Degree and Study Plan

College: Engineering
Department: Electrical and Computer Engineering
Cohort: 2022
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)

كلية الهندسة
College of Engineering

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

1. **Scheme-I** is for students who by-passed the Foundation Program or those 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 & Spring)
3. **Co-Operative Training (Co-Op) Scheme (introduced in April 2020)** is optional. It is designed for students who are following Scheme-I or Scheme-II and willing to take 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:	Ahmed Al Maashri	Date:	17 October 2023
Dean: for		Date	22 October 2023

Assistant Dean For Undergraduate Studies
COLLEGE OF ENGINEERING
SULTAN QABOOS UNIVERSITY

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

Department of Electrical and Computer Engineering

Degree and Study Plan: 2022 Cohort (Scheme-I)

	Course Code	Course Title	Cr.	Pre-Requisites	Cat.
Scheme-I Sem-1 Fall 2022	-	General Foundation Program	-	-	UR
	Total Credits		-		
Scheme-I Semester-2 Spring 2023	HIST1010 or ISLM1010	Oman & Islamic Civilization **or** Islamic Culture	2		UR
	CHEM1071	General Chemistry for Engineering	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT(0105 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
	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 FPMT(0105 or 0109)	CR
	Total Credits		**14**		
Scheme-I Semester-3 Fall 2023	ARAB1060**	Arabic	2		UR
		University Elective	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	MATH2107	CR
	PHYS2107	Physics for Engineering I	4	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT(0105 or 0109), MATH2107	CR
	Total Credits		**16**		
Scheme-I Semester-4 Spring 2024	ECCE2017	Electrical Circuit Analysis	4	MATH2107	DR
	ECCE3206	Digital Logic Design	3		DR
	MATH3171	Linear Algebra & Multivariate Calculus for Engineers	3	MATH2109 + LANC2161	CR
	PHYS 2108	Physics for Engineering II	4	PHYS2107 OR PHYS2101	CR
	Total Credits		**14**		
Scheme-I Semester-5 Fall 2024	ENGR2217[2]	Introduction to Computer Programming for Engineers	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPCS (0101 or 0102)	CE
	ECCE3153	Electronic Devices and Circuits	3	ECCE2017	DR
	ECCE4023	Engineering Electromagnetics	3	PHYS2108 + MATH 3171	DR
	MATH4151	Disc. Math and Complex Analy.	3	MATH3171	DR
	MATH4174	Differential Equations for Engrs.	3	MATH2109 + LANC2161	CR
	Total Credits		**15**		
Scheme-I Semester-6 Spring 2025	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 + ECCE3206 + (ECCE3153 or MCTE3110)	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: 2022 Cohort (Scheme-I)
Telecommunications and Wireless Systems Specialization (TWS)

	Course Code	Course Title	Cr.	Pre-Requisites	Cat.
Scheme-I Semester-7 Fall 2025	ECCE3038	Elect. Measurements & Instr.	2	ECCE2017 and ECCE3153	DR
	ECCE4122	Principles of Analog & Digital Communication	3	ECCE3142 and STAT2103	DR
	ECCE4242	Introduction to Computer Networks	3	ECCE4227 or COMP3518 or COMP3501 [Incompatible with ECCE5231]	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 26	ECCE3006	Skills Training	-	ECCE3152 or MCTE3110	DR
	Total Credits		**0**		
Scheme-I Semester-8 Spring 2026	ECCE4082	Professional Skills	1	LANC2161	DR
	ECCE4127	Advanced Digital Communication	3	ECCE4122	SR
	ECCE4416	Linear Control Systems	3	ECCE3142	DR
	ECCE5113	Antenna Theory and Radiowave Propagation	3	ECCE4023	SR
	ECCE5010	Engineering Economics and Project Management	3	STAT2103	DR
		University Elective	2		UE
	Total Credits		**15**		
Summer 2026	ENGR4007	Industrial Training	-	ECCE3006	CR
	Total Credits		**0**		
Scheme-I Semester-9 Fall 2026	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**		
Scheme-I Semester-10 Spring 2027	ECCE5099	Project (Part II)	3	ECCE5009	DR
	ECCE5143	Advanced Digital Signal Proc.	3	ECCE4142 and ECCE4227	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] Or ECCE4xxx

Degree and Study Plan: 2022 Cohort (Scheme-I)

Embedded Computing and Networks Specialization (ECN)

