Time Systems	COMP2002 OR ENGR2217
74.	ECCE5302	Power Systems Protection	ECCE4312
75.	ECCE5303	Power Distribution System Eng.	ECCE4316
76.	ECCE5304	Power Stations	ECCE4312
77.	ECCE5313	Electric Power Transmission System Eng.	ECCE4316
78.	ECCE5314	Selected Topics in Power	ECCE4312
79.	ECCE5315	Smart Grid	ECCE4312
80.	ECCE5316	Renewable Power Generation	ECCE3352
81.	ECCE5317	Power System Stability and Control	ECCE4316
82.	ECCE5322	Electrical Power Systems Quality	ECCE4312
83.	ECCE5323	Power System Operation	ECCE4316
84.	ECCE5324	Power System Reliability and Planning	ECCE4312
85.	ECCE5332	High Voltage Engineering	ECCE4312
86.	ECCE5333	Power System Economics	ECCE4312
87.	ECCE5334	Modern Substation Engineering	ECCE4312
88.	ECCE5342	Electrical Engineering Material	PHYS2108
89.	ECCE5352	Generalized Machine Theory	ECCE4358
90.	ECCE5410	Intelligent control systems	ECCE4416
91.	ECCE5411	Introduction to the Industrial network practices	ECCE4436 [Incompatible with ECCE4242 and ECCE5231]
92.	ECCE5412	Mechatronics	ECCE4416
93.	ECCE5414	Real Time Control System	ECCE4416 AND ECCE4227
94.	ECCE5415	Control of Electric Machines	ECCE4467
95.	ECCE5422	Selected Topics in Control Systems	ECCE4416 OR MCTE4250
96.	ECCE5432	Programmable Logic Control Systems	ECCE3206 AND ECCE4416
97.	ECCE5433	Modern Control Systems	ECCE4416
98.	ECCE5434	System Dynamics and Simulation	ECCE3142
99.	ECCE5435	Modern Robotics	ECCE4455 and ECCE4416
100.	ECCE5443	Optimization Techniques in Engineering	MATH3171
101.	ECCE5445	Control System Design	ECCE4416 OR MCTE4250
102.	ECCE5452	Computer-Aided Instrumentation	(ECCE4456 OR 4455) AND ECCE4227
103.	ECCE5453	Mobile Robot Control	ECCE4416
104.	ECCE5462	Electric Drives	ECCE4466 OR ECCE4467
105.	ECCE5464	Advanced Power Electronics	ECCE4466 OR ECCE4467
106.	ECCE5501	Co-Operative Training-I	ENGR4007 (co-requisite)
107.	ECCE5502	Co-Operative Training-II	ECCE5501

Note:

- Students are advised to regularly check the most updated degree plan on the department webpage. This degree plan is last updated on 4th March 2025
- Course Syllabus and exact prerequisite(s) can be checked on A&R website.

College : **ENGINEERING**
Department : **CIVIL AND ARCHITECTURAL ENGINEERING**
Cohorts : **2025**
Degree : **B. ENG.**
Major Specialization : **CIVIL ENGINEERING**

Summary of Credits:		
University Requirements (UR)		**6**
General Foundation Program	NC*	
Arabic	2	
Contemporary Omani State and People	2	
Oman & Islamic Civilization or Islamic Culture	2	
University Electives (UE) See list A		**6**
College Requirements (CR) See list B		**32**
College Electives (CE) See list C		**3**
Departmental Requirements (DR) See list D		**41**
Departmental Electives (DE) See list E		**0**
Major Requirements (AR) See list F		**33**
Major Electives (AE) See list G		**15**
Minor Requirements (IR) See list H		**0**
Minor Electives (IE) See list I		**0**
Specialization Requirements (SR) See list J		**0**
Specialization Electives (SE) See list K		**0**
TOTAL		**136**

* Not Credited

For reference contact: HoD — Ext. 1332
HoD — Date:12/08/2024
Dean's Office — Date: 19/4/2025
Admission and Registration — Date:

Last update on: 12/08/2024

Department of Civil and Architectural Engineering
Civil Engineering Degree Plan: 2025 Cohort (Scheme I)

Scheme I FP1 (Fall 2025)	Course Code	Course Title	Cr.	Pre-req.	Cat.
		General Foundation Program	**0**		UR
	Total		**0**		

Scheme I Semester 1 (Spring 2026)	Course Code	Course Title	Cr.	Pre-req.	Cat.
	HIST1010 ISLM1010	Oman & Islamic Civilization **or** Islamic Culture	**2**		UR
	LANC2160	English for Engineering I	**3**	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	CHEM1071	General Chemistry for Engineers	**3**	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT (0108 or 0109)	CR
	ENGR1501	Introduction to Engineering	**1**	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	ENGR1600	Workshop I	**1**	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	MATH2107	Calculus I	**4**	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT (0108 or 0109)	CR
	Total		**14**		

Scheme I Semester 2 (Fall 2026)	Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	ARAB1060^{+}	Arabic	**2**		UR
		University Elective I	**2**		UE
	SOCY1005^{+}	Contemporary Omani State and People	**2**		UR
	LANC2161	English for Engineering II	**3**	LANC2160	CR
	MATH2109	Calculus II for Science and Engineering	**3**	MATH 2107	CR
	PHYS2107	Physics for Engineering I	**4**	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT (0108 or 0109), MATH2107* (Co-req.)	CR
	Total		**16**		

Scheme I Semester 3 (Spring 2027)	Course Code	Course Title	Cr.	Pre-req.	Cat.
		College Elective	**3**		CE
	PHYS2108	Physics for Engineering II	**4**	PHYS 2107	CR
	ERSC2020	Geology for Engineers	**3**		DR
		University Elective II	**2**		UE
	CIVL3011	Statics	**3**	PHYS2107	DR
	Total		**15**		

[+]For non-Omani and non-Arabic speaking students, refer to Appendix A.

