

**المقررات الدراسية لقسم الهندسة الكهربائية والإلكترونية**  
**Academic Courses for Electrical & Electronics Engineering Department**

**Basic Engineering Courses for all Sections**

**علوم هندسية أساسية لجميع الشعب**

**Second Year**

Third Semester Courses							
No	Course Name	Code	Units	Weekly Hours			Prerequisite
				Lecture	Tutorial	Practical	
1	Math. III	GS 222	3	2	2	-	GS 120
2	Intro. to Computer Science	GS 228	3	2	-	2	
3	Properties of Materials	GE 241	3	4	-	-	GS131, GS135
4	Descriptive Geometry	GE 243	2	1	2	-	GE 142
5	Eng. Workshop	GE 244	2	2	1		
6	Circuit I	EE 203	3	2	2	-	GS121& GS131
			16				

Third Semester Courses							
No	Course Name	Code	Units	Weekly Hours			Prerequisite
				Lecture	Tutorial	Practical	
1	Math. IV	GS 223	3	2	2	-	GS 222
2	Electronics I	EE 230	3	2	2	-	EE203, GE241
3	Circuit Lab	EE 208L	1	1	-	1	EE 203
4	Circuit II	EE 216	3	2	2	-	EE 203

5	Electronics Lab I	EE 230L	1	1		1	EE 203, GE241
6	Computer Prog. C++	GE 229	3	2	-	2	GS 226
	Tech. Report Writing	GH 218	1	2	-	-	
			15				

## Third Year

Third Semester Courses							
No	Course Name	Code	Units	Weekly Hours			Prerequisite
				Lecture	Tutorial	Practical	
1	Statistics & Prob.	GS 324	3	2	1	1	
2	Signals and Systems	EE 317	3	2	2	-	EE 216
3	Electromagnetic I	EE 313	3	2	2	-	GS131 & GS223
4	Electronics II	EE 333	3	2	2	-	EE 230
5	Elect. Measurements	EE 307	3	2	1	1	EE 216
			15				

Third Semester Courses							
No	Course Name	Code	Units	Weekly Hours			Prerequisite
				Lecture	Tutorial	Practical	
1	Numerical Methods	GE 346	3	2	1	1	GS 222
2	Communication I	EE 310	3	3	1	-	EE 317
3	Comm. Lab I	EE 310 L	1	1	-	1	EE317, 230L
4	Electrical Machines I	EE 340	3	3	1	-	EE 216 & 313
5	Basic Machine Lab	EE 340L	1	1	-	1	EE313, EE208L
6	Digital I	EE 360	3	3	1		EE 230
7	Digital Lab	EE 360L	1	1	-	1	EE 230, 230 L
			15				

**شعبة الإلكترونيات والاتصالات**  
**Electronic and Communications Section**

**A. Compulsory Courses for Electronic and Communications Section**

**المقررات الهندسية الملزمة  
لشعبة الإلكترونيات والاتصالات**

**Fourth Year**

Seventh Semester Courses							
No	Course Name	Code	Units	Weekly Hours			Prerequisite
				Lecture	Tutorial	Practical	
1	Electromagnetic II	EE 414	3	2	2	-	EE 313
2	Communication II	EE 411	3	3	1	-	EE 310
3	Comm. Lab II	EE 411L	1	1	-	1	EE 310 L
4	Automatic Control I	EE 480	3	3	-	1	EE 317
5	Microprocessor I	EE 461	3	3	1	-	EE 360
6	Microprocessor Lab	EE 461 L	1	1	-	1	EE 360L
			14				

Eighth Semester Courses							
No	Course Name	Code	Units	Weekly Hours			Prerequisite
				Lecture	Tutorial	Practical	
1	Optical Electronics	EE 415	3	3		1	EE 411
2	Active net& filters	EE 418	3	2	2	-	EE 317
3	Electronics III	EE 434	3	2	2	-	EE 333
4	Wire Comm. System	EE 419	3	3	-	1	EE 411
5	Electronics Lab II	EE 434L	1	1	-	1	EE 333
6	Digital II	EE 465	3	3	1	-	EE 360
			16				

## Fifth Year

Ninth Semester Courses							
No	Course Name	Code	Units	Weekly Hours			Prerequisite
				Lecture	Tutorial	Practical	
1	Automatic Control II	EE 581	3	3	-	1	EE 480
2	Wireless Comm.	EE 520	3	3	1		EE 414 &EE411
3	Computer Comm.	EE 563	3	3		1	EE 461 &E411
4	Antennas & wave Pro	EE 515	3	3	1	-	EE 414
5	Final project Part I	EE 599	0	-	-	-	
			12				

Tenth Semester Courses							
No	Course Name	Code	Units	Weekly Hours			Prerequisite
				Lecture	Tutorial	Practical	
1	Microwave Eng.	EE 527	3	3	1	-	EE 414
2	Microwave Lab	EE 527L	1	1		1	EE 414
3	Elective Course I		3				
4	Elective Course II		3				
5	Final project	EE 599	4	2	2	2	
6							
7							
			14				

**B. Elective Courses for Electronic and Communications Section**

لشعبة المقررات الهندسية الاختيارية  
الإلكترونيات والاتصالات (يتم اختيار مقررين بـ 6 وحدات)

No.	Course Name	Designation	Units	عنوان المقرر
1.	Complex Analysis	GS 528	3	
2.	Acoustics	EE 522	3	
3.	Signal Processing	EE 523	3	
4.	Radar Engineering	EE 525	3	
5.	Info. Theory & Coding	EE 526	3	
6.	Semiconductor Devices	EE 535	3	
7.	VLSI	EE 537	3	
Total			6	إجمالي عدد الوحدات

