

## Course Plan for BS Electrical Engineering (2021-25)

Code	Course Name	Pre-Req.	Code	Course Name	Pre-Req.
<b>Semester 1 (17)</b>			<b>Semester 2 (17)</b>		
PAM-131	Engineering Physics (3+1)	Nil	PAM-202	Calculus-II (3+0)	PAM-101
PAM-101	Calculus-I (3+0)	Nil	EE-120	Electronic Devices & Circuits (3+1)	EE-111
EE-111	Circuit Analysis – I (3+1)	Nil	ME-198	Engineering Mechanics (2+1)	Nil
CIS-101	Computer Fundamentals & Programming (3+1)	Nil	PAM-256	Ordinary Differential Equations (3+0)	PAM-101
CMS-104	Composition and Grammar (2+0)	Nil	CMS-105	Communication Skills (2+0)	Nil
			PAM-242	Linear Algebra (2+0)	Nil
<b>Semester 3 (17)</b>			<b>Semester 4 (17)</b>		
CMS-101	Islamic Studies (2+0)	Nil	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
ME-199	Applied Thermodynamics (3+0)	Nil	EE-226	Circuit Analysis-II (3+1)	EE-111
EE-224	Digital Logic Design (3+1)	Nil	EE-213T	Electrical Machines Theory (4+0)	Nil
PAM-260	Complex Analysis & Applications (3+0)	PAM-256	CMS-106	Technical Writing (2+0)	Nil
ME-122	Workshop Practice (0+1)	Nil	ME-196	Engineering Drawing (0+1)	Nil
<b>Semester 5 (19)</b>			<b>Semester 6 (19)</b>		
EE-312	Measurement & Instrumentation (3+1)	EE-111	CMS-202	Engineering Economics (2+0)	Nil
EE-313	Electromagnetic Theory (3+0)	PAM-202	EE-411	Power Electronics (3+1)	EE-120
EE-323	Communication Systems (3+1)	EE-220	EE-XXX	Elective-II (3+1)	
EE-XXX	Elective-I (3+1)		EE-XXX	Elective-III (3+1)	
PAM-266	Probability & Random Variables (3+0)	Nil	PAM-361	Engineering Computational Methods (3+0)	PAM-256
EE-213L	Electrical Machine Lab (0+1)	Nil	CMS-207	Professional Ethics (2+0)	
<b>Semester 7 (17)</b>			<b>Semester 8 (15)</b>		
EE-416	Linear Control Systems (3+1)	EE-220	CMS-103	Pakistan Studies	
EE-499	Thesis Project (0+3)	**	CMS-301	Principles of Management (2+0)	Nil
CMS-109	Entrepreneurship (2+0)	Nil	EE-499	Thesis Project (0+3)	**
EE-XXX	Elective-IV (3+1)		EE-XXX	Elective-VII (3+1)	
EE-XXX	Elective-V (3+1)		EE-XXX	Elective-VI (3+1)	
<b>Power Specialization</b>			<b>Electronics and Telecommunication Specialization</b>		
<b>Electives</b>	EE-324: Power Generation	EE-213	<b>Electives</b>	EE-316: Integrated Circuits	EE-212
	EE-418: Power Transmission, Distribution	Nil		EE-425: Fundamentals of Robotics	PAM-242
	EE-415: Power Systems Analysis	Nil		EE-412: Transmission Line & W. Guides	EE-313
	EE-419: Electric Machine Design	EE-213		EE-422: VLSI Design	EE-316
	EE-432: Power System Protection	EE-415		EE-410: FPGA Based Design	EE-224
	EE-431: Power System Operation & Control	EE-415		EE-414: Digital Signal Processing	EE-220
	EE-430: High Voltage Engineering	EE-415		EE-325: Electrical Power Systems	EE-213
				CIS-318: Data Structures & Algorithm	CIS-101
				EE-326: Data & Computer Comm.	Nil
				EE-426: Industrial Automation	EE-416
		EE-427: Digital Comm. Systems	EE-323		
		EE-423: Digital Control Systems	EE-416		
		EE- Real Time Embedded System			

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