	Course Code	Course Title	Cr.	Pre-Requisites	Cat.
Scheme-I **Semester-7 Fall 2025**	ECCE3038	Elect. Measurements & Instr.	2	ECCE2017 and ECCE3153	DR
	ECCE4122	Principles of Analog & Digital Communication	3	ECCE3142 and STAT2103	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 26	ECCE3006	Skills Training	**-**	ECCE3152 or MCTE3110	DR
	Total Credits		**0**		
Scheme-I **Semester-8 Spring 2026**	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 or COMP3518 or COMP3501 [Incompatible with ECCE5231]	SR
	ECCE4257	Applied Algorithms for ECE	3	(COMP2002 or ENGR2217) and ECCE3258	SR
	ECCE4254	Operating Systems	3	COMP2002 or ENGR2217 [Incompatible with ECCE5231]	SR
	ECCE5217	Reconfigurable Computing	3	ECCE4227	SR
	Total Credits		**15**		
Summer **2026**	ENGR4007	Industrial Training	**-**	ECCE3006	CR
	Total Credits		**0**		
Scheme-I **Semester-9 Fall 2026**	ECCE5232	Computer Architecture and Organization	3	ECCE4227	SR
	ECCE5009	Project (Part I)	2	ECCE4010 and PR[3]	DR
	ECCE5218	Routing and Switching	3	ECCE4242	SR
	ECCE5293	Embedded Vision Systems	3	ECCE4227	SR
	ECCE5xxx[4]	Specialization Elective	3	Offered course-specific	SE
	ECCE5010	Engineering Economics and Project Management	3	STAT2103	DR
	Total Credits		**17**		
Scheme-I **Semester-10 Spring 2027**	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[4]	Specialization Elective	3	Offered course specific	SE
	ECCE5xxx[4]	Specialization Elective	3	Offered course-specific	SE
	Total Credits		**15**		

Degree and Study Plan: 2022 Cohort (Scheme-I)

Power Systems and Energy Specialization (PSE)

	Course Code	Course Title	Cr.	Pre-Requisites	Cat.
Scheme-I Semester-7 Fall 2025	ECCE3038	Elect. Measurements & Instr.	2	ECCE2017 and ECCE3153	DR
	ECCE4122	Principles of Analog & Digital Communication	3	ECCE3142 and STAT2103	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 26	ECCE3006	Skills Training	-	ECCE3152 or MCTE3110	DR
	Total Credits		**0**		
Scheme-I Semester-8 Spring 2026	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	DR
	ECCE4467	Power Electronics & Drives	3	(ECCE3153 or MCTE3110) and (ECCE3352 or MCTE3210)	SR
	Total Credits		**16**		
Summer 2026	ENGR4007	Industrial Training	-	ECCE3006	CR
	Total Credits		**0**		
Scheme-I Semester-9 Fall 2026	ECCE5009	Project (Part I)	2	ECCE4010 and PR[3]	DR
	ECCE5302	Power Systems Protection	3	ECCE4316	SR
	ECCE5332	High Voltage Engineering	3	ECCE4312	SR
	ECCE5303	Power Distribution System Eng.	3	ECCE4312	SR
	ECCE5xxx[4]	Specialization Elective	3	Offered course specific	SE
		University Elective	2		UE
	Total Credits		**16**		
Scheme-I Semester-10 Spring 2027	ECCE5099	Project (Part II)	3	ECCE5009	DR
	ECCE5322	Electrical Power Systems Quality	3	ECCE4312	SR
	ECCE5315	Smart Grid	3	ECCE3352 and ECCE4312	SR
	ECCE5xxx[4]	Specialization Elective	3	Offered course specific	SE
	ECCE5xxx[4]	Specialization Elective	3	Offered course specific	SE
	Total Credits		**15**		

Degree and Study Plan: 2022 Cohort (Scheme-I)

Electronic Instrumentation and Control Specialization (EIC)

	Course Code	Course Title	Cr.	Pre-Requisites	Cat.
Scheme-I Semester-7 Fall 2025	ECCE3038	Elect. Measurements & Instr.	2	ECCE2017 and ECCE3153	DR
	ECCE4122	Principles of Analog & Digital Communication	3	ECCE3142 and STAT2103	DR
	ECCE4153	Modern Digital Electronics	3	ECCE3153	SR
	ECCE4416	Linear Control Systems	3	ECCE3142	DR
	ECCE4467	Power Electronics & Drives	3	(ECCE3153 or MCTE3110) and (ECCE3352 or MCTE3210)	SR
		University Elective	2		UE
	Total Credits		**16**		
Jan 26	ECCE3006	Skills Training	-	ECCE3152 or MCTE3110	DR
	Total Credits		**0**		
Scheme-I Semester-8 Spring 2026	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 2026	ENGR4007	Industrial Training	-	ECCE3006	CR
	Total Credits		**0**		
Scheme-I Semester-9 Fall 2026	ECCE5009	Project (Part I)	2	ECCE4010 and PR[3]	DR
	ECCE5452	Computer-Aided Instrumentation	3	(ECCE4456 or ECCE4455) and ECCE4227	SR
	ECCE5411	Introduction to Industrial Network Practices	3	ECCE4436	SR
	ECCE5xxx[4]	Specialization Elective	3	Offered course-specific	SE
	ECCE5xxx[4]	Specialization Elective	3	Offered course-specific	SE
	ECCE5010	Engineering Economics and Project Management	3	STAT2103	DR
	Total Credits		**17**		
Scheme-I Semester-10 Spring 2027	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[4]	Specialization Elective	3	Offered course-specific	SE
	Total Credits		**14**		