Scheme I / Semester 4 (Fall 2027)	Course Code	Course Title	Cr.	Pre-req.	Cat.
	MATH3171	Linear Algebra & Multivariate Calculus	**3**	MATH2109, LANC2161	CR
	CIVL3020	Engineering Drawing	**3**		AR
	CIVL3056	Surveying	**3**	MATH2107	DR
	CIVL3086	Mechanics of Materials	**3**	CIVL3011	DR
	CIVL3096	Construction Materials	**3**	CIVL3011, CHEM1071	DR
	Total		**15**		

Scheme I / Jan. 2028	Course Code	Course Title	Cr.	Pre-req.	Cat.
	CIVL3007	Practical Skills Development	**0**	CIVL3056	AR
	Total		**0**		

Scheme I / Semester 5 (Spring2028)	Course Code	Course Title	Cr.	Pre-req.	Cat.
	MATH4174	Differential Equations for Engineers	**3**	MATH2109, LANC2161	CR
	CIVL3036	Structures I	**3**	CIVL3086	DR
	CIVL3076	Transportation Engineering	**3**		AR
	CIVL3106	Geotechnical Engineering I	**3**	PETM3006 or ERSC2020	AR
	CIVL4046	Fluid Mechanics	**3**	CIVL3011	DR
	Total		**15**		

Scheme I / Semester 6 (Fall 2028)	Course Code	Course Title	Cr.	Pre-req.	Cat.
	CIVL4036	Highway Engineering	**3**	CIVL3106, CIVL3076	AR
	CIVL4136	Environmental Engineering I	**3**	CIVL4046, CHEM1071	AR
	CIVL4146	Hydraulics	**3**	CIVL4046	AR
	CIVL4206	Concrete Design	**3**	CIVL3036, CIVL3096, (CIVL3020 or AREN3312)	DR
	CIVL5146	Numerical Methods	**3**	ENGR2217/COMP2002), MATH3171	DR
	Total		**15**		

Scheme I / Semester 7 (Spring 2029)	Course Code	Course Title	Cr.	Pre-req.	Cat.
	CIVL4006	Prob. & Statistics for Engineers	**3**	MATH2107	DR
	CIVL4400	Professional Practice & Ethics	**2**		DR
		Department Elective I[b]	**3**		AE
	CIVL3066	Engineering Hydrology	**3**	CIVL4046	AR
	CIVL4016	Structures II	**3**	CIVL3036, MATH 4174	AR
	CIVL5204	Engineering Economics	**3**	MATH2107	DR

	Total	**17**

Scheme I **Summer 2029**	**Course Code**	**Course Title**	**Cr.**	**Pre-req.**	**Cat.**
	ENGR4007	Industrial Training	**0**		CR
	Total		**0**		

Scheme I **Semester 8 (Fall 2029)**	**Course Code**	**Course Title**	**Cr.**	**Pre-req.**	**Cat.**
	CIVL5993	Department Elective II[b] **or** Research Project I	**3**	Department Approval	AE
	CIVL4216	Steelwork Design	**3**	CIVL3036, (CIVL3020 or AREN3312), PHYS2108	DR
	CIVL4226	Foundation Engineering	**3**	CIVL3106, CIVL4206	AR
	CIVL5010	Modern Technologies in Civil Engineering	**1**	CIVL4206	AR
	CIVL5336	Construction Management	**3**	CIVL5204	DR
	CIVL5991	Design Project I	**2**	CIVL4206 and (CIVL4036, CIVL4136 or CIVL4146)	AR
	Total		**15**		

Scheme I **Semester 9 (Spring 2030)**	**Course Code**	**Course Title**	**Cr.**	**Pre-req.**	**Cat.**
		University Elective III	**2**		UE
		Department Elective III[b]	**3**		AE
		Department Elective IV[b]	**3**		AE
	CIVL5994	Department Elective V[b] **or** Research Project II	**3**	CIVL5993	AE
	CIVL5992	Design Project II	**3**	CIVL5991	AR
	Total		**14**		
Total (All Program)			**136**		

[b] Departmental Electives: A student must choose five department elective courses.
The student who completes CIVL5993 must also take CIVL5994.

Department of Civil and Architectural Engineering
Civil Engineering Degree Plan: 2025 Cohort (Scheme II)

Scheme II FP1 (Fall 2025)	Course Code	Course Title	Cr.	Pre-req.	Cat.
		General Foundation Program	**0**		UR
	Total		**0**		

Scheme II FP2 (Spring 2026)	Course Code	Course Title	Cr.	Pre-req.	Cat.
		General Foundation Program	**0**		UR
	Total		**0**		

Scheme II Semester 1 (Fall 2026)	Course Code	Course Title	Cr.	Pre-req.	Cat.
	HIST1010 **or** ISLM1010	Oman & Islamic Civilization **or** Islamic Culture	**2**		UR
	LANC2160	English for Engineering I	**3**	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	CHEM1071	General Chemistry for Engineers	**3**	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT (0108 or 0109)	CR
	ENGR1501	Introduction to Engineering	**1**	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	ENGR1600	Workshop I	**1**	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	MATH2107	Calculus I	**4**	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT (0108 or 0109)	CR
	Total		**14**		

Scheme II Semester 2 (Spring 2027)	Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	ARAB1060[+]	Arabic	**2**		UR
		University Elective I	**2**		UE
	LANC2161	English for Engineering II	**3**	LANC 2160	CR
	SOCY1005[+]	Contemporary Omani State and People	**2**		UR
	MATH2109	Calculus II for Science and Engineering	**3**	MATH2107	CR
	PHYS2107	Physics for Engineering I	**4**	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT (0108 or 0109), MATH2107* (Co-req.)	CR
	Total		**16**		

[+]For non-Omani and non-Arabic speaking students, refer to Appendix A.

