



Study Plan of Power and Control 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
	EB 131	General Chemistry	None	2	1	1	2
18 Cr							
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
	UGE 01	English Language (1)	None	2	1	0	2
18 Cr							
3	EM 170	Introduction to Manufacturing Processes	None	2	1	1	2
	EB 103	Engineering Mathematics (3)	EB 102	3	2	2	1
	EB 123	Modern Physics	EB 122	3	2	2	1
	EC 201	Computer Programming	UEC 02E	3	2	1	2
	EE 271	Energy Systems	None	3	2	2	1
	EE 291	Electric Circuits	EB 102 & EB 122	4	3	2	1
	HU 113	Technical Reports Writing and Presentations	None	2	1	0	2
18 Cr							
4	EB 104	Linear Algebra	EB 102	3	2	2	1
	EB 204	Engineering Mathematics (4)	EB 103	3	2	2	1
	EE 202	Digital Logic Fundamentals	UEC 02E	3	2	2	1
	EE 211	Electronics Workshop	None	1	0	0	3
	EE 213	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
	UGE 02	English Language (2)	UGE 01	2	1	0	2
18 Cr							
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	Micro-Electronic Devices & Circuits	EE 213	3	2	2	1
	EE 241	Signals and Systems	EB 204	3	2	2	1
	EE 260	Electromagnetic Fields	EB 204 & EB 122	3	2	2	1
	EE 272	Electrical Power Engineering (1)	EE 271	3	2	2	1
	EE 205	Probabilities and Random Variables	EB 204	3	3	1	0
19 Cr							
6	EE 261	Electromagnetic Waves & Transmission Media	EE 260	3	2	2	1
	EE 273	Electrical Power Engineering (2)	EE 272	3	2	2	1
	HU 141	HU Elective (1): Ethics and Human Rights			2	0	0
	OR HU 142	OR Legislations and Contracts	None	2	2	1	0
	OR HU 143	OR Principles of Law	None	2	0	0	0
	OR HU 144	OR Communication Laws and Rules	None	2	0	0	0
	EE 286	Power Electronics (1)	EE 213	3	2	2	1
17 Cr							
7	EE 225	Solid State Electronics	EE 213	3	2	2	1
	HU 131	HU Elective (1): Project Management					
	OR HU 132	OR Accounting and Cost for Engineering	None	2	2	1	0
	OR HU 134	OR Engineering Economy	None	2	2	1	0
	OR HU 135	OR Sales, Marketing and Communications Techniques	None	2	2	1	0
	EE 275	Power System Protection (1)	EE 273	3	2	2	1
	EE 274	Electrical Safety Engineering	EE 273	3	3	1	0
18 Cr							
8	EE 282	Electrical Machines (1)	EE 260 & EE 291	3	2	2	1
	EE 290	Control Systems (1)	EB 204 & EE 291	3	2	2	1
	EM 237	Thermofluids for Electrical Engineering Students	EB 112 & EB 122	4	3	2	1
	EE 283	Electrical Machines (2)	EE 282	3	2	2	1
	EE 254	Communication Technology for Power Engineers	EE 241 & EB 205	3	2	2	1
	EE 276	High Voltage Engineering	EE 260	3	2	2	1
	EE 371	Power Systems Analysis	EE 273	3	2	2	1
16 Cr							
9	EE 399	Electrical Standards & Codes	None	2	2	0	0
	UGA 03	Professional Communication in Arabic Language	None	2	2	0	0
	UGE 03	English Language (3)	UGE 02	2	1	0	2
	EE 380	Electrical Machines (3)	EE 283	3	2	2	1
	EM 239	Thermal Power Plants for Electrical Power Engineering Students	EM 237	3	2	2	1
	EE 382	Elective (1): Power Electronics (2)	EE 286	3	2	2	1
	EE 377	Elective (2): Power System Protection (2)	EE 275	3	2	2	1
18 Cr							
10	OR EE 379	OR Power Distribution in Industrial & Commercial Buildings	OR EE 273 & EE 275	3	2	2	1
	EE 400-1	Graduation Project (1)	Dept. Approval	4	3	1	2
	EE 372	Elective (3): Power System Planning and Reliability	EE 371	3	2	2	1
	OR EE 374	OR Power System Quality	OR EE 371	3	2	2	1
	EE 381	Elective (4): Advanced Analysis of Electrical Machines	EE 380	3	2	2	1
	OR EE 383	OR Principles of Solid-State Drives	OR EE 380 & EE 382	3	2	2	1
	OR EE 384	OR Electrical Drives	OR EE 286 & EE 380	3	2	2	1
17 Cr							
10	EE 206	Elective (5): Microprocessor Interfacing	EE 203	3	2	2	1
	OR EE 344	OR Digital Filters	OR EE 241	3	2	2	1
	OR EE 387	OR Microprocessor Based Process Control	OR EE 390	3	2	2	1
	OR EE 389	OR PLC Applications in Industry	OR EE 203 & EE 290	3	2	2	1
	OR EE 391	OR Digital Control Systems	OR EE 290	3	2	2	1
	OR EE 397	OR Fuzzy Logic Control	OR EE 203 & EE 290	3	2	2	1
	EE 390	Control Systems (2)	EE 290	3	2	2	1
17 Cr							
	UCS 02	Communication Skills (2)	UCS 01	1	0	0	2
	EE 400-2	Graduation Project (2)	EE 400-1	4	3	1	2

Total = 177 Cr