

التاريخ: المرفقات:....









المملكة العربية السعودية وزارة التعليم جامعة الجوف كليت الهندست

Program Name: Electrical Engineering

Qualification Level : Bachelor of Science Degree

Department: Electrical Engineering

College: Engineering

Institution: Jouf University

Regular Track

Year	Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours (LT,LB,TU)	Type of requirements (Institution, College or Department)
		ENGL 001	English Language (1)	Required	-	6 (5,5,10)	University
		MTH 101	Introductory Mathematics	Required	-	3 (2,0,2)	College
	Level 1	CIS 101	Computer Skills	Required	 	3 (2,2,0)	University
L		EDU 101		Required			University
First Year		EDU 101	University Life Skills Total Credit Hour	1 1		2 (2,0,0)	University
st		ENGL 002	English Language (2)	6 (5,5,10)	University		
Fir		MTH 102	Differential Calculus	Required Required	ENGL 001 MTH 101	3 (2,0,2)	College
	Lawal	CHM 103	Chemistry	Required	-	3 (2,2,0)	College
	Level 2	CIS 102	Problem Solving and	Required	CIS 101	3 (2,2,0)	University
	2	010 102	Programming Trade Constitution	_			CIII (CI 510)
		TCT 102	Total Credit Hour		l e	15 (11,9,12)	T T • •
		ISL 103	Islamic Economic System	Required	3.6077.403	2 (2,0,0)	University
		MTH 203 PHS 101	Integral Calculus General Physics (1)	Required	MTH 102	3 (2,0,2)	College
			•	Required		4 (3,2,0)	College
	Level	ARB 100	Arabic Language Skills	Required	 	2 (2,0,0)	University
ır	3	MEC 101	Engineering drawing	Required	 	2 (1,2,0)	College
Yes		MEC 102	Engineering Design (1)	Required		3 (2,2,0)	College
pı		MEC 103	Engineering Economy	Required	MTH 102	2 (2,0,0)	College
Second Year		ISL 107	Total Credit Hour Professional Ethics		l	18 (14,6,2)	
Se				Required	DIIC 101	2 (2,0,0)	University
	Level	PHS 202 MTH 204	General Physics (2) Advanced Calculus	Required Required	PHS 101 MTH 203	4 (3,2,0) 3 (2,0,2)	College College
		MTH 281	Statistics and Probabilities	Required	MTH 203	3 (2,0,2)	College
	4	MEC 104	Engineering Design (2)	Required	MEC 102	2 (1,2,0)	College
		MEC 105	Basics of Engineering Technology	Required	MEC 101	2 (1,2,0)	College
		ICI 10V	Total Credit Hour	1	I	16 (11,6,4)	
	Level 5	ISL 10X	University Elective (1)	Elective	A DD 100	2 (2,0,0)	University
		ARB 102 ELE 200	Writing Skills Electrical Circuits (1)	Required Required	ARB 100 PHS 202	2 (2,0,0) 4 (3,2,1)	University Department
		ELE 204	Logic Design	Required	PHS 202	4 (3,2,1)	Department
		ELE 207	Engineering Electromagnetics	Required	PHS 202	3 (3,0,0)	Department
ar		3 FFFT 205	Dies di LE	D	MTH 204	2 (2 0 2)	
Year		MTH 305	Differential Equations	Required	MTH 204	3 (2,0,2)	College
Third		ISL 10X	Total Credit Hour University Elective (2)	Elective	I	18 (15,4,4)	University
ľhi		ELE 202	Electrical Circuits (2)	Required	ELE 200	2 (2,0,0) 3 (2,2,1)	Department
	Level	ELE 202 ELE 205	Signals and Systems Analysis	Required	MTH 204	3 (3,0,0)	Department Department
	6	ELE 206	Engineering Management	Required	MEC 103	2 (2,0,1)	Department
	U	ELE 211	Basic Electronics	Required	ELE 200	4 (3,2,1)	Department
		MTH 382	Numerical Methods	Required	MTH 305	3 (2,0,2)	College
		TT T 200	Total Credit Hour			17 (14,4,5)	-
• .		ELE 300	Electrical Measurements and Instrumentations	Required	ELE 211	4 (3,2,1)	Department
eaı	Lovel	ELE 321	Communication Systems	Required	ELE 205	4 (3,2,1)	Department
Ϋ́	Level 7	ELE 331	Electromechanical Energy	Required	ELE 207	3 (2,2,1)	Department
ırtk	,	ELE 341	Conversion (1) Electrical power systems (1)	Required	ELE 202	3 (2,2,1)	Department
Fourth Year		ELE 341 ELE 351	Control Engineering (1)	Required	MTH 305	4 (3,2,1)	Department
I					ELE 205		-
			Total Credit Hour	S		18 (13,10,5)	