Department of Electrical and Computer Engineering

Degree and Study Plan: 2022 Cohort (Scheme-II)

	Course Code	Course Title	Cr.	Pre-Requisites	Cat.
Scheme-II Sem-1 Fall 2022	-	General Foundation Program	-	-	UR
	Total Credits		**-**		
Scheme-II Sem-2 SP2023	-	General Foundation Program	-	-	UR
Scheme-II Sem-3 Fall 23	HIST1010 or ISLM1010	Oman & Islamic Civilization **or** Islamic Culture	2		UR
	CHEM1071	General Chemistry for Engineering	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT(0105 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
	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 FPMT(0105 or 0109)	CR
	Total Credits		**14**		
Scheme-II Semester-4 Spring 2024	ARAB1060**	Arabic	2		UR
		University Elective	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	MATH2107	CR
	PHYS2107	Physics for Engineering I	4	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT(0105 or 0109) and MATH2107	CR
	Total Credits		**16**		
Scheme-II Semester-5 Fall 2024	ECCE2017	Electrical Circuit Analysis	4	MATH2107	DR
	ECCE3206	Digital Logic Design	3		DR
	MATH3171	Linear Algebra & Multivariate Calculus for Engineers	3	MATH2109 and LANC2161	CR
	PHYS 2108	Physics for Engineering II	4	PHYS2107 or PHYS2101	CR
	ENGR2217[5]	Introduction to Computer Programming for Engineers	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPCS (0101 or 0102)	CE
	ECCE4082	Professional Skills	1	LANC2161	DR
	Total Credits		**18**		
Scheme-II Semester-6 Spring 2025	ECCE3352	Electrical Technology	3	ECCE2017	DR
	ECCE4023	Engineering Electromagnetics	3	PHYS2108 and MATH 3171	DR
	MATH4174	Differential Equations for Engrs.	3	MATH2109 and LANC2161	CR
	ECCE3153	Electronic Devices and Circuits	3	ECCE2017	DR
	ECCE3142	Signals & Systems	3	ECCE2017	DR
	STAT2103	Probability for Engineers	3	MATH2107	DR
	Total Credits		**18**		

[5] *ENGR 2217-Programming for Engineers*

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

Degree and Study Plan: 2022 Cohort (Scheme-II)
Telecommunications and Wireless Systems Specialization (TWS)

	Course Code	Course Title	Cr.	Pre-Requisites	Cat.
Scheme-II Semester-7 Fall 2025	ECCE3038	Elect. Measurements & Instr.	2	ECCE2017 and ECCE3153	DR
	ECCE4122	Principles of Analog & Digital Communication	3	ECCE3142 and STAT2103	DR
	ECCE4153	Modern Digital Electronics	3	ECCE3153	SR
	ECCE4227	Embedded Systems	3	(COMP2002 or ENGR2217) and ECCE3206 and (ECCE3153 or MCTE3110)	DR
	ECCE4010	Engineering Design and Professional Ethics	2	ECCE3142 and ECCE3352 and ECCE3153 and ECCE3206	DR
	ECCE4142	Digital Signal Processing	3	ECCE3142	SR
	Total Credits		**16**		
Jan 26	ECCE3006	Skills Training	-	ECCE3152 or MCTE3110	DR
	Total Credits		**0**		
Scheme-II Semester-8 Spring 2026	ECCE4127	Advanced Digital Communication	3	ECCE4122	SR
	ECCE5010	Engineering Economics and Project Management	3	STAT2103	SR
	ECCE5113	Antenna Theory and Radiowave Propagation	3	ECCE4023	SR
	ECCE4416	Linear Control Systems	3	ECCE3142	DR
	ECCE4242	Introduction to Computer Networks	3	ECCE4227 or COMP3518 or COMP3501 [Incompatible with ECCE5231]	
	MATH4151	Disc. Math and Complex Analy.	3	MATH3171	DR
	Total Credits		**18**		
Scheme-II Summer 2026	ENGR4007	Industrial Training	-	ECCE3006	CR
	Total Credits		**0**		
Scheme-II Semester-9 Fall 2026	ECCE5009	Project (Part I)	2	ECCE4010 and PR[6]	DR
	ECCE5123	Optical Communications	3	ECCE4122	SR
	ECCE5124	Wireless Communications	3	ECCE4122	SR
	ECCE5114	Telecom Systems Security	3	ECCE4122	SR
	MATH4176	Numerical Analysis for Engineers	3	MATH3171 and MATH4174 and (COMP2002 or ENGR2217)	DR
		University Elective	2		UE
	Total Credits		**16**		
Scheme-II Semester-10 Spring 2027	ECCE5099	Project (Part II)	3	ECCE5009	DR
	ECCE5130	Modern Communication Systems Design	3	ECCE4153	SR
	ECCE5143	Advanced Digital Signal Proc.	3	ECCE4142 and ECCE4227	SR
	ECCE5xxx[7]	Specialization Elective	3	Offered course-specific	SE
		University Elective	2		UE
	Total Credits		**14**		
Scheme-II Summer 2027	ECCE5xxx[4]	Specialization Elective	3	Offered course-specific	SE
	ECCE5xxx[4]	Specialization Elective	3	Offered course-specific	SE
	Total Credits		**6**		

[6] Internal regulation [enforced by the ECE Department]. ECCE5009 will be available only in each Fall semester.
[7] Or ECCE4xxx

Degree and Study Plan: 2022 Cohort (Scheme-II)

Embedded Computing and Networks Specialization (ECN)

	Course Code	Course Title	Cr.	Pre-Requisites	Cat.
Scheme-II Semester-7 Fall 2025	ECCE3038	Elect. Measurements & Instr.	2	ECCE2017 and ECCE3153	DR
	ECCE4122	Principles of Analog & Digital Communication	3	ECCE3142 and STAT2103	DR
	ECCE4216	Machine Learning for Engineers	3	(ENGR2217 or COMP2002) and (ECCE3352 or MCTE3210)	SR
	ECCE4416	Linear Control Systems	3	ECCE3142	DR
	ECCE4227	Embedded Systems	3	(COMP2002 or ENGR2217) and ECCE3206 and (ECCE3153 or MCTE3110)	DR
	MATH4151	Disc. Math and Complex Analy.	3	MATH3171	DR
	Total Credits		**17**		
Jan 26	ECCE3006	Skills Training	-	ECCE3152 or MCTE3110	DR
	Total Credits		**0**		
Scheme-II Semester-8 Spring 2026	ECCE4010	Engineering Design and Professional Ethics	2	ECCE3142 and ECCE3352 and ECCE3153 and ECCE3206	DR
	MATH4176	Numerical Analysis for Engineers	3	MATH3171 and MATH4174 and (COMP2002 or ENGR2217)	DR
	ECCE4242	Introduction to Computer Networks	3	ECCE4227 or COMP3518 or COMP3501 [Incompatible with ECCE5231]	SR
	ECCE4257	Applied Algorithms for ECE	3	(COMP2002 or ENGR2217) and ECCE3258	SR
	ECCE4254	Operating Systems	3	COMP2002 or ENGR2217 [Incompatible with ECCE5231]	SR
	ECCE5217	Reconfigurable Computing	3	ECCE4227	SR
	Total Credits		**17**		
Scheme-II Summer 2026	ENGR4007	Industrial Training	-	ECCE3006	CR
	Total Credits		**0**		
Scheme-II Semester-9 Fall 2026	ECCE5232	Computer Architecture and Organization	3	ECCE4227	SR
	ECCE5009	Project (Part I)	2	ECCE4010 and PR[3]	DR
	ECCE5218	Routing and Switching	3	ECCE4242	SR
	ECCE5293	Embedded Vision Systems	3	ECCE4227	SR
	ECCE5010	Engineering Economics and Project Management	3	STAT2103	DR
		University Elective	2		UE
	Total Credits		**16**		
Scheme-II Semester-10 Spring 2027	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[4]	Specialization Elective	3	Offered course-specific	SE
		University Elective	2		UE
	Total Credits		**14**		
Scheme-II Summer 2027	ECCE5xxx[4]	Specialization Elective	3	Offered course specific	SE
	ECCE5xxx[4]	Specialization Elective	3	Offered course-specific	SE
	Total Credits		**6**		

Degree and Study Plan: 2022 Cohort (Scheme-II)

Power Systems and Energy Specialization (PSE)

	Course Code	Course Title	Cr.	Pre-Requisites	Cat.
Scheme-II Semester-7 Fall 2025	ECCE3038	Elect. Measurements & Instr.	2	ECCE2017 and ECCE3153	DR
	ECCE4122	Principles of Analog & Digital Communication	3	ECCE3142 and STAT2103	DR
	ECCE4312	Power System Analysis I	3	ECCE3352	SR
	ECCE4227	Embedded Systems	3	(COMP2002 or ENGR2217) and ECCE3206 and (ECCE3153 or MCTE3110)	DR
	ECCE4358	Electrical Machines	3	ECCE3352	SR
	ECCE4010	Engineering Design and Professional Ethics	2	ECCE3142 and ECCE3352 and ECCE3153 and ECCE3206	DR
	Total Credits		**16**		
Jan 26	ECCE3006	Skills Training	-	ECCE3152 or MCTE3110	DR
	Total Credits		**0**		
Scheme-II Semester-8 Spring 2026	ECCE4361	Renewable Electricity generation	3	ECCE3352	SR
	ECCE4316	Power System Analysis II	3	ECCE4312	SR
	ECCE4467	Power Electronics & Drives	3	(ECCE3153 or MCTE3110) and (ECCE3352 or MCTE3210)	SR
	ECCE5010	Engineering Economics and Project Management	3	STAT2103	DR
	MATH4151	Disc. Math and Complex Analy.	3	MATH3171	DR
		University Elective	2		UE
	Total Credits		**17**		
Scheme-II Summer 2026	ENGR4007	Industrial Training	-	ECCE3006	CR
	Total Credits		**0**		
Scheme-II Semester-9 Fall 2026	ECCE5009	Project (Part I)	2	ECCE4010 and PR[3]	DR
	ECCE5302	Power Systems Protection	3	ECCE4316	SR
	ECCE5332	High Voltage Engineering	3	ECCE4312	SR
	ECCE5303	Power Distribution System Eng.	3	ECCE4312	SR
	MATH4176	Numerical Analysis for Engineers	3	MATH3171 and MATH4174 and [COMP2002 or ENGR2217]	DR
		University Elective	2		UE
	Total Credits		**16**		
Scheme-II Semester-10 Spring 2027	ECCE5099	Project (Part II)	3	ECCE5009	DR
	ECCE5322	Electrical Power Systems Quality	3	ECCE4312	SR
	ECCE5315	Smart Grid	3	ECCE3352 and ECCE4312	SR
	ECCE5xxx[4]	Specialization Elective	3	Offered course specific	SE
	ECCE4416	Linear Control Systems	3	ECCE3142	DR
	Total Credits		**15**		
Scheme-II Summer 2027	ECCE5xxx[4]	Specialization Elective	3	Offered course specific	SE
	ECCE5xxx[4]	Specialization Elective	3	Offered course specific	SE
	Total Credits		**6**		

Degree and Study Plan: 2022 Cohort (Scheme-II)

Electronic Instrumentation and Control Specialization (EIC)

	Course Code	Course Title	Cr.	Pre-Requisites	Cat.
Scheme-II Semester-7 Fall 2025	ECCE3038	Elect. Measurements & Instr.	2	ECCE2017 and ECCE3153	DR
	ECCE4122	Principles of Analog & Digital Communication	3	ECCE3142 and STAT2103	DR
	ECCE4467	Power Electronics & Drives	3	(ECCE3153 or MCTE3110) and (ECCE3352 or MCTE3210)	SR
	ECCE4227	Embedded Systems	3	(COMP2002 or ENGR2217) and ECCE3206 and (ECCE3153 or MCTE3110)	DR
	ECCE4416	Linear Control Systems	3	ECCE3142	DR
	MATH4151	Disc. Math and Complex Analy.	3	MATH3171	DR
	Total Credits		**17**		
Jan 26	ECCE3006	Skills Training	-	ECCE3152 or MCTE3110	DR
	Total Credits		**0**		
Scheme-II Semester-8 Spring 2026	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
	ECCE4153	Modern Digital Electronics	3	ECCE3153	SR
	Total Credits		**17**		
Scheme-II Summer 2026	ENGR4007	Industrial Training	-	ECCE3006	CR
	Total Credits		**0**		
Scheme-II Semester-9 Fall 2026	ECCE5009	Project (Part I)	2	ECCE4010 and PR[3]	DR
	ECCE5452	Computer-Aided Instrumentation	3	(ECCE4456 or ECCE4455) and ECCE4227	SR
	ECCE5411	Introduction to Industrial Network Practices	3	ECCE4436	SR
	MATH4176	Numerical Analysis for Engineers	3	MATH3171 and MATH4174 and (COMP2002 or ENGR2217)	DR
	ECCE5010	Engineering Economics and Project Management	3	STAT2103	DR
		University Elective	2		UE
	Total Credits		**16**		
Scheme-II Semester-10 Spring 2027	ECCE5099	Project (Part II)	3	ECCE5009	DR
	ECCE5410	Intelligent Control Systems	3	ECCE4416	SR
	ECCE5445	Control System Design	3	ECCE4416 or MCTE4250	SR
	ECCE5xxx[4]	Specialization Elective	3	Offered course-specific	SE
		University Elective	2		UE
	Total Credits		**14**		
Scheme-II Summer 2027	ECCE5xxx[4]	Specialization Elective	3	Offered course-specific	SE
	ECCE5xxx[4]	Specialization Elective	3	Offered course-specific	SE
	Total Credits		**6**		

