

Power and Control 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	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	UEC 01E	Computer Skills & Programming Concepts (1)	1	1	1	1					1	1									
1	HU 121	Engineering Perspectives and Technology	1		1				1	1		1									
18 Cr	EB 131	General Chemistry	1	1	1	1						1									
2	EB 102	Engineering Mathematics (2)	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									
2	UCS 01	Communication Skills (1)							1	1		1	1								
2	UEC 02E	Computer Skills & Programming Concepts (2)	1	1	1	1	1					1	1								
18 Cr	UGE 01	English Language (1)							1	1		1									
3	EM 170	Introduction to Manufacturing Processes	1		1	1			1	1		1									
3	HU 113	Technical Reports Writing and Presentation Skills						1		1		1									
3	EB 103	Engineering Mathematics (3)	1									1									
3	EB 123	Modern Physics	1	1								1									
3	EC 201	Computer Programming	1	1					1			1	1								
3	EE 271	Energy Systems	1	1								1	1				1				
18 Cr	EE 291	Electric Circuits	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				
4	EE 211	Electronics Workshop		1	1				1				1	1			1				
4	EE 213	Introduction to Electronic Circuits		1									1	1			1				
4	EE 293	Electrical Measurements and Instrumentation (1)		1	1								1	1			1				
18 Cr	UGE 02	English Language (2)							1	1		1									
5	EB 207	Numerical Analysis using MATLAB	1									1									
5	EE 203	Introduction to Microprocessors		1						1		1					1				
5	EE 224	Micro-Electronic Devices & Circuits		1						1			1	1			1				
5	EE 241	Stimuli and Systems	1	1									1	1			1				
5	EE 260	Electromagnetic Fields				1	1	1					1	1			1				
19 Cr	EE 272	Electrical Power Engineering (1)	1	1									1	1			1			1	1
6	EB 205	Probabilities and Random Variables	1	1									1	1			1				
6	EE 261	Electromagnetic Waves & Transmission Media				1	1						1	1			1				
6	EE 273	Electrical Power Engineering (2)				1	1						1	1			1			1	1
6		HU Elective (1)			1	1			1			1									
17 Cr	EE 286	Power Electronics (1)						1	1				1	1			1				1
17 Cr	EE 225	Solid State Electronics	1	1	1				1	1				1							
7		HU Elective (2)			1	1			1			1									
7	EE 275	Power System Protection (1)											1	1			1			1	1
7	EE 274	Electrical Safety Engineering						1					1	1			1			1	1
7	EE 282	Electric Machines (1)											1	1			1			1	1
7	EE 290	Control Systems (1)		1									1	1			1			1	1
18 Cr	EM 237	Thermofluids for Electrical Engineering Students	1		1	1							1	1			1				
8	EE 283	Electric Machines (2)											1	1			1			1	1
8	EE 254	Communication Technology for Power Engineers		1	1	1							1	1			1			1	1
8	EE 276	High Voltage Engineering				1							1	1			1			1	1
8	EE 371	Power Systems Analysis				1							1	1			1			1	1
16 Cr	EE 399	Electrical Standards & Codes											1	1			1			1	1
16 Cr	UGA 03	Professional Communication in Arabic Language										1	1								
16 Cr	UGE 03	English Language (3)										1	1								
9	EE 380	Electric Machines (3)												1			1			1	1
9	EM 239	Thermal Power Plants for Electrical Power Engineering	1	1	1	1			1	1							1			1	1
9		Elective (1)											1	1			1			1	1
9		Elective (2)											1	1			1			1	1
18 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
10		Elective (3)											1	1			1			1	1
10		Elective (4)											1	1			1			1	1
10		Elective (5)											1	1			1			1	1
17 Cr	EE 390	Control Systems (2)											1	1			1			1	1
17 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
17 Cr	UCS 02	Communication Skills (2)											1	1			1			1	1
0 Cr	FT 001	Field Training											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 Power and Control Engineering Graduates

- Elective (1)**
- EE 382 Power Electronics (2)
- Elective (2)**
- EE 377 Power System Protection (2)
 - EE 379 Power Distribution in Industrial and Commercial Buildings
- Elective (3)**
- EE 372 Power System Planning and Reliability
 - EE 374 Power Systems Quality
- Elective (4)**
- EE 381 Advanced Analysis of Electrical Machines
 - EE 383 Principles of Solid-State Drives
 - EE 384 Electrical Drives
- Elective (5)**
- EE 206 Microprocessor Interfacing
 - EE 344 Digital Filters
 - EE 387 Microprocessor Based Process Control
 - EE 389 PLC Applications in Industry
 - EE 391 Digital Control Systems
 - EE 397 Fuzzy Logic Control

- HU Elective (1)**
- HU 141 Ethics and Human Rights
 - HU 142 Legislations and Contracts
 - HU 143 Principles of Law
 - HU 144 Communication Laws and Rules
- HU Elective (2)**
- HU 131 Project Management
 - HU 132 Accounting and Cost for Engineering
 - HU 134 Engineering Economy
 - HU 135 Sales, Marketing and Communications Techniques

Head of Electrical Engineering Department

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