

BS ELECTRICAL ENGINEERING - Pre-requisites Chart

Type	Course	Units	Class	Prerequisite	Grade
Core	ECE 1	1	Intro to Electrical and Computer Engineering	None	
Core	ECE 71	3	Engineering Computations	ELM/Trigonometry	
Core	ECE 85	3	Digital Logic Design	Discrete Math	
Core	ECE 85L	1	Digital Logic Design Lab	ECE 85 (Concurrent)	
Core	ECE 90	3	Principles of Electrical Circuits	Phys 4B, Math 77 (Conc.)	
Core	ECE 90L	1	Principles of Electrical Circuits Lab	ECE 90 (Concurrent)	
Core	ECE 102	3	Advanced Circuit Analysis	ECE 90, Math 81	
Tech Area	ECE 106	3	Switching Theory and Logical Design	ECE 85	
Tech Area	ECE 107	3	Digital Switching Processing	ECE 71 [†] , 115 or 118, 124	
Tech Area	ECE 114	3	Physical Electronics	Phys 4C, ECE 128 (Conc.)	
Tech Area	ECