

## Course Plan for BS Electrical Engineering

C. Code	Course Name	Pre Req.	C. Code	Course Name	Pre Req.
<b>Semester 1</b>			<b>Semester 2</b>		
PAM-131	Engineering Physics (3+1)	Nil	PAM-202	Calculus-II (3+0)	PAM-101
CMS-101/ CMS-102	Islamic Studies (2+0) / Ethics (2+0)	Nil	EE-120	Electronic Devices & Circuits (3+1)	EE-111
PAM-101	Calculus-I (3+0)	Nil	ME-198	Engineering Mechanics (2+1)	Nil
EE-111	Circuit Analysis – I (3+1)	Nil	PAM-256	Ordinary Differential Equations (3+0)	PAM-101
CIS-101	Computer Fundamentals & Programming (3+1)	Nil	ME-196	Engineering Drawing (0+1)	Nil
CMS-104	Composition and Grammar (2+0)	Nil	CMS-105	Communication Skills (3+0)	Nil
<b>Semester 3</b>			<b>Semester 4</b>		
PAM-242	Linear Algebra (2+0)	PAM-202	EE-220	Signals & Systems Theory (3+0)	PAM-260
EE-212	Electronic Circuit and Design (3+1)	EE-120	EE-311	Microprocessors & Interfacing (3+1)	EE-224
EE-226	Circuit Analysis-II (3+1)	EE-111/ PAM-256	ME-199	Applied Thermodynamics (3+0)	Nil
EE-224	Digital Logic Design (3+1)	EE-111	EE-213	Electrical Machines (3+1)	PAM-131
PAM-260	Complex Analysis & Applications (3+0)	PAM-256	CMS-106	Technical Writing (3+0)	Nil
CMS-103	Pakistan Studies (2+0)	Nil	ME-122	Workshop Practice (0+1)	Nil
<b>Semester 5</b>			<b>Semester 6</b>		
EE-312	Measurement & Instrumentation (3+1)	EE-111	PAM-361	Engineering Computational Methods (3+0)	PAM-242 PAM-256
EE-313	Electromagnetic Theory (3+0)	PAM-202	EE-323	Communication Systems (3+1)	EE-313/ PAM-266
CMS-202	Engineering Economics (2+0)	Nil	EE-411	Power Electronics (3+1)	EE-120
EE- XXX	Elective-I (3+1)		EE- XXX	Elective-II (3+1)	
PAM-266	Probability & Random Variables (3+0)	Nil	EE- XXX	Elective-III (3+1)	
<b>Semester 7</b>			<b>Semester 8</b>		
EE-416	Linear Control Systems (3+1)	PAM-256	CMS-109	Entrepreneurship (2+0)	Nil
CMS-301	Principles of Management (2+0)	Nil	EE-499	Thesis Project (0+3)	**
EE-499	Thesis Project (0+3)	**	EE-XXX	Elective-VI (3+1)	
EE-XXX	Elective-IV (3+1)		EE-XXX	Elective-VII (3+1)	
EE-XXX	Elective-V (3+1)				
<b>Power Specialization</b>			<b>Electronics and Telecommunication Specialization</b>		
Elective I	EE-324: Power Generation	EE-213	Elective I	EE-316: Integrated Circuits	EE-212
Elective II	EE-418: Power Transmission, Distribution	EE-415	Elective II	EE-414: Digital Signal Processing	EE-220
Elective III	EE-415: Power Systems Analysis	EE-223	Elective III	EE-410: FPGA Based Design	EE-212
Elective IV	EE-419: Electric Machine Design	EE-213	Elective IV	EE-325: Electrical Power Systems	EE-223
Elective V	EE-432: Power System Protection	EE-418	Elective V	CIS-318: Data Structures & Algorithm	CIS-101
Elective VI	EE-431: Power System Operation & Control	EE-415		EE-326: Data & Computer Comm.	Nil
Elective VII	EE-430: High Voltage Engineering	EE-312	Elective VI	EE-425: Fundamentals of Robotics	PAM-242
				EE-412: Transmission Line Waveguides	EE-323
				EE-423: Digital Control Systems	EE-416
			Elective VII	EE-426: Industrial Automation	EE-416
				EE-427: Digital Comm. Systems	EE-323

\*\* The student should pass 70% of the total Credit Hours of course work.