Scheme II / Summer 2027	Course Code	Course Title	Cr.	Pre-req.	Cat.
		College Elective	**3**		CE
	CIVL3011	Statics	**3**	PHYS2107	DR
	Total		**6**		

Scheme II / Semester 3 (Fall 2027)	Course Code	Course Title	Cr.	Pre-req.	Cat.
	ERSC2020	Geology for Engineers	**3**		DR
	PHYS2108	Physics for Engineering II	**4**	PHYS2107	CR
	CIVL3020	Engineering Drawing	**3**		AR
	CIVL3056	Surveying	**3**	MATH2107	DR
	CIVL3086	Mechanics of Materials	**3**	CIVL3011	DR
	Total		**16**		

Scheme II / January 2028	Course Code	Course Title	Cr.	Pre-req.	Cat.
	CIVL3007	Practical Skills Development	**0**	CIVL3056	AR
	Total		**0**		

Scheme II / Semester 4 (Spring 2028)	Course Code	Course Title	Cr.	Pre-req.	Cat.
	CIVL3076	Transportation Engineering	**3**		AR
	CIVL3096	Construction Materials	**3**	CIVL3011, CHEM1071	DR
	CIVL3106	Geotechnical Engineering I	**3**	PETM3006 or ERSC2020	AR
	CIVL4046	Fluid Mechanics	**3**	CIVL3011	DR
	MATH3171	Linear Algebra & Multivariate Calculus	**3**	MATH2109, LANC2161	CR
	Total		**15**		

Scheme II / Summer 2028	Course Code	Course Title	Cr.	Pre-req.	Cat.
	CIVL4006	Prob. & Statistics for Engineers	**3**	MATH2107	DR
	CIVL5204	Engineering Economics	**3**	MATH2107	DR
	Total		**6**		

Scheme II / Semester 5 (Fall 2028)	Course Code	Course Title	Cr.	Pre-req.	Cat.
		University Elective II	**2**		UE
	MATH4174	Differential Equations for Engineers	**3**	MATH2109, LANC2161	CR
	CIVL3036	Structures I	**3**	CIVL3086	DR
	CIVL4036	Highway Engineering	**3**	CIVL3106, CIVL3076	AR
	CIVL4136	Environmental Engineering I	**3**	CIVL4046, CHEM1071	AR
	CIVL4146	Hydraulics	**3**	CIVL4046	AR
	Total		**17**		

Scheme II / Semester 6 (Spring 2029)	Course Code	Course Title	Cr.	Pre-req.	Cat.
	CIVL4400	Professional Practice & Ethics	**2**		DR
		Department Elective I[b]	**3**		AE
	CIVL3066	Engineering Hydrology	**3**	CIVL4046	AR
	CIVL4016	Structures II	**3**	CIVL3036, MATH 4174	AR
	CIVL4206	Concrete Design	**3**	CIVL3036, CIVL3096, (CIVL3020 or AREN3312)	DR
	CIVL5146	Numerical Methods	**3**	ENGR2217/COMP2002), MATH 3171	DR
	Total		**17**		

Scheme II / Summer 2029	Course Code	Course Title	Cr.	Pre-req.	Cat.
	ENGR4007	Industrial Training	**0**		
	Total		**0**		

Scheme II / Semester 7 (Fall 2029)	Course Code	Course Title	Cr.	Pre-req.	Cat.
	CIVL5993	Department Elective II[b] **or** Research Project I	**3**	Department Approval	AE
	CIVL4216	Steelwork Design	**3**	CIVL3036, (CIVL3020 or AREN3312), PHYS 2108	DR
	CIVL4226	Foundation Engineering	**3**	CIVL3106, CIVL4206	AR
	CIVL5010	Modern Technologies in Civil Engineering	**1**	CIVL4206	AR
	CIVL5336	Construction Management	**3**	CIVL5204	DR
	CIVL5991	Design Project I	**2**	CIVL4206 and (CIVL4036, CIVL4136 or CIVL4146)	AR
	Total		**15**		

Scheme II / Semester 8 (Spring 2030)	Course Code	Course Title	Cr.	Pre-req.	Cat.
		University Elective III	**2**		UE
		Department Elective III[b]	**3**		AE
		Department Elective IV[b]	**3**		AE
	CIVL5994	Department Elective V[b] **or** Research Project II	**3**	CIVL5993	AE
	CIVL5992	Design Project II	**3**	CIVL5991	AR
	Total		**14**		
Total (All Program)			**136**		

[b] Departmental Electives: A student must choose five department elective courses.
The student who completed CIVL5993 must also take CIVL5994.

Department of Civil and Architectural Engineering
Civil Engineering Degree Plan: 2025 Cohort (COOP Scheme)

- The cooperative Training (COOP) Scheme is **optional**.
- **Scheme I** Students can enroll in this scheme starting from Semester **8** after the foundation program.
- **Scheme II** students can enroll in this scheme starting from Semester **7** after the foundation program.
- For enrollment terms, conditions, and registration procedure, please consult the Head of Department and the Assistant Dean for Training and Community Services Offices.

COOP Scheme **COOP Semester**	Course Code	Course Title	Cr.	Pre-req.	Cat.
	ENGR4007	Industrial Training	0		CR
	CIVL5001	Civil Program Cooperative Training I	0	ENGR4007* (Co-req.)	AE
	Total		**0**		

COOP Scheme **COOP Semester**	Course Code	Course Title	Cr.	Pre-req.	Cat.
	CIVL5002	Civil Program Cooperative Training II	6	CIVL5001	AE
	Total		**6**		

COOP Scheme **COOP Semester (Fall)**	Course Code	Course Title	Cr.	Pre-req.	Cat.
	CIVL5993	Department Elective II[b] **or** Research Project I	**3**	Department Approval	AE
	CIVL4226	Foundation Engineering	**3**	CIVL3106, CIVL4206	AR
	CIVL5010	Modern Technologies in Civil Engineering	**1**	CIVL4206	AR
	CIVL5336	Construction Management	**3**	CIVL5204	DR
	CIVL5991	Design Project I	**2**	CIVL4206 and (CIVL4036, CIVL4136 or CIVL4146)	AR
	Total		**12**		

COOP Scheme **COOP Semester (Spring)**	Course Code	Course Title	Cr.	Pre-req.	Cat.
		University Elective III	**2**		UE
	CIVL4216	Steelwork Design	**3**	CIVL3036, (CIVL3020 or AREN3312), PHYS2108	DR
	CIVL5994	Department Elective III[b] **or** Research Project II	**3**	CIVL5993	AE
	CIVL5992	Design Project II	**3**	CIVL5991	AR
	Total		**11**		
Total (All Program)			**136**		

[b] Departmental Electives: A student must choose three department elective courses.
The student who completed CIVL5993 must also take CIVL5994.