The Co-Operative Training (Co-Op) Scheme is **optional**. Students can enroll in this scheme after finishing semester-8. Following is designed for Scheme-I students and 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 Scheme

Co-Op Scheme Co-Op Sem-1 Fall-2026	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 Scheme Co-Op Sem-2 SP-2027	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 2027	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 2028	ECCE5099	Project (Part II)	3	ECCE5009	DR
	ECCE5143	Advanced Digital Signal Processing	3	ECCE4142 and ECCE4227	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**		

Embedded Computing and Networks Specialization (ECN)

Semester-9 Fall 2027	ECCE5232	Computer Architecture and Organization	3	ECCE4227	SR
	ECCE5009	Project (Part I)	2	ECCE4010 and PR[3]	DR
	ECCE5218	Routing and Switching	3	ECCE4242	SR
	ECCE5293	Embedded Vision Systems	3	ECCE4227	
	ECCE5xxx[4]	Specialization Elective	3	Offered course-specific	SE
	ECCE5010	Engineering Economics and Project Management	3	STAT2103	DR
	Total Credits		**17**		
Semester-10 Spring 2028	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[4]	Specialization Elective	3	Offered course-specific	SE
	ECCE5xxx[4]	Specialization Elective	3	Offered course-specific	SE
	Total Credits		**15**		

Power Systems and Energy Specialization (PSE)

Semester-9 Fall 2027	ECCE5009	Project (Part I)	2	ECCE4010 and PR[3]	DR
	ECCE5302	Power Systems Protection	3	ECCE4316	SR
	ECCE5332	High Voltage Engineering	3	ECCE4312	SR
	ECCE5303	Power Distribution System Eng.	3	ECCE4312	SR
	ECCE5xxx[4]	Specialization Elective	3	Offered course specific	SE
		University Elective	2		UE
	Total Credits		**16**		
Semester-10 Spring 2028	ECCE5099	Project (Part II)	3	ECCE5009	DR
	ECCE5322	Electrical Power System Quality	3	ECCE4312	SR
	ECCE5315	Smart Grid	3	ECCE3352 and ECCE4312	SR
	ECCE5xxx[4]	Specialization Elective	3	Offered course specific	SE
	ECCE5xxx[4]	Specialization Elective	3	Offered course specific	SE
	Total Credits		**15**		

Electronic Instrumentation and Control Specialization (EIC)

Semester-9 Fall 2027	ECCE5009	Project (Part I)	2	ECCE4010 and PR[3]	DR
	ECCE5452	Computer-Aided Instrumentation	3	(ECCE4456 or ECCE4455) and ECCE4227	SR
	ECCE5411	Introduction to Industrial Network Practices	3	ECCE4436	SR
	ECCE5xxx[4]	Specialization Elective	3	Offered course specific	SE
	ECCE5xxx[4]	Specialization Elective	3	Offered course specific	SE
	ECCE5010	Engineering Economics and Project Management	3	STAT2103	DR
	Total Credits		**17**		
Semester-10 Spring 2028	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[4]	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.
- For the university electives below, engineering students must register a humanity or social course (non-scientific & non-linguistic course) from any college as a University Elective. However, students are **NOT** allowed to register the following University Electives listed below

List A: UNIVERSITY ELECTIVES (UE) – 6 Credits

No.	Course Code	Course Title	College
1	ENGL1523	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: Creativity and Innovation	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

