

## ماجستير في الهندسة الكهربائية

التخصصات المتاحة حاليا هي:

- الطاقة وانظمة التحكم
- الاتصالات وانظمة الشبكات

يمكن للطلاب التحويل من اي تخصص الى آخر ومن اي مسار الى آخر (رسالة او بدون رسالة) بعد الفصل الاول من الدراسة وذلك بتقديم طلب الى رئيس القسم يبدي رغبته بالانتقال الى تخصص آخر او مسار آخر.

- عدد إجمالي المقررات في البرنامج:
- مسار الرسالة: 36 ساعة معتمدة موزعة على 27 ساعة معتمدة مواد + 9 ساعات رسالة و موزعة حسب الفصول الدراسية كالتالي:

Year	Semester	Course	Credits	Remarks
1	Fall	Core Course	3	
		Core Course	3	
		Core Course	3	
		Total	9	
	Spring	Core Course	3	
		Elective Course	3	Specialization
		Elective Course	3	Specialization
		Seminar Course	0	
		Total	9	Thesis proposal approval
2	Fall	Elective Course	3	Specialization
		Elective Course	3	Specialization
		Thesis	3	IP
		Total	9	
	Spring	Elective Course	3	Specialization
		Thesis	6	
		Total	9	

- مسار المشروع (بدون رسالة): 42 ساعة معتمدة موزعة حسب الفصول الدراسية كالتالي :

Year	Semester	Course	Credits	Remarks
1	Fall	Core Course	3	
		Core Course	3	
		Core Course	3	
		Elective Course	3	
		Seminar	0	
		Total	12	

	<b>Spring</b>	<b>Core Course</b>	<b>3</b>	
		<b>Elective Course</b>	<b>3</b>	<b>Specialization</b>
		<b>Elective Course</b>	<b>3</b>	<b>Specialization</b>
		<b>Elective Course</b>	<b>3</b>	
		<b>Total</b>	<b>12</b>	<b>Project Proposal Approval</b>
<b>2</b>	<b>Fall</b>	<b>Elective</b>	<b>3</b>	<b>Specialization</b>
		<b>Elective</b>	<b>3</b>	<b>Specialization</b>
		<b>Elective Course</b>	<b>3</b>	<b>Specialization</b>
		<b>Total</b>	<b>9</b>	
	<b>Spring</b>	<b>Elective Course</b>	<b>3</b>	<b>Specialization</b>
		<b>Elective Course</b>	<b>3</b>	<b>Specialization</b>
		<b>Engineering Design Project</b>	<b>3</b>	
		<b>Total</b>	<b>9</b>	

**المواد الاجبارية والاختيارية**  
**Energy and Power Systems تخصص الطاقة وانظمة التحكم**

**(Core Courses) المواد الاجبارية**

Course code	Course name	Cr.
ELEE 501	Linear System Analysis	3
ELEE 502	Optimization Techniques for Electrical Engineering	3
ELEE 504	Advanced Power System Analysis	3
ELEE 506	Advanced Analysis of Electric Machines	3
ELEE 599	Seminar	0
<b>Total</b>		<b>12</b>
ELEE 610	Research Thesis	9
ELEE 611	Engineering Design Project (Non-Thesis Program only)	3

**(Elective Courses) المواد الاختيارية**

Course code	Course name	Cr.
ELEE 512	Power System Planning	3
ELEE 513	Renewable Energy Systems	3
ELEE 514	Environmental Impacts of Energy Systems	3
ELEE 515	Energy Policy and Planning	3
ELEE 516	Power Electronics Systems and Applications	3
ELEE 517	Electric Power Systems Control and Stability	3
ELEE 518	Energy Efficiency in the Power Sector	3
ELEE 519	Smart Grids	3
ELEE 520	Protection of Power Systems	3
ELEE 521	Electric Safety and Grounding System Design	3
ELEE 522	Special Topics in Energy and Power Systems	3

• تخصص الاتصالات وانظمة الشبكات (Communications and Network Systems)  
المواد الاجبارية (Core Courses)

Course code	Course name	Cr.
ELEE 500	Probability and Stochastic Processes	3
ELEE 507	Digital Communications	3
ELEE 508	Advanced Digital Communications	3
ELEE 511	Modeling and Simulation of Communication Systems	3
ELEE 599	Seminar	0
<b>Total</b>		<b>12</b>
ELEE 610	Research Thesis	9
ELEE 611	Engineering Design Project (Non-Thesis Program only)	3

المواد الاختيارية (Elective Courses)

Course code	Course name	Cr.
ELEE 531	Information Theory	3
ELEE 532	Queuing Theory	3
ELEE 533	Stochastic Processes, Detection, and Estimation	3
ELEE 534	Multimedia and Advanced Signal Processing	3
ELEE 535	Computer Network Architectures and Protocols	3
ELEE 536	Wireless Networks	3
ELEE 537	Mobile Communications Networks	3
ELEE 538	Optical Fiber Communication	3
ELEE 539	Advanced Electronics	3
ELEE 540	Introduction to Optical Electronics	3
ELEE 541	Special Topics in Communication and Network Systems	3