Appendix A

No.	Cohorts 2018 and before	Credits	Cohorts 2018 and after	Cr.	Notes
1	ARAB1001	3	ARAB1060	**2**	
2	SOCY1001	1	SOCY1005	**2**	For Omanis Only
3	--	--	SOCY1007	**2**	For Non-Omanis
4	ARAB1019			**3**	For Non-Arabic Speaking Students. Offered only in Fall semesters

Notes:

- For the courses (SOCY1005, SOCY1007, HIST1010), the course materials and exams are in English for non-Arabic speaking students.
- Currently, there is no Arabic course with 2 credits for the non-Arabic speaking students of cohorts 2018 and after. Those students have to register the ARAB1019 as shown in the table above.

Department of Civil and Architectural Engineering

Civil Engineering Degree Plan: 2025 Cohort

LIST A* – University Electives

***List of University Elective Courses Allowed for ENG students (Check the QR code)**

LIST B: College Requirements (CR)

Code	Title	Credits	Pre-Requisite
ENGR1501	Introduction to Engineering	1	
ENGR1600	Workshop I	1	
LANC2160	English for Engineering I	3	
LANC2161	English for Engineering I	3	LANC2160
MATH2107	Calculus I	4	
MATH2109	Calculus II for Science and Engineering	3	MATH 2107
MATH3171	Linear Algebra & Multivariate Calculus	3	MATH2109, LANC2161
MATH4174	Differential Equations for Engineers	3	MATH2109, LANC2161
PHYS2107	Physics for Engineering I	4	MATH2107* (Co-req.)
PHYS2108	Physics for Engineering II	4	PHYS 2107
CHEM1071	General Chemistry for Engineers	3	
ENGR4007	Industrial Training	0	
Total		**32**	

LIST C: College Electives (CE)

<u>One Course-</u> 3 credit hours: The elective course will be offered from the following courses subject to availability.

Code	Title	Credits	Pre-Requisite
COMP 2002	Introduction to Comp. Programming for Engineers	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPCS (0101 or 0102)
ENGR2217	Computer Programming	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPCS (0101 or 0102)

LIST D: Department Requirements (DR)

Code	Title	Credits	Pre-Requisite
CIVL3011	Statics	3	PHYS2107
CIVL3056	Surveying	3	MATH2107
CIVL3086	Mechanics of Materials	3	CIVL3011
CIVL3096	Construction Materials	3	CIVL3011, CHEM1071
ERSC2020	Geology for Engineers	3	
CIVL3036	Structures I	3	CIVL3086
CIVL4006	Prob. & Statistics for Engineers	3	MATH2107
CIVL4046	Fluid Mechanics	3	CIVL3011
CIVL4206	Concrete Design	3	CIVL3036, CIVL3096, (CIVL3020 or AREN3312)
CIVL4400	Professional Practice & Ethics	2	
CIVL5146	Numerical Methods	3	(ENGR2217/COMP2002), MATH 3171
CIVL5204	Engineering Economics	3	MATH2107
CIVL4216	Steelwork Design	3	CIVL3036, (CIVL3020 or AREN3312), PHYS2108
CIVL5336	Construction Management	3	CIVL5204
Total		**41**	

LIST F: Major Requirements (AR)

Code	Title	Credits	Pre-Requisite
CIVL3007	Practical Skills Development	0	CIVL3056
CIVL3020	Engineering Drawing	**3**	
CIVL3106	Geotechnical Engineering I	3	PETM3006 or ERSC2020
CIVL4036	Highway Engineering	3	CIVL3106, CIVL3076
CIVL3076	Transportation Engineering	3	
CIVL4136	Environmental Engineering I	3	CIVL4046, CHEM1071
CIVL4146	Hydraulics	3	CIVL4046
CIVL3066	Engineering Hydrology	3	CIVL4046
CIVL4016	Structures II	3	CIVL3036, MATH4174
CIVL4226	Foundation Engineering	3	CIVL3106, CIVL4206
CIVL5010	Modern Technologies in Civil Engineering	**1**	CIVL4206
CIVL5991	Design Project I	2	CIVL4206 and (CIVL4036, CIVL4136 or CIVL4146)
CIVL5992	Design Project II	3	CIVL5991
Total		**33**	

LIST G: Major Electives (AE)

Technical Elective Courses – 15 credit hours

The student should select 5 courses (15 credit hours) or 3 courses (9 credit hours) and Research Project I and Research Project II. The electives can be taken from: (1) Civil Engineering optional technical electives; or (2) one course (max. 3 credits) offered in the M.Sc. Program in Civil Engineering after approval of advisor.

Civil Engineering: General

Code	Title	Credits	Pre-Requisite
CIVL5104	Special Topics in Civil Engineering	3	Department Approval
CIVL5150	Remote Sensing	3	
CIVL5376	Conservation of Structures	3	
CIVL5993	Research Project I	3	Department Approval
CIVL5994	Research Project II	3	CIVL5993

Civil Engineering: Water Resources

Code	Title	Credits	Pre-Requisite
CIVL5076	Coastal Engineering	3	CIVL4046
CIVL5142	Groundwater	3	CIVL3066
CIVL5246	Hydraulic Structures	3	CIVL4046
CIVL5346	Water Resources Engineering	3	CIVL3066
CIVL5160	GIS in Water Resources Engineering	3	CIVL3066

Civil Engineering: Geotechnical

Code	Title	Credits	Pre-Requisite
CIVL4106	Geotechnical Engineering II	3	CIVL3106
CIVL5106	Slope Stability	3	CIVL3106
CIVL5132	Environmental Geotechnics	3	CIVL3106
CIVL5133	Soil Improvement	3	CIVL3106