Year	Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours (LT,LB,TU)	Type of requirements (Institution, College or Department)
		ELE 302	Introduction to Microprocessors	Required	ELE 204	3 (2,2,0)	Department
		ELE 311	Microelectronic Devices and Circuits	Required	ELE 211	3 (2,2,1)	Department
	Lowel	ELE 313	Industrial Electronics	Required	ELE 300	3 (2,2,1)	Department
	Level	ELE 342	Electrical power systems (2)	Required	ELE 341	3 (2,2,1)	Department
	8	ELE 343	Power Electronics	Required	ELE 211 ELE 341	3 (2,2,1)	Department
			Total Credit Hour	15 (10,10,4)			
	Level 9	ELE 421	Digital Communications	Required	ELE 321	3 (2,2,1)	Department
		ELE 451	Digital Control Systems	Required	ELE 351	3 (2,2,1)	Department
		ELE 490	Special topics in Electrical Engineering	Required	Pass 110 Credits	2 (2,0,0)	Department
		ELE 4XX	Elective Course (1)	Elective	Department Approval	3	Department
		ELE 491	Senior Design Project	Required	Pass 110 Credits	4 (2,4,0)	Department
ear		Total Credit Hours				15	
Fifth Year		EDU 102/ BUS 101	University Elective (3)	Elective		2 (2,0,0)	University
E		ELE 422	Wireless Communications	Required	ELE 421	3 (3,0,0)	Department
		ELE 441	Renewable Energy	Required	ELE 341	3 (2,2,1)	Department
	Level 10	ELE 4XX	Elective Course (2)	Elective	Department Approval	3	Department
		ELE 4XX	Elective Course (3)	Elective	Department Approval	3	Department
		ELE 493	Field Training**	Required	Pass 110 Credits	2	Department
		Total Credit Hours					

