



الأكاديمية العربية للعلوم والتكنولوجيا والنقل البحري

Arab Academy for Science, Technology & Maritime Transport

كلية الهندسة – فرع القرية الذكية

البرنامج الدراسي - قسم هندسة الطاقة



الأكاديمية العربية للعلوم والتكنولوجيا - كلية الهندسة

هندسة الطاقة - فرع القريفة الذكية

البرنامج الدراسي

Year 1

Semester 1			Semester 2		
Course No.	Course Title	Preq. code	Course No.	Course Title	Preq. code
LH131	ESP (1)	-	LH132	ESP (2)	LH131
BA123	Mathematics (1)	-	BA124	Mathematics (2)	BA123
BA113	Physics (1)	-	BA114	Physics (2)	BA113
CC111	Introduction to Computers	-	CC112	Structured Programming	CC111
MB151	Eng. Drawing & Projection	-	IM112	Manufacturing Technology	-
BA141	Engineering Mechanics (1)	-	BA142	Engineering Mechanics (2)	BA141
1M111	Industrial Relations	-	BA118	Chemistry	-

Year 2

Semester 3			Semester 4		
Course No.	Course Title	Preq. code	Course No.	Course Title	Preq. code
LH231	Technical Report Writing	LH132	BA224	Mathematics (4)	BA223
CC216	Digital Logic Design	CC111	ME231	Thermo-dynamics	BA114
BA223	Mathematics (3)	BA124	EE232	Electrical Circuits (2)	EE231
ME274	Material Science	BA114 & BA142	EE211	Electrical Measurements & Instrumentation	EE231
CC213	Programming Application	CC112	EE331	Electrical & Magnetic Field (1)	EE231 & BA223
EE231	Electrical Circuits (1)	BA124	EG211	Energy resources & conversion	EE231

Year 3					
Semester 5			Semester 6		
Course No.	Course Title	Preq. code	Course No.	Course Title	Preq. code
BA323	Mathematics (5)	BA224	BA327	Statistics & Numerical Methods	-
EC335	Electronics Fundamentals	EE231	EG312	Power System Analysis	EG311
EE321	Electrical Machines (1)	EE232	ME355	Theory of Machines	BA142
EE321	Fluid Mechanics	ME231	EE322	Electrical Machines (2)	EE321
EG311	Electrical Power Engineering	EE232	ME431	Heat Transfer	ME231
NE264	Scientific Thinking	-	EE421	Power Electronics (1)	EC335
Year 4					
Semester 7			Semester 8		
Course No.	Course Title	Preq. code	Course No.	Course Title	Preq. code
EC435	Photo voltaic Electronic	EE421	EG423	Combustion Engines	ME431
EG421	Machine construction and operation	ME355	NE364	Engineering Economy	-
EG422	Solar Energy (1)	ME431	EG412	Solar Energy (2)	EG422
EE423	Power Electronics (2)	EE421	EG413	Energy Environmental Aspects	EG211
CC444	Programmable devices & smart meters	CC216	EE424	Electrical Drives	EE423
EE418	Automatic Control Systems	EE322	ME656	Turbomachinery	ME431
			IM400	Practical Training	-
Year 5					
Semester 9			Semester 10		
Course No.	Course Title	Preq. code	Course No.	Course Title	Preq. code
EG501	Project (1)		EG502	Project (2)	EG501
EG511	Control Applications of energy systems	EE418	EG514	Wind Energy (2)	EG521

EG521	Wind Energy (1)	EG423	EG513	Renewable Energy network interface	EG412
EG512	Load Management & Energy Efficiency	EG312	EG5XX	Elective Course (Group A)	
ME425	Power plant technology	ME431	EG5XX	Elective Course (Group B)	
EG5XX	Elective Course (Group A)				

ELECTIVE COURSES

<u>Group A</u>			<u>Group B</u>		
Course No.	Course Title	Preq. code	Course Num.	Course Title	Preq. code
EC532	- Electronics and renewable energy systems	EC435	IM535	- International operations management	-
EG518	- Bio Energy	EG211	IM423	- Operation Research	-
EG516	- Advanced PV module systems	EG412	EG525	Energy System Laws and Regulations	
EG524	- Fuel planning & alternative fuels	EG211			
EG517	- Green Buildings	EG412			
EG515	- Selected topics in Renewable energy	EG412&EG514			
EG523	- Sea water Desalination	ME431			
ME465	Computational Fluid Dynamics	ME431			
ME455	Computer aided design	EG421			
ME464	Hydraulic and pneumatic systems	EG321			
EG515	Energy Economics & Planning	EG521 & EG421			