Civil Engineering: Transportation

Code	Title	Credits	Pre-Requisite
CIVL5122	Highway Materials	3	CIVL4036
CIVL5206	Traffic Engineering	3	CIVL3076
CIVL5216	Pavement Design and Maintenance	3	CIVL4036
CIVL5226	Airport Design	3	CIVL4036

Civil Engineering: Structures

Code	Title	Credits	Pre-Requisite
CIVL5096	Concrete Structures	3	CIVL4016, CIVL4206
CIVL5126	Concrete Materials and Technology	3	CIVL3036, CIVL3086, CIVL3096
CIVL5214	Computer Applications in Structural Engineering	3	CIVL4016, CIVL4206
CIVL5236	Prestressed Concrete	3	CIVL4206
CIVL5296	Design of Masonry Structures	3	CIVL3086
CIVL5270	Fire Safety in Buildings	3	CIVL4216
CIVL5462	Concrete Technology	3	CIVL3096
CIVL5662	Building Materials	3	CIVL3086, CIVL3096
CIVL5664	Contemporary Materials in Civil Engineering	3	CIVL3096

Civil Engineering: Construction

Code	Title	Credits	Pre-Requisite
CIVL5102	Construction Engineering	3	
CIVL5156	Estimating Construction Cost	3	CIVL3020, CIVL4206
CIVL5306	Specifications and Contracts	3	CIVL4206
CIVL5678	Administration of Contracts	3	CIVL4206
CIVL5680	Construction Planning & Scheduling (Computer application)	3	CIVL4206, CIVL5336

Civil Engineering: Environmental

Code	Title	Credits	Pre-Requisite
CIVL5151	Solid Waste Management	3	CIVL4136
CIVL5152	Microbiology for Engineers	3	CIVL4136
CIVL5153	Chemistry for Environmental Engineering	3	CIVL4136
CIVL5186	Water and Wastewater Management	3	CIVL4136
CIVL5254	Environmental Pollution	3	CIVL4136
CIVL5255	Environmental Management Systems	3	CIVL4136
CIVL5326	Environmental Engineering II	3	CIVL4136
CIVL5154	Membrane Technology for water and wastewater	3	CIVL4136

Civil Engineering: Geomatics

Code	Title	Credits	Pre-Requisite
CIVL5111	Global Positioning Systems and Its Applications in Civil Engineering	3	CIVL3056
CIVL5311	Adjustment Computations	3	CIVL3056
CIVL5600	Introduction to Photogrammetry	3	CIVL3056

College : **ENGINEERING**
Department : **CIVIL AND ARCHITECTURAL ENGINEERING**
Cohorts : **2025**
Degree : **B. ENG.**
Major Specialization : **ARCHITECTURAL ENGINEERING**

Summary of Credits:		
University Requirements (UR)		**6**
General Foundation Program	NC*	
Arabic	2	
Contemporary Omani State and People	2	
Oman & Islamic Civilization or Islamic Culture	2	
University Electives (UE) See List A		**6**
College Requirements (CR) See list B		**32**
College Electives (CE) See list C		**3**
Departmental Requirements (DR) See list D		**41**
Departmental Electives (DE) See list E		**0**
Major Requirements (AR) See list F		**62**
Major Electives (AE) See list G		**6**
Minor Requirements (IR) See list H		**0**
Minor Electives (IE) See list I		**0**
Specialization Requirements (SR) See list J		**0**
Specialization Electives (SE) See list K		**0**
TOTAL		**156**

* Not Credited

For reference contact: HoD Ext. 1332
HoD Date:18.06.2025
Dean's Office Date: 19/6/2025
Admission and Registration Date:

Last update on: ..18../..6../..2025.....

Department of Civil and Architectural Engineering

Architectural Engineering Degree Plan: 2025 Cohort (Scheme I)

Scheme I FP1 (Fall 2025)	Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
		General Foundation Program	**0**		UR
	Total		**0**		

Scheme I Semester 1 (Spring 2026)	Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	HIST1010 ISLM1010	Oman & Islamic Civilization **or** Islamic Culture	**2**		UR
	LANC2160	English for Engineering I	**3**		CR
	CHEM1071	General Chemistry for Engineers	**3**		CR
	ENGR1501	Introduction to Engineering	**1**		CR
	ENGR1600	Workshop I	**1**		CR
	MATH2107	Calculus I	**4**		CR
	Total		**14**		

Scheme I Semester 2 (Fall 2026)	Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	ARAB1060[+]	Arabic	**2**		UR
		University Elective I	**2**		UE
	SOCY1005[+]	Contemporary Omani State and People	**2**		UR
	LANC2161	English for Engineering II	**3**	LANC2160	CR
	MATH2109	Calculus II For Science and Engineering	**3**	MATH 2107	CR
	PHYS2107	Physics for Engineering I	**4**	MATH2107*	CR
	Total		**16**		

Scheme I Semester 3 (Spring 2027)	Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
		University Elective II	**2**		UE
		College Elective	**3**		CE
	CIVL4006	Prob. & Statistics for Engineers	**3**	MATH 2107	DR
	PHYS2108	Physics For Engineering II	**4**	PHYS2107 **or** PHYS2101	CR
	CIVL3011	Statics	**3**	PHYS2107 **or** PHYS2101	DR
	Total		**15**		

[+]For non-Omani and non-Arabic speaking students, refer to Appendix A.

