

Electrical Communications Engineering Program Matrix



Sem	Code	Course	A.1	A.2	A.3	A.4	A.5	A.6	A.7	A.8	A.9	A.10	B.1	B.2	B.3	B.4	B.5	C.1	C.2	C.3	C.4	
1	EB 101	Engineering Mathematics (1)	1						1			1										
1	EB 111	Engineering Mechanics (1)	1						1			1										
1	EB 121	Engineering Physics (1)	1	1					1			1										
1	EB 141	Eng. Drawing & Descriptive Geometry (1)	1						1			1										
1	UEC 01E	Computer Skills & Programming Concepts (1)	1	1	1	1					1	1										
1	HU 121	Engineering Perspectives and Technology	1						1	1												
18 Cr	EB 131	General Chemistry	1	1	1				1	1		1										
2	EB 102	Engineering Mathematics (2)	1						1			1										
2	EB 112	Engineering Mechanics (2)	1						1			1										
2	EB 122	Engineering Physics (2)	1	1					1			1										
2	EB 142	Eng. Drawing & Descriptive Geometry (2)	1						1			1										
2	UCS 01	Communication Skills (1)	1								1	1										
2	UEC 02E	Computer Skills & Programming Concepts (2)	1	1	1	1					1	1										
2	UGE 01	English Language (1)	1						1	1		1										
18 Cr	EM 170	Introduction to Manufacturing Processes	1			1	1			1	1											
3	HU 113	Technical Reports Writing and Presentation Skills	1						1	1	1											
3	EB 103	Engineering Mathematics (3)	1						1			1										
3	EB 123	Modern Physics	1	1					1	1		1										
3	EE 204	Computer Programming	1	1							1	1										
18 Cr	EE 271	Energy Systems	1	1							1	1	1	1	1	1	1					
18 Cr	EE 291	Electric Circuits	1	1	1								1	1	1	1	1					
4	EB 104	Linear Algebra	1									1										
4	EB 204	Engineering Mathematics (4)	1									1										
4	EE 202	Digital Logic Fundamentals	1			1						1	1	1	1	1	1					
4	EE 211	Electronics Workshop	1	1					1				1	1	1	1	1					
4	EE 213	Introduction to Electronic Circuits	1	1									1	1	1	1	1					
4	EE 293	Electrical Measurements and Instrumentation (1)	1										1	1	1	1	1					
18 Cr	UGE 02	English Language (2)	1									1										
5	EB 307	Numerical Analysis using MATLAB	1	1								1	1									
5	EE 203	Introduction to Microprocessors	1	1								1	1	1	1	1	1					
5	EE 224	Micro-Electronic Devices & Circuits	1	1								1	1	1	1	1	1					
5	EE 241	Signals and Systems	1	1									1	1	1	1	1					
18 Cr	EE 260	Electromagnetic Fields	1	1									1									
6	EB 205	Probabilities and Random Variables	1	1	1							1										
6	EE 261	Electromagnetic Waves & Transmission Media	1									1										
6	EE 251	Analog Communications	1	1								1	1	1	1	1	1					
6	EE 225	Solid State Electronics	1	1								1	1	1	1	1	1					
6	EE 228	Analog Integrated Circuits	1	1								1	1	1	1	1	1					
18 Cr	EB 206	Special Functions	1	1								1										
7	EE 262	Microwave Engineering	1										1	1	1	1	1	1	1	1	1	1
7	EE 290	Control Systems (1)	1	1									1	1	1	1	1	1	1	1	1	1
7	EE 252	Communications Laboratory	1										1	1	1	1	1	1	1	1	1	1
7	EE 255	Digital Communications (1)	1										1	1	1	1	1	1	1	1	1	1
17 Cr	EM 237	Thermofluids for Electrical Engineering Students	1	1	1	1						1	1	1	1	1	1	1	1	1	1	1
8	EE 342	Digital Signal Processing	1										1									
8	EE 304	Microprocessor Based System Design	1										1	1	1	1	1	1	1	1	1	1
8	EE 256	Digital Communications (2)	1										1	1	1	1	1	1	1	1	1	1
15 Cr	UGA 03	Professional Communication in Arabic Language	1										1	1	1	1	1	1	1	1	1	1
15 Cr	EE 363	Microwave Measurements and Laboratory	1										1	1	1	1	1	1	1	1	1	1
15 Cr	EE 364	Antenna Theory and Design	1										1	1	1	1	1	1	1	1	1	1
9	UGE 03	English Language (3)	1										1									
9	EE 350	Communication Systems	1										1	1	1	1	1	1	1	1	1	1
19 Cr	EE 400-1	Graduation Project (1)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	EE 354	Mobile Communication Systems	1										1	1	1	1	1	1	1	1	1	1
10	EE 385	Electrical Power and Machines	1										1	1	1	1	1	1	1	1	1	1
18 Cr	EE 400-2	Graduation Project (2)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0 Cr	UCS 02	Communication Skills (2)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0 Cr	FT 001	Field Training	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

- Basic Science + University Requirements Courses
- Courses from Other Departments
- General Electrical Courses
- Power and Control Engineering Specialized Courses
- Electrical Communications Engineering Specialized Courses
- General Competencies (Level-A) of Engineering Graduates
- Specialized Competencies (Level-B) of Electrical Engineering Graduates
- Sub-Specialized Competencies (Level-C) of Electrical Communications Engineering Graduates

Elective (1)	
EE 367	Fundamentals of Acoustics
Elective (2)	
EE 206	Microprocessor Interfacing
EE 221	Microwave Devices
EE 226	Integrated Circuit Devices
EE 316	Optical Electronics
EE 338	Digital Integrated Circuits
Elective (3)	
EE 325	Introduction to Computer Networks
EE 346	Introduction to Computer Vision
EE 347	Applications of Artificial Intelligence in Communications
EE 353	Data Communication Networks
EE 359	Error Correcting Codes
Elective (4)	
EE 344	Digital Filters
EE 345	Digital Image Processing
EE 357	Multimedia Communication Systems
EE 358	Information Theory
Elective (5)	
EE 387	Microprocessor Based Process Control
EE 389	PLC Applications in Industry
EE 390	Control Systems (2)
EE 391	Digital Control Systems
EE 397	Fuzzy Logic Control

HU Elective (1)	
HU 131	Project Management
HU 132	Accounting and Cost for Engineering
HU 134	Engineering Economy
HU 135	Sales, Marketing and Communications Techniques

HU Elective (2)	
HU 141	Ethics and Human Rights
HU 142	Legislation and Contracts
HU 143	Principles of Law
HU 144	Communication Laws and Rules

Head of Electrical Engineering Department
Prof. Dr. Mohamed Handy

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