List B: COLLEGE REQUIREMENTS (CR) – 32 Credits

No.	Course Code	Course Title	Credits	Pre-Requisites
1	LANC2160	English for Engineering I	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)
2	LANC2161	English for Engineering II	3	LANC2160
3	ENGR1501	Introduction to Engineering	1	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)
4	ENGR1600	Workshop I	1	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)
5	MATH2107	Calculus I	4	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT (0105 or 0109)
6	MATH2109	Calculus II for science and Engineering	3	MATH 2107
7	MATH3171	Linear Algebra & Multivariate Calculus	3	MATH2109, LANC2161
8	MATH4174	Differential Equations for Engineers	3	MATH2109, LANC2161
9	PHYS2107	Physics for Engineering I	4	MATH2107*, FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT (0105 or 0109)
10	PHYS2108	Physics of Engineering II	4	PHYS 2107
11	CHEM1071	General Chemistry for Engineering	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT (0105 or 0109)
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	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPCS (0101 or 0102)
2	ENGR2217	Programming for Engineers	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPCS (0101 or 0102)

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	ECCE2017 and 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.	ECCE4023	Engineering Electromagnetics	3	MATH3171 and PHYS2108
9.	ECCE4082	Professional Skills	1	LANC2161
10.	ECCE4122	Principles of Analog & Digital Comm	3	ECCE3142 and STAT2103
11.	ECCE4227	Embedded Systems	3	(COMP2002 or ENGR2217) and ECCE3206 and (ECCE3153 or MCTE3110)
12.	ECCE4416	Linear Control Systems	3	ECCE3142
13.	ECCE5010	Engineering Economics and Project Management	3	STAT2103
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	ECCE3152 or MCTE3110

List H: SPECIALIZATION REQUIREMENT (SR) – 30Credits

Telecommunications and Wireless Systems Specialization

No.	Course Code	Course Title	College	Pre-Requisite
1.	ECCE4242	Introduction to Computer Networks	3	(ECCE4227 or COMP3518 or COMP3501) [Incompatible with ECCE5231]
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 Radiowave 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 and ECCE4227
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 or COMP3518 or COMP3501 [Incompatible with ECCE5231]
2.	ECCE4216	Machine Learning for Engineers	3	(ENGR2217 or COMP2002) and (ECCE3352 or MCTE3210)
3.	ECCE4257	Applied Algorithms for ECE	3	(COMP2002 or ENGR2217) and ECCE3258
4.	ECCE4254	Operating Systems	3	COMP2002 or ENGR2217 [Incompatible with ECCE5231]
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 Applications 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) 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	ECCE4316
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	ECCE3352 and 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) 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
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 or COMP3518 or COMP3501 [Incompatible with ECCE5231]
12.	ECCE4254	Operating Systems	COMP2002 or ENGR2217 [Incompatible with ECCE5231]
13.	ECCE4257	Applied Algorithms for ECE	(COMP2002 or ENGR2217) and ECCE3258
14.	ECCE4272	Artificial Intelligence	
15.	ECCE4282	Coding and Data Encryption	ECCE3122 or ECCE4122
16.	ECCE4312	Power System Analysis I	ECCE3352
17.	ECCE4316	Power System Analysis II	ECCE4312
18.	ECCE4358	Electrical Machines	ECCE3352
19.	ECCE4360	Renewable Energy Systems	ECCE4358 and ECCE4316
20.	ECCE4361	Renewable Electricity Generation	ECCE3352
21.	ECCE4422	Digital Control Systems	ECCE4416
22.	ECCE4436	Industrial Control Systems Design	ECCE4416
23.	ECCE4455	Sensors and Actuators	ECCE3038
24.	ECCE4467	Power Electronics & Drives	(ECCE3153 or MCTE3110) and (ECCE3352 or MCTE3210)
25.	ECCE5001	Entrepreneurial Opportunities in Electrical and Computer Engineering	
26.	ECCE5002	Selected Topics in ECE	
27.	ECCE5006	Biomedical Signal Processing	ECCE3142
28.	ECCE5007	Biomedical Instrumentation Engineering	ECCE3142
29.	ECCE5008	Project Management	ECCE5004 or ECCE5010
30.	ECCE5113	Antenna Theory and Radiowave Propagation	ECCE4023
31.	ECCE5114	Telecom Systems Security	ECCE4122
32.	ECCE5122	Communications Systems	ECCE4124 or ECCE4127
33.	ECCE5123	Optical Communications	ECCE4122
34.	ECCE5124	Wireless Communications	ECCE4122
35.	ECCE5128	Wireless Communication Networks	ECCE4126
36.	ECCE5129	Information Theory and Data Communications	ECCE4126
37.	ECCE5130	Modern Communication Systems Design	ECCE4153
38.	ECCE5131	Digital Cellular Systems	ECCE4142
39.	ECCE5133	Satellite Communications	ECCE4122
40.	ECCE5134	Selected Topics in Communications	ECCE4124 or ECCE4127
41.	ECCE5136	Error Control Coding	ECCE4122
42.	ECCE5142	Image and Video Processing	ECCE4142
43.	ECCE5143	Advanced Digital Signal Processing	ECCE4142 and ECCE4227
44.	ECCE5160	Antenna Modeling and Measurement Techniques	ECCE4023
45.	ECCE5162	Microwave Engineering	ECCE4023
46.	ECCE5164	RF Comm. Circuits	ECCE4153 or ECCE4153
47.	ECCE5166	Introduction to EMI/EMC	ECCE3022 or ECCE4023
48.	ECCE5212	VLSI Design	ECCE4227
49.	ECCE5213	Fault-Tolerant Computing Systems	ECCE4227
50.	ECCE5214	Adv. Logic & Computer Interfacing	ECCE4227
51.	ECCE5215	Computing Systems for Eng. Applications	ECCE4242
52.	ECCE5217	Reconfigurable Computing	ECCE4227
53.	ECCE5218	Routing and Switching	ECCE4242
54.	ECCE5219	Intelligent Applications in Robotics & Drones	ECCE4227
55.	ECCE5220	AI Accelerators	ECCE4227
56.	ECCE5222	Microprocessor Interfacing	ECCE4227