Scheme I **Semester 4** **(Fall 2027)**	**Course Code**	**Course Title**	**Cr.**	**Pre-req./Co-req.***	**Cat.**
	MATH3171	Linear Algebra & Multi. Var. Calculus for Engineers	**3**	MATH2108 **or** MATH2109	CR
	AREN2312	Architectural Drawing	**2**		AR
	CIVL3056	Surveying	**3**	MATH2107	DR
	CIVL3086	Mechanics of Materials	**3**	CIVL3011	DR
	CIVL3096	Construction Materials	**3**	CHEM1071, CIVL3011	DR
	AREN3211	Architectural Design Theory	**2**		AR
	Total		**16**		

Scheme I **Semester 5** **(Spring2028)**	**Course Code**	**Course Title**	**Cr.**	**Pre-req./Co-req.***	**Cat.**
	CIVL4046	Fluid Mechanics	**3**	CIVL3011	DR
	CIVL3036	Structures I	**3**	CIVL3086	DR
	AREN2111	Architectural Design I	**3**	AREN2312, AREN3211	AR
	AREN2313	Architectural Graphics	**3**	AREN2312	AR
	AREN2411	History I: Modern &Contemporary	**2**		AR
	Total		**14**		

Scheme I **Semester 6** **(Fall 2028)**	**Course Code**	**Course Title**	**Cr.**	**Pre-req./Co-req.***	**Cat.**
	AREN3811	Building Construction Methods	**3**	CIVL3096	AR
	AREN3112	Architectural Design II	**3**	AREN2111	AR
	AREN3312	Introduction to CAAD	**3**	AREN2312	AR
	MATH4174	Differential Equations for Engineers	**3**	LANC2161, (MATH2108 **or** MATH2109)	CR
	CIVL4400	Professional Practice and Ethics	**2**		DR
	MEIE3141	Thermodynamics I	**3**	PHYS2108* **or** PHYS2102*	AR
	Total		**17**		

Scheme I **Semester 7** **(Spring 2029)**	**Course Code**	**Course Title**	**Cr.**	**Pre-req./Co-req.***	**Cat.**
	AREN3814	Climate-responsive Design	**3**		AR
	AREN3313	Architectural Working Drawing	**3**	AREN3811, AREN3312	AR
	AREN3113	Architectural Design III	**4**	AREN3112	AR
	AREN3816	Building Mechanical Systems	**3**	MEIE3141	AR
	AREN3812	Architectural Acoustics	**2**		AR
	AREN3412	History II: Islamic & Vernacular	**2**		AR
	Total		**17**		

Scheme I **Semester 8** **(Fall 2029)**	**Course Code**	**Course Title**	**Cr.**	**Pre-req./Co-req.***	**Cat.**
		Architectural Elective I	2		AE
	CIVL4206	Concrete Design	3	CIVL3036, CIVL3096, (CIVL3046 **or** AREN3312)	DR
	CIVL5146	Numerical Methods	3	(COMP2002 **or** ENGR2217), MATH3171	DR
	AREN4813	Building Illumination	2		AR
	AREN4817	Sanitary & Plumbing Design	2	CIVL4046	AR
	AREN4114	Architectural Design IV	4	AREN3113	AR
	AREN4113	Research Project	1	AREN3113	AR
	Total		**17**		

Scheme I **Semester 9** **(Spring 2030)**	**Course Code**	**Course Title**	**Cr.**	**Pre-req./Co-req.***	**Cat.**
	CIVL4216	Steelwork Design	**3**	CIVL3036, (CIVL3046 **or** AREN3312), (PHYS2108 **or** PHYS2102)	DR
		Architectural Elective II	**2**		AE
	AREN4818	Building Electrical Systems	**3**	AREN4813	AR
	AREN4115	Graduation Project I	**4**	AREN4114, CIVL4206, AREN4113	AR
	CIVL5204	Engineering Economics	**3**	MATH2107	DR
	Total		**15**		

Scheme II **Summer** **2030**	**Course Code**	**Course Title**	**Cr.**	**Pre-req./Co-req.***	**Cat.**
	ENGR4007	Industrial Training	**0**		CR
	Total		**0**		

Scheme I **Semester 10** **(Fall 2030)**	**Course Code**	**Course Title**	**Cr.**	**Pre-req./Co-req.***	**Cat.**
		University Elective III	**2**		UE
		Architectural Elective III	**2**		AE
	ERSC2020	Geology for Engineers	**3**		DR
	AREN5819	Specifications and Quantities	**2**	AREN3313	AR
	AREN5116	Graduation Project II	**3**	AREN4115, AREN3816, AREN4818, AREN4817	AR
	CIVL5336	Construction Management	**3**	CIVL5204	DR
	Total		**15**		
Total (All Program)			**156**		

Department of Civil and Architectural Engineering

Architectural Engineering Degree Plan: 2025 Cohort (Scheme II)

Scheme II FP1 (Fall 2025)	Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
		General Foundation Program	**0**		UR
	Total		**0**		

Scheme II FP2 (Spring 2026)	Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
		General Foundation Program	**0**		UR
	Total		**0**		

Scheme II Semester 1 (Fall 2026)	Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	HIST1010	Oman & Islamic Civilization **or**	**2**		UR
	ISLM1010	Islamic Culture			
	LANC2160	English for Engineering I	**3**		CR
	CHEM1071	General Chemistry for Engineers	**3**		CR
	ENGR1501	Introduction to Engineering	**1**		CR
	ENGR1600	Workshop I	**1**		CR
	MATH2107	Calculus I	**4**		CR
	Total		**14**		

Scheme II Semester 2 (Spring 2027)	Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
	ARAB1060[+]	Arabic	**2**		UR
		University Elective I	**2**		UE
	LANC2161	English for Engineering II	**3**	LANC 2160	CR
	SOCY1005[+]	Contemporary Omani State and People	**2**		UR
	MATH2109	Calculus II For Science and Engineering	**3**	MATH2107	CR
	PHYS2107	Physics for Engineering I	**4**	MATH2107*	CR
	Total		**16**		

[+]For non-Omani and non-Arabic speaking students, refer to Appendix A.

