Courses Description
Department of Electrical Engineering
Power and Machines
2019-2020

Academic Program Description form

University Name: University of Mosul

Faculty / Institute: College of Engineering

Scientific Department: Electrical Engineering

Academic or Professional Program Name:
B.Sc. Electrical Engineering / Electronics and Communication
B.Sc. Electrical Engineering / Power and Machines

Final Certificate Name: B.Sc. in Electrical Engineering

Academic System: Courses System + Bologna Process

Description Preparation Date: March, 2024

File Completion Date: March, 2024

Signature:

Head of Department Name:

Dr. Mohammad Tariq Yaseen

Date: March, 2024

Signature:

Scientific Associate Name:

Dr. Ayman T.Hameed

Date: March, 2024

The file is checked by: Department of Quality Assurance and University Performance

Director of Quality Assurance and University Performance Department:

Date:

Signature:

Approval of the Dean

a) Undergraduate

Courses / College of Engineering / University of Mosul / First level for the academic year 2019-2020 / Department of Electrical Engineering

Fall Semester / First Level								
Notes	Code	Pre-request	Units	Practical hours	Theoretical hours	Subject	Type	
	UOMC101	-	3	-	3	English Language	Compulsory	University requirements
	UOMC102	-	3	2	2	Computer	Compulsory	University requirements
	UOMC103	-	2	-	2	Rights and Freedoms	Compulsory	University requirements
	ENGC121	-	3	-	3	Calculus I	Compulsory	College requirements
	ENGC123	-	1	3	-	Engineering Drawings	Compulsory	College requirements
Compulsory for Dept. Students	ENGE133	-	2	-	2	Physics	Elective	College requirements
	ELCA100	-	4	2	3	Electrical Circuit Analysis I	Compulsory	Department requirements
			18	7	15	Total Hours		

Notes	Code	Pre-request	Units	Practical hours	Theoretical hours	Subject	Type	
					Spring Semester / First Level			
	UOMC 100	-	2	-	2	Arabic Language	Compulsory	University requirements
The student should select one subject only (no. of units =2 only)	-	-	2	-	2	Manufacturing Processes	Elective	University requirements
	-	-	2	-	2	Environmental Pollution	Elective	University requirements
	-	-	2	-	2	Information Technology	Elective	University requirements
	ENGC122	Calculus I	3	-	3	Calculus II	Compulsory	College requirements
	ENGC124	Engineering Drawing	1	3	-	Auto-CAD	Compulsory	College requirements
Compulsory for Dept. Students	ENGE132	-	3	-	3	Engineering Mechanics	Elective	College requirements
	ELCA 150	Electrical Circuit Analysis I	4	2	3	Electrical Circuit Analysis II	Compulsory	Department requirements
	PHEC151	Physics	3	-	3	Electronic Physics	Compulsory	Department requirements
			18	5	16	Total Hours		

Course No.	Subject	First Term			Second Term			Units No.
		Theo.	Pract.	App.	Theo.	Pract.	App.	
EEP 201	Management & Industrial Safety	2	-	-	2	-	-	4
EEP 202	Mathematics II	3	-	1	3	-	1	6
EEP 203	Computer Programming	2	2	-	2	2	-	6
EEP 204	Electronics I	2	-	1	2	-	1	4
EEP 205	Electric Networks	2	-	1	2	-	1	4
EEP 206	Electrical Machines	2	-	1	2	-	1	6
EEP 207	Electromagnetic Fields	2	-	1	2	-	1	4
EEP 208	Laboratories	.	3	-	.	3	-	2
EEP 209	Elective Subjects (Distribution Systems)	2	-	-	2	-	-	4
Total		17	18	5	5	18	5	5
		28			28			

Course No.	Subject	First Term			Second Term			Units No.
		Theo.	Pract.	App.	Theo.	Pract.	App.	
EEP 301	Statistics & Engineering Economics	2	-	-	2	-	-	4
EEP 302	Engineering Analysis	2	-	1	2	-	1	4
EEP 303	Power Electronics	3	-	1	3	-	1	6
EEP 304	Electrical Machines	2	-	1	2	-	1	4
EEP 305	Electrical Powers	2	-	1	2	-	1	4
EEP 306	Measurements	2	-	1	2	-	1	4
EEP 307	Electronic and Communication System	2	-	1	2	-	1	4
EEP 308	Elective Subjects. (Microprocessor and Interfacing Systems)	2	-	-	2	-	-	4
EEP 309	Power & Machines Lab.	-	6	-	-	6	-	4
Total		17	6	6	17	6	6	38
		29			29			