شعبة القوى  
Power Section

**A. Compulsory Courses for Power Section**

المقررات الهندسية الملزمة  
لشعبة القوى

**Fourth Year**

Seventh Semester Courses							
No	Course Name	Code	Units	Weekly Hours			Prerequisite
				Lecture	Tutorial	Practical	
1	Elect. Machines II	EE 444	3	3	1	-	EE 340
2	Power Dis. Systems	EE 450	3	2	2	-	EE 216
3	Microprocessor I	EE 461	3	3	1	-	EE 360
4	Microprocessor Lab	EE 461 L	1	1	-	1	EE 360L
5	Automatic Control I	EE 480	3	3	-	1	EE 317

6	Power Lab I	EE 451L	2	1		2	EE 340
			15				

### Eighth Semester Courses

No	Course Name	Code	Units	Weekly Hours			Prerequisite
				Lecture	Tutorial	Practical	
1	Elect. Machines III	EE 445	3	3	1	-	EE 444
2	Power sys Analysis I	EE 452	3	2	1	1	EE 450
3	Power Electronics	EE 431	3	2	1	1	EE 333
4	Power T. Line	EE 453	3	3	1	-	EE 450
5	Power Lab II	EE 551L	2	1		2	EE 451L
6							
			14				

## Fifth Year

### Ninth Semester Courses

No	Course Name	Code	Units	Weekly Hours			Prerequisite
				Lecture	Tutorial	Practical	
1	Energy Economics	EE 554	3	2	1	1	EE 452 & 444
2	Elect. network design	EE 548	3	2	1	1	EE 450
3	Renewable Energy	EE 559	3	3	1	-	
4	Power sys Analysis II	EE 555	3	2	1	1	EE 452
5	High Voltage Eng.	EE 551	3	3	1	-	GE241,EE307& EE 450
	Final Project	EE 599	0				
			15				

Tenth Semester Courses							
No	Course Name	Code	Units	Weekly Hours			Prerequisite
				Lecture	Tutorial	Practical	
1	Power sys. protection	EE556	3	3	1	-	EE 555
2	Elective Course I		3	3	1	-	
3	Elective Course II		3	3	1	-	
4	Final Project	EE 599	4	2	2	2	
5							
			13				

**B. Elective Courses for Electronic and Communications Section**

لشعبة المقررات الهندسية الاختيارية  
القوى (يتم اختيار مقررين بـ 6 وحدات)

No.	Course Name	Designation	Units	عنوان المقرر
1.	Complex Analysis	GS 528	3	
2.	A.C Drives	EE 547	3	
3.	Lighting Engineering	EE 558	3	
4.	Industrial Control Sys.	EE 588	3	
Total			6	إجمالي عدد الوحدات

**شعبة التحكم الالى**  
**Automatic Control Section**

**A. Compulsory Courses for Automatic Control Section**

المقررات الهندسية الملزمة  
لشعبة التحكم الالى

**Fourth Year**

Seventh Semester Courses							
No	Course Name	Code	Units	Weekly Hours			Prerequisite
				Lecture	Tutorial	Practical	
1	Digital II	EE465	3	3	1	-	EE360
2	Automatic Control I	EE480	3	1	3	-	EE317
3	Automatic Control Lab I	EE480L	2	-	1	2	EE317
4	Electronic Measurements	EE409	3	3	1	-	EE307
5	Microprocessor I	EE461	3	3	1	-	EE360
6	Microprocessor Lab I	EE461L	-	1	1	1	EE360L
	Tech. Report Writing	GH418	1	1	1	-	GH113
			15				

Eighth Semester Courses							
No	Course Name	Code	Units	Weekly Hours			Prerequisite
				Lecture	Tutorial	Practical	
1	Modern Control II	EE581	3	3	1	-	EE480
2	Modern Control L II	EE581L	2	1	-	2	EE480L
3	Microprocessor II	EE564	3	3	1	-	EE361
4	Microprocessor II Lab	EE564L	2	1	-	2	EE361L
5	Industrial Electronics	EE484	3	3	1	-	EE333
6	Industrial Cont. Systems	EE588	3	3	1	-	EE581



			16				

## Fifth Year

Ninth Semester Courses							
No	Course Name	Code	Units	Weekly Hours			Prerequisite
				Lecture	Tutorial	Practical	
1	Digital Control	EE585	3	3	1	-	EE581
2	Computer Cont. Sys.	EE586	3	3	1	-	EE564
3	Nonlinear Cont. Sys.	EE583	3	3	1	-	EE581
4	Elective I		3	3	1	-	
5	Elective II		3	3	1	-	
			15				

Tenth Semester Courses							
No	Course Name	Code	Units	Weekly Hours			Prerequisite
				Lecture	Tutorial	Practical	
1	Programmable Logic Controllers	EE587	3	3	1	-	EE581, 582
2	Adaptive cont. Sys.	EE582	3	3	1	-	EE581
3	Elective Course III		3	3	1	-	
4	Final Year Project	EE599	4	2	2	2	
5							
			13				

**B. Elective Courses for Automatic Control Section**

لشعبة التحكم المقررات الهندسية الاختيارية  
الآلي (يتم اختيار مقررين بـ 6 وحدات)

No.	Course Name	Designation	Units	عنوان المقرر
1.	Complex Analysis	GS 528	3	
2.	Fuzzy Logic	EE 590	3	
3.	Stochastic Processes	EE 591	3	
4.	Penu. & Hyd. Systems	EE 592	3	
5.	Robot Technology	EE 593	3	
6.	App. of Indu. Electro	EE 594	3	
7.	Micro co. Applications	EE 595	3	
8.	Neural Networks	EE 596	3	
9.	Process Modelling & Simulation	EE 597	3	
10.	Management & Engineering Economics	EE598	3	
Total			6	إجمالي عدد الوحدات