

Ministry of Higher Education and Scientific Research  
University of Mosul  
College of Engineering  
Department of Electrical Engineering



# Courses Description

## Department of Electrical Engineering

### Power and Machines

#### 2018-2019

## 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

Annual/ College of Engineering / University of Mosul / First class for the academic year 2018-2019 / Department of Electrical Engineering

Course No.	Subject	First Term			Second Term			Units No.
		Theo.	Pract.	App	Theo.	Pract.	App.	
EE 101	Human Rights and Democracy	1	-	-	1	-	-	2
EE102	Digital Techniques	2	-	1	2	-	1	4
EE 103	Engineering Drawing	-	3	-	-	3	-	2
EE 104	Computer Science	2	2	-	2	2	-	6
EE 105	Principle of Mechanical Eng.	3	-	-	3	-	-	6
EE 106	Mathematics	3	-	1	3	-	1	6
EE 107	Electronics Physics	2	-	1	2	-	1	4
EE 108	Basics of Electrical Eng.	3	-	1	3	-	1	6
EE 109	Laboratories	-	3	-	-	3	-	2
EE 110		1	-	-	1	-	-	
Total		18	17	8	4	17	8	4
		29			29			

Annual/ College of Engineering / University of Mosul / Second class for the academic year 2018-2019 / Department of  
Electrical Engineering / Power & Machines

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			

Annual/ College of Engineering / University of Mosul / Third class for the academic year 2018-2019 / Department of  
Electrical Engineering / Power & Machines

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

Annual / College of Engineering / University of Mosul / Fourth class for the academic year 2018-2019 / Department of  
Electrical Engineering / Power & Machines

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

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