Scheme II **Summer 2027**	**Course Code**	**Course Title**	**Cr.**	**Pre-req./Co-req.***	**Cat.**
		College Elective	**3**		CE
	CIVL3011	Statics	**3**	PHYS2107 **or** PHYS2101	DR
	Total		**6**		

Scheme II **Semester 3 (Fall 2027)**	**Course Code**	**Course Title**	**Cr.**	**Pre-req./Co-req.***	**Cat.**
	MATH3171	Linear Algebra & Multi. Var. Calculus for Engineers	**3**	MATH2108 **or** MATH2109	CR
	AREN2312	Architectural Drawing	**2**		AR
	CIVL3056	Surveying	**3**	MATH2107	DR
	CIVL3086	Mechanics of Materials	**3**	CIVL3011	DR
	PHYS2108	Physics For Engineering II	**4**	PHYS2107 **or** PHYS2101	CR
	AREN3211	Architectural Design Theory	**2**		AR
	Total		**17**		

Scheme II **Semester 4 (Spring 2028)**	**Course Code**	**Course Title**	**Cr.**	**Pre-req./Co-req.***	**Cat.**
	CIVL3096	Construction Materials	**3**	CHEM1071, CIVL3011	DR
		University Elective II	**2**		UE
	CIVL3036	Structures I	**3**	CIVL3086	DR
	AREN2111	Architectural Design I	**3**	AREN2312, AREN3211	AR
	AREN2313	Architectural Graphics	**3**	AREN2312	AR
	AREN2411	History I: Modern & Contemporary	**2**		AR
	Total		**16**		

Scheme II **Summer 2028**	**Course Code**	**Course Title**	**Cr.**	**Pre-req./Co-req.***	**Cat.**
	CIVL4006	Prob. & Statistics for Engineers	**3**	MATH2107	DR
	CIVL5204	Engineering Economics	**3**	MATH2107	DR
	Total		**6**		

Scheme II **Semester 5 (Fall 2028)**	**Course Code**	**Course Title**	**Cr.**	**Pre-req./Co-req.***	**Cat.**
	AREN3811	Building Construction Methods	**3**	CIVL3096	AR
	AREN3112	Architectural Design II	**3**	AREN2111	AR
	AREN3312	Introduction to CAAD	**3**	AREN2312	AR
	CIVL4400	Professional Practice and Ethics	**2**		DR
	CIVL4046	Fluid Mechanics	**3**	CIVL3011	DR
	MEIE3141	Thermodynamics I	**3**	PHYS2108* **or** PHYS2102*	AR
	Total		**17**		

Scheme II **Semester 6** **(Spring 2029)**	**Course Code**	**Course Title**	**Cr.**	**Pre-req./Co-req.***	**Cat.**
	AREN3814	Climate-responsive Design	3		AR
	AREN3313	Architectural Working Drawing	3	AREN3811, AREN3312	AR
	AREN3113	Architectural Design III	4	AREN3112	AR
	AREN3816	Building Mechanical Systems	3	MEIE3141	AR
	AREN3812	Architectural Acoustics	2		AR
	AREN3412	History II: Islamic & Vernacular	2		AR
	Total		**17**		

Scheme II **Semester 7** **(Fall 2029)**	**Course Code**	**Course Title**	**Cr.**	**Pre-req./Co-req.***	**Cat.**
		Architectural Elective I	**2**		AE
	CIVL 4206	Concrete Design	**3**	CIVL3036, CIVL3096, (CIVL3046 **or** AREN3312)	DR
	CIVL5146	Numerical Methods	**3**	(COMP2002 **or** ENGR2217), MATH3171	DR
	AREN4813	Building Illumination	**2**		AR
	AREN4817	Sanitary & Plumbing Design	**2**	CIVL4046	AR
	AREN4114	Architectural Design IV	**4**	AREN3113	AR
	AREN4113	Research Project	**1**	AREN3113	AR
	Total		**17**		

Scheme II **Semester 8** **(Spring 2030)**	**Course Code**	**Course Title**	**Cr.**	**Pre-req./Co-req.***	**Cat.**
	CIVL4216	Steelwork Design	**3**	CIVL3036, (CIVL3046 **or** AREN3312), (PHYS2108 **or** PHYS2102)	DR
		Architectural Elective II	**2**		AE
	AREN4818	Building Electrical Systems	**3**	AREN4813	AR
	AREN4115	Graduation Project I	**4**	AREN4114, CIVL4206, AREN4113	AR
	MATH4174	Differential Equations for Engineers	**3**	(LANC2161, MATH2108) **or** (LANC2161, MATH2109)	CR
	Total		**15**		

Scheme II **Summer** **2030**	**Course Code**	**Course Title**	**Cr.**	**Pre-req./Co-req.***	**Cat.**
	ENGR4007	Industrial Training	**0**		
	Total		**0**		

Scheme II **Semester 9** **(Fall 2030)**	**Course Code**	**Course Title**	**Cr.**	**Pre-req./Co-req.***	**Cat.**
		University Elective III	**2**		UE
		Architectural Elective III	**2**		AE
	ERSC2020	Geology for Engineers	**3**		DR
	AREN5819	Specifications and Quantities	**2**	AREN3313	AR
	AREN5116	Graduation Project II	**3**	AREN4115, AREN3816, AREN4818, AREN4817	AR
	CIVL5336	Construction Management	**3**	CIVL5204	DR
	Total		**15**		

Total (All Program)	156

Appendix A

No.	Cohorts 2018 and before	Credits	Cohorts 2018 and after	Cr.	Notes
1	ARAB1001	3	ARAB1060	**2**	
2	SOCY1001	1	SOCY1005	**2**	For Omanis Only
3	--	--	SOCY1007	**2**	For Non-Omanis
4	ARAB1019			**3**	For Non-Arabic Speaking Students. Offered only in Fall semesters

Notes:

- For the courses (SOCY1005, SOCY1007, HIST1010), the course materials and exams are in English for non-Arabic speaking students.

- Currently, there is no Arabic course with 2 credits for the non-Arabic speaking students of cohorts 2018 and after. Those students have to register the ARAB1019 as shown in the table above.

Department of Civil and Architectural Engineering

Architectural Engineering Degree Plan: 2025 Cohort

LIST A* – UNIVERSITY ELECTIVES

Please scan the barcode below to view the list of University Elective courses allowed for ENG students.

* University elective must be non-science and non-linguistic course. Any humanity and social course not listed above cannot be accepted as university elective.