Note: The student is required to complete the summer training after the end of the second semester of the third level

Course No.	Subject	First Term			Second Term			Units No.
		Theo.	**Pract**	**App.**	**Theo**	**Pract**	**App.**	
EEP 401	Power System Analysis	2	-	2	2	-	2	4
EEP402	Protection & Operation of PS	2	-	1	2	-	1	4
EEP 403	Advanced Electrical Machines	3	-	1	3	-	1	6
EEP 404	High Voltage Systems	2	-	-	2	-	-	4
EEP 405	Final Year Project	1	3	-	1	3	-	4
EEP 406	Power & Machines Lab.	-	6	-	-	6	-	4
EEP 407	Control Engineering	3	-	1	3	-	1	6
EEP 408	(Generation Systems) Elective Subjects	2	-	-	2	-	-	4
Total		15	9	5	15	9	5	36
		29			29			

b) Postgraduate

	Subject	Type	Hours	Units	Code
Master	Antennas and Wave (Elective)	Semesters	2	2	EEE644
	Microelectronics (Elective)	Semesters	2	2	EEE 653
	Digital Signal Processing (Compulsory)	Semesters	2	2	EEE652
	Engineering Analysis (Compulsory)	Semesters	2	2	EEE 640
	Modern Control Theory (Compulsory)	Semesters	2	2	EEE 647
	Modeling and Simulation(Compulsory)	Semesters	2	2	EEP 670
	Power Electronics (Compulsory)	Semesters	2	2	EEP 667
	A.C. Machines (Elective)	Semesters	2	2	EEP669
	Power System Analysis (Elective)	Semesters	2	2	EEP683
	Antennas and Wave (Elective)	Semesters	2	2	EEE646
	Microwave Devices (Elective)	Semesters	2	2	
	Computer Networks (Elective)	Semesters	2	2	EEE661
	Programmable Controllers(Compulsory)	Semesters	2	2	EEE680
	English Language II (Compulsory)	Semesters	2	2	
	Scientific Research Methods (Compulsory)	Semesters	1	1	EEE 690
	Electrical Drive (Elective)	Semesters	2	2	EEP 672
	Advanced High Voltage (Elective)	Semesters	2	2	EEP 671
	Power System Protection (Elective)	Semesters	2	2	

	Subject	Type	Hours	Units	Code
PhD	Advanced Communication Systems (Elective)	Semesters	2	2	EED709
	CMOS Integrated Circuits (Elective)	Semesters	2	2	
	Advanced Antenna Theory (Elective)	Semesters	2	2	EED708
	Advanced Control Systems (Compulsory)	Semesters	2	2	EED710
	Advanced DSP (Compulsory)	Semesters	2	2	
	Advanced Topics in Electrical (Compulsory)	Semesters	2	2	EED720
	Advanced Electrical Drives (Elective)	Semesters	2	2	EED714
	Flexible A C Transmission System (FACTS) (Elective)	Semesters	2	2	EED706
	Power Systems Stability (Elective)	Semesters	2	2	EED712
	Wave Propagation (Elective)	Semesters	2	2	EED718
	Computer Network Security (Elective)	Semesters	2	2	EED717
	Advanced Microprocessors (Elective)	Semesters	2	2	
	English Language II (Compulsory)	Semesters	2	2	
	Research Methodology (Compulsory)	Semesters	1	1	
	& Advanced Modeling Simulation (Compulsory)	Semesters	2	2	EED701
	Smart Grids and Renewable Energy (Compulsory)	Semesters	2	2	EED711
	Advanced Alternating Machines (Elective)	Semesters	2	2	EE768
	Advanced High Voltage DC (Elective)	Semesters	2	2	
	: Modern Protection Systems (Elective)		2	2	EED704