

## **Electrical Engineering Department - Faculty of Engineering - Pharos University in Alexandria**



## Study Plan of Electronics and Communication Engineering Program (2022/2023)

Semester	Code	Course	Pre-requisites	Credit Hours	Lectures	Tutorials	Practical
1	EB 101	Engineering Mathematics (1)	None	3	2	2	1
	EB 111	Engineering Mechanics (1)	None	3	3	1	0
	EB 121	Engineering Physics (1)	None	3	2	1	2
	EB 141	Engineering Drawing & Descriptive Geometry (1)	None	3	2	3	0
	UEC 01E	Computer Skills & Programming Concepts (1)	None	2	1	1	2
	HU 121	Engineering Perspectives and Technology	None	2	1	0	2
18 Cr	EB 131	General Chemistry	None	2	1	1	2
2	EB 102	Engineering Mathematics (2)	EB 101	3	2	2	1
	EB 112	Engineering Mechanics (2)	EB 111	3	3	1	0
	EB 122	Engineering Physics (2)	EB 121	3	2	1	2
	EB 142	Engineering Drawing & Descriptive Geometry (2)	EB 141	2	1	2	1
	UCS 01	Communication Skills (1)	None	1	0	0	2
	UEC 02E	Computer Skills & Programming Concepts (2)	UEC 01E	2	1	1	2
40.5	UGE 01	English Language (1)	None	2	1	0	2
18 Cr	EM 170	Introduction to Manufacturing Processes	None	2	1	1	2
3	EB 103	Engineering Mathematics (3)	EB 102	3	2	2	1
	EB 123 EC 201	Modern Physics Computer Programming	EB 122 UEC 02E	3	2 2	2	2
	EE 271	Energy Systems	None	3	2	2	1
	EE 291	Electric Circuits	EB 102 & EB 122	4	3	2	1
18 Cr	HU 113	Technical Reports Writing and Presentations	None	2	1	0	2
4	EB 104	Linear Algebra	EB 102	3	2	2	1
	EB 204	Engineering Mathematics (4)	EB 103	3	2	2	1
	EE 202 EE 211	Digital Logic Fundamentals  Electronics Workshop	UEC 02E None	3	0	0	3
	EE 211	Introduction to Electronic Circuits	EB 122 & EE 291	3	2	2	1
	EE 293	Electrical Measurements and Instrumentation (1)	EE 291	3	2	2	1
18 Cr	UGE 02	English Language (2)	UGE 01	2	1	0	2
5	EB 207	Numerical Analysis using MATLAB	EB 102	4	3	1	2
	EE 203	Introduction to Microprocessors	EE 202	3	2	2	1
	EE 224 EE 241	Micro-Electronic Devices & Circuits Signals and Systems	EE 213 EB 204	3	2 2	2 2	1
	EE 260	Electromagnetic Fields	EB 204 & EB 122	3	2	2	1
	HU 141	HU Elective (1): Ethics and Human Rights	None	2	2	1	0
18 Cr	OR HU 134	Engineering Economy	None	2	2	1	U
6	EB 205	Probabilities and Random Variables	EB 204	3	3	1	0
	EE 261	Electromagnetic Waves & Transmission Media	EE 260	3	2	2	1
	EE 251 EE 225	Analog Communications Solid State Electronics	EE 241 EE 213	3	2 2	2 2	1
	EE 228	Analog Integrated Circuits	EE 224	3	2	2	1
18 Cr	EB 206	Special Functions	EB 204	3	3	1	0
7	EE 262	Microwave Engineering	EE 261	3	2	2	1
	EE 290	Control Systems (1)	EB 204 & EE 291	3	2	2	1
	EE 252 EE 255	Communications Laboratory Digital Communications (1)	EE 251 EE 251	3	2	2	3
	EE 233 EM 237	Thermofluids for Electrical Engineering Students	EB 112 & EB 122	4	3	2	1
17 Cr	EE 342	Digital Signal Processing	EE 241 & EB 205	3	2	2	1
8 15 Cr	HU 131	HU Elective (2): Project Management	None	2	2	1	0
	EE 304	Microprocessor Based System Design	EE 202 & EE 203	3	2	2	1
	EE 256 EE 363	Digital Communications (2) Microwave Measurements and Laboratory	EE 255 EE 262	3 2	2	0	4
	EE 363 EE 364	Antenna Theory and Design	EE 262 EE 262	3	2	2	1
	UGA 03	Professional Communication in Arabic Language	None	2	2	0	0
9	UGE 03	English Language (3)	UGE 02	2	1	0	2
	EE 350	Communication Systems	EE 255	4	3	2	1
	EE 367	Elective (1): Fundamentals of Acoustics	EE 251 & EE 261	3	2	2	1
	EE 316 OR EE 359	Elective (2): Optical Electronics OR Error Correcting Codes	EE 228 OR EE 256	3	2	2	1
	EE 353	Elective (3): Data Communication Networks	EE 255	3	2	2	1
19 Cr	EE 400-1	Graduation Project (1)	Dept. Approval	4	3	2	2
10	EE 344 OR	Elective (4): Digital Filters	EE 241	3	2	2	1
	EE 389	OR PLC Applications in Industry	OR EE 290 & EE 203	,			*
	EE 325 OR EE 345	Elective (5): Introduction to Computer Networks OR Digital Image Processing	EE 255 OR EE 241	3	2	2	1
	EE 343	Mobile Communication Systems	EE 255	3	2	2	1
	EE 385	Electrical Power and Machines	EE 271 & EE 291	4	3	2	1
	UCS 02	Communication Skills (2)	UCS 01	1	0	0	2
18 Cr	EE 400-2	Graduation Project (2)	EE 400-1	4	3	2	2