Cooperative Track

Year	Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours (LT,LB,TU)	Type of requirements (Institution, College or Department)
		ENGL 001	English Language (1)	Required	-	6 (5,5,10)	University
		MTH 101	Introductory Mathematics	Required	-	3 (2,0,2)	College
	Level	CIS 101	Computer Skills	Required	-	3 (2,2,0)	University
ar	1	EDU 101	University Life Skills	Required	-	2 (2,0,0)	University
First Year		Total Credit Hours					
rst		ENGL 002	English Language (2)	Required	ENGL 001	6 (5,5,10)	University
室		MTH 102	Differential Calculus	Required	MTH 101	3 (2,0,2)	College
	Level	CHM 103	Chemistry	Required	-	3 (2,2,0)	College
	2	CIS 102	Problem Solving and Programming	Required	CIS 101	3 (2,2,0)	University
			Total Credit Hour	s		15 (11,9,12)	
		ISL 103	Islamic Economic System	Required		2 (2,0,0)	University
		MTH 203	Integral Calculus	Required	MTH 102	3 (2,0,2)	College
		PHS 101	General Physics (1)	Required		4 (3,2,0)	College
	Tamal	ARB 100	Arabic Language Skills	Required		2 (2,0,0)	University
	Level	MEC 101	Engineering drawing	Required		2 (1,2,0)	College
ear	3	MEC 102	Engineering Design (1)	Required		3 (2,2,0)	College
X		MEC 103	Engineering Economy	Required	MTH 102	2 (2,0,0)	College
Second Year			Total Credit Hour	18 (14,6,2)			
၁၁ә		ISL 107	Professional Ethics	Required		2 (2,0,0)	University
S		PHS 202	General Physics (2)	Required	PHS 101	4 (3,2,0)	College
		MTH 204	Advanced Calculus	Required	MTH 203	3 (2,0,2)	College
	Level	MTH 281	Statistics and Probabilities	Required	MTH 203	3 (2,0,2)	College
	4	MEC 104 MEC 105	Engineering Design (2) Basics of Engineering Technology	Required Required	MEC 102 MEC 101	2 (1,2,0) 2 (1,2,0)	College College
		MEC 103	Total Credit Hour		MIEC 101	16 (11,6,4)	Conege
		ISL 10X	University Elective (1)	Elective		2 (2,0,0)	University
		ARB 102	Writing Skills	Required	ARB 100	2 (2,0,0)	University
	Level	ELE 200	Electrical Circuits (1)	Required	PHS 202	4 (3,2,1)	Department
	_	ELE 204	Logic Design	Required	PHS 202	4 (3,2,1)	Department
	5	ELE 207	Engineering Electromagnetics	Required	PHS 202	3 (3,0,0)	Department
Year		MTH 305	D:664'-1 E4'	Required	MTH 204 MTH 204	3 (2,0,2)	College
		WITH 505	Differential Equations Total Credit Hour		M1H 204	18 (15,4,4)	Conege
ird		ISL 10X	University Elective (2)	Elective		2 (2,0,0)	University
Third		ELE 202	Electrical Circuits (2)	Required	ELE 200	3 (2,2,1)	Department
	Level	ELE 202 ELE 205	Signals and Systems Analysis	Required	MTH 204	3 (3,0,0)	Department Department
		ELE 206	Engineering Management	Required	MEC 103	2 (2,0,1)	Department
	6	ELE 211	Basic Electronics	Required	ELE 200	4 (3,2,1)	Department
		MTH 382	Numerical Methods	Required	MTH 305	3 (2,0,2)	College
		Total Credit Hours					
<u>.</u>		ELE 300	Electrical Measurements and Instrumentations	Required	ELE 211	4 (3,2,1)	Department
ea	Level	ELE 321	Communication Systems	Required	ELE 205	4 (3,2,1)	Department
Ϋ́	Level 7	ELE 331	Electromechanical Energy	Required	ELE 207	3 (2,2,1)	Department
ırt	1	ELE 341	Conversion (1) Electrical power systems (1)	Required	ELE 202	3 (2,2,1)	Department
Fourth Year		ELE 351	Control Engineering (1)	Required	MTH 305	4 (3,2,1)	Department
			ELE 205	40 (12 12			
			Total Credit Hour	S		18 (13,10,5)	

Year	Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours (LT,LB,TU)	Type of requirements (Institution, College or Department)
		ELE 302	Introduction to Microprocessors	Required	ELE 204	3 (2,2,0)	Department
		ELE 311	Microelectronic Devices and Circuits	Required	ELE 211	3 (2,2,1)	Department
		ELE 313	Industrial Electronics	Required	ELE 300	3 (2,2,1)	Department
	Level	ELE 342	Electrical power systems (2)	Required	ELE 341	3 (2,2,1)	Department
	8	ELE 343	Power Electronics	Required	ELE 211 ELE 341	3 (2,2,1)	Department
		ELE 421	Digital Communications	Required	ELE 321	3 (2,2,1)	Department
			Total Credit Hour	18 (12,12,5)			
	Level 9	ELE 491	Senior Design Project	Required	Pass 110 Credits	4 (2,4,0)	Department
		ELE 492	Cooperative Training	Required	Pass 110 Credits	8	Department
		Total Credit Hours					
Fifth Year	Level 10	EDU 102/ BUS 101	University Elective (3)	Elective		2 (2,0,0)	University
Į.		ELE 422	Wireless Communications	Required	ELE 421	3 (3,0,0)	Department
ŢŢ,		ELE 441	Renewable Energy	Required	ELE 341	3 (2,2,1)	Department
F		ELE 451	Digital Control Systems	Required	ELE 351	3 (2,2,1)	Department
		ELE 490	Special topics in Electrical Engineering	Required	Pass 110 Credits	2 (2,0,0)	Department
		ELE 4XX	Elective Course (1)	Elective	Department Approval	3	Department
			Total Credit Hour	S		16	

(List of Elective Courses)

Course Code	Course Title	Required or Elective	Pre- Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
ELE 401	Biomedical Signals and Systems	Elective	Dep. Approval	3 (2,2,1)	Department
ELE 402	Biomedical Instrumentation	Elective	Dep. Approval	3 (2,2,1)	Department
ELE 411	Digital Communication Electronics	Elective	ELE 311 Dep. Approval	3 (2,2,1)	Department
ELE 412	Low Power VLSI Circuit Design	Elective	ELE 311 Dep. Approval	3 (2,2,1)	Department
ELE 413	Principles of Nanoelectronics	Elective	ELE 311 Dep. Approval	3 (3,0,0)	Department
ELE 414	Microwave Circuits and Devices	Elective	ELE 311 Dep. Approval	3 (3,0,0)	Department
ELE 423	Antennas and Wave propagation	Elective	ELE 207 ELE 421 Dep. Approval	3 (2,2,1)	Department
ELE 424	Digital Signal Processing	Elective	ELE 205 Dep. Approval	3 (2,2,1)	Department
ELE 425	Satellite Communications	Elective	ELE 421 Dep. Approval	3 (2,2,1)	Department
ELE 426	Optical Communications	Elective	ELE 421 Dep. Approval	3 (2,2,1)	Department
ELE 427	Microwave Engineering	Elective	ELE 207 Dep. Approval	3 (2,2,1)	Department
ELE 428	Wireless Networking	Elective	ELE 421 Dep. Approval	3 (3,0,0)	Department
ELE 431	Electromechanical Energy Conversion (2)	Elective	ELE 331 Dep. Approval	3 (2,2,1)	Department
ELE 442	Switchgear and Protection of Power Systems	Elective	ELE 341 Dep. Approval	3 (2,2,1)	Department
ELE 443	High Voltage Engineering	Elective	ELE 342 Dep. Approval	3 (2,2,1)	Department
ELE 444	Power Transmission and Distribution	Elective	ELE 342 Dep. Approval	3 (2,2,1)	Department
ELE 445	Sustainable Energy Technology	Elective	Dep. Approval	3 (2,2,1)	Department
ELE 452	Introduction to Fuzzy and Neural Systems	Elective	ELE 451 Dep. Approval	3 (2,2,1)	Department
ELE 453	Control Engineering (2)	Elective	ELE 451 Dep. Approval	3 (2,2,1)	Department
ELE 454	Robotic Systems	Elective	ELE 313 ELE 451 Dep. Approval	3 (2,2,1)	Department
ELE 455	Selected Topics in Control Engineering	Elective	ELE 313 ELE 451	3 (3,0,0)	Department

			Dep. Approval		
ELE 456	Real Time Design Systems	Elective	ELE 302 ELE 451 Dep. Approval	3 (2,2,1)	Department
ELE 457	Embedded Systems	Elective	ELE 302 ELE 451 Dep. Approval	3 (2,2,1)	Department

Total Credit Hours 162