Department of Civil and Architectural Engineering

Architectural Engineering Degree Plan: 2025 Cohort

LIST B: College REQUIREMENTS (CR)

Code	Title	Credits	Pre-Requisite / Co-req. *
ENGR1501	Introduction to Engineering	1	
ENGR1600	Workshop I	1	
LANC2160	English for Engineering I	3	
LANC2161	English for Engineering I	3	LANC2160
MATH2107	Calculus I	4	
MATH2109	Calculus II For Science and Engineering	3	MATH 2107
MATH3171	Linear Algebra & Multivariate Calculus	3	MATH2108 **or** MATH2109
MATH4174	Differential Equations for Engineers	3	(LANC2161, MATH2108) **or** (LANC2161, MATH2109)
PHYS2107	Physics for Engineering I	4	MATH2107*
PHYS2108	Physics for Engineering II	4	PHYS2107 **or** PHYS2101
CHEM1071	General Chemistry for Engineers	3	
ENGR4007	Industrial Training	0	
Total		**32**	

Department of Civil and Architectural Engineering

Architectural Engineering Degree Plan: 2025 Cohort

LIST C: College Electives (CE)

One Course- 3 credit hours: The elective course will be offered from the following courses subject to availability.

Code	Title	Credits	Pre-Requisite / Co-req. *
COMP 2002	Introduction to Comp. Programming for Engineers	3	
ENGR2217	Computer Programming	3	

Department of Civil and Architectural Engineering
Architectural Engineering Degree Plan: 2025 Cohort
LIST D: Department Requirement (DR)

Code	Title	Credits	Pre-Requisite / Co-req. *
CIVL3011	Statics	3	PHYS2107 **or** PHYS2101
CIVL3056	Surveying	3	MATH2107
CIVL3086	Mechanics of Materials	3	CIVL3011
CIVL3096	Construction Materials	3	CIVL3011, CHEM1071
ERSC2020	Geology for Engineers	3	
CIVL3036	Structures I	3	CIVL3086
CIVL4006	Prob. & Statistics for Engineers	3	MATH2107
CIVL4046	Fluid Mechanics	3	CIVL3011
CIVL4206	Concrete Design	3	CIVL3036, CIVL3096, (CIVL3046 **or** AREN3312)
CIVL4400	Professional Practice & Ethics	2	
CIVL5146	Numerical Methods	3	(ENGR2217 **or** COMP2002), MATH 3171
CIVL5204	Engineering Economics	3	MATH2107
CIVL4216	Steelwork Design	3	CIVL3036, (CIVL3046 **or** AREN3312), (PHYS2108 **or** PHYS2102)
CIVL5336	Construction Management	3	CIVL5204
Total		**41**	

Department of Civil and Architectural Engineering

Architectural Engineering Degree Plan: 2025 Cohort

LIST F: MAJOR Requirements (AR)

Code	Title	Credits	Pre-Requisite / Co-req. *
AREN2312	Architectural Drawing	2	
AREN2111	Architectural Design I	3	AREN2312, AREN3211
AREN2313	Architectural Graphics	3	AREN2312
AREN2411	History I: Modern &Contemporary	2	
AREN3811	Building Construction Methods	3	CIVL3096
AREN3112	Architectural Design II	3	AREN 2111
AREN3312	Introduction to CAAD	3	AREN2312
AREN3211	Architectural Design Theory	2	
MEIE 3141	Thermodynamics I	3	PHYS2108* **or** PHYS2102*
AREN3814	Climate-responsive Design	3	
AREN3313	Architectural Working Drawing	3	AREN3811, AREN3312
AREN3113	Architectural Design III	4	AREN3112
AREN3816	Building Mechanical Systems	3	MEIE3141
AREN3812	Architectural Acoustics	2	
AREN3412	History II: Islamic & Vernacular	2	
AREN4813	Building Illumination	2	
AREN4817	Sanitary & Plumbing Design	2	CIVL4046
AREN4114	Architectural Design IV	4	AREN3113
AREN4113	Research Project	1	AREN3113
AREN4818	Building Electrical Systems	3	AREN4813
AREN4115	Graduation Project I	4	AREN4114, CIVL4206
AREN5819	Specifications and Quantities	2	AREN3313
AREN5116	Graduation Project II	3	AREN4115, AREN3816, AREN4818, AREN4817
Total		**62**	

Department of Civil and Architectural Engineering
Architectural Engineering Degree Plan: 2025 Cohort
LIST G: MAJOR electives (AE)
Architectural Engineering Electives

Technical Elective Courses – 6 credit hours

The student should select 3 courses (6 credit hours) from the following architectural elective courses:

Code	Title	Credits	Pre-Requisite / Co-req. *
AREN3611	Principles of Settlement Planning	2	
AREN3808	Computer Aided Lighting Design	2	AREN4813
AREN3809	Architectural Conservation Techniques	2	
AREN3815	Sustainable Design in Hot climates	2	
AREN4202	Architectural Professional Practice	2	CIVL4400
AREN4203	Behavioral Factors in Housing Design	2	
AREN4205	Residential Planning and Design	2	
AREN4222	Fire and Smoke Control in Buildings	2	
AREN4304	Special Topics in CAD	2	
AREN4305	Introduction to Interior Design	2	
AREN4306	Spatial Analysis Techniques	2	
AREN4311	Emerging Technologies in Arch. Engineering	2	AREN3816
AREN4312	Parametric & Regenerative Design	2	AREN3312
AREN4313	Building Information Modeling	2	AREN3312
AREN4601	Landscape Design in Hot Regions	2	
AREN4604	Concepts and Elements of Urban Design in Hot Regions	2	
AREN4701	Design of Air Conditioning Systems	2	AREN3816
AREN4703	BIM for Mechanical, Electrical, and Plumbing Systems	2	AREN3816, AREN4817
AREN5403	Omani Vernacular Architecture	2	
AREN5801	Solar Energy in Buildings	2	
AREN5802	Modern Building Construction Systems	2	AREN3811
AREN5805	Building Energy Conservation and Analysis	2	