57.	ECCE5223	Adv. Embedded Systems Design	ECCE4227
58.	ECCE5224	Microprocessor Based Control Design	ECCE4227
59.	*ECCE5228*	Cloud & Edge Computing Infrastructure	ECCE4242
60.	*ECCE5229*	Embedded Real Time Systems	ECCE4227
61.	ECCE5231	Industrial Networks and Operating Systems	ECCE4227 and COMP2002 [Incompatible with ECCE4242 and ECCE4254]
62.	ECCE5233	Computer Architecture and Organization II	ECCE5232
63.	*ECCE5234*	Industrial Systems Security	ECCE4242 or ECCE5411
64.	*ECCE5236*	Practical Ethical Hacking	ECCE4242 or ECCE5411
65.	ECCE5242	Advanced Computer Networks	ECCE4242
66.	ECCE5243	Network Software Design & Programming	ECCE4242
67.	ECCE5252	Software Engineering	ECCE4252 or ECCE4255
68.	ECCE5265	Database Engineering and Applications	COMP2002 or ENGR2217
69.	ECCE5282	Computer Network Security	ECCE4242 or ECCE5231
70.	ECCE5283	Cryptography, Security & e-Commerce	ECCE4242
71.	ECCE5284	Digital Forensics	(ENGR2217 or COMP2002) and (ECCE4242 or ECCE5411 or ECCE5231)
72.	ECCE5291	Functional Verification of Hardware Designs	ECCE4227
73.	ECCE5292	Selected Topics in Computer Engineering	ECCE4227 and (ECCE4242 or ECCE5231)
74.	ECCE5293	Embedded Vision Systems	ECCE4227
75.	ECCE5294	Introduction to Real Time Systems	COMP2002 or ENGR2217
76.	ECCE5302	Power Systems Protection	ECCE4316
77.	ECCE5303	Power Distribution System Eng.	ECCE4316
78.	ECCE5304	Power Stations	ECCE4312
79.	ECCE5313	Electric Power Transmission System Eng.	ECCE4316
80.	ECCE5314	Selected Topics in Power	ECCE4312
81.	ECCE5315	Smart Grid	ECCE3352 and ECCE4312
82.	ECCE5316	Renewable Power Generation	ECCE3352
83.	ECCE5317	Power System Stability and Control	ECCE4316
84.	ECCE5322	Electrical Power Systems Quality	ECCE4312
85.	ECCE5323	Power System Operation	ECCE4316
86.	ECCE5324	Power System Reliability and Planning	ECCE4312
87.	ECCE5332	High Voltage Engineering	ECCE4312
88.	ECCE5333	Power System Economics	ECCE4312
89.	ECCE5342	Electrical Engineering Material	PHYS2108
90.	ECCE5352	Generalized Machine Theory	ECCE4358
91.	ECCE5410	Intelligent control systems	ECCE4416
92.	ECCE5411	Introduction to the Industrial network practices	ECCE4436
93.	ECCE5412	Mechatronics	ECCE4416
94.	ECCE5414	Real Time Control System	ECCE4416 and ECCE4227
95.	ECCE5415	Control of Electric Machines	ECCE4467
96.	ECCE5422	Selected Topics in Control Systems	ECCE4416 or MCTE4250
97.	ECCE5432	Programmable Logic Control Systems	ECCE3206 and ECCE4416
98.	ECCE5433	Modern Control Systems	ECCE4416
99.	ECCE5434	System Dynamics and Simulation	ECCE3142
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 01st of August 2022
- Course Syllabus and exact prerequisite(s) can be checked on https://portal.squ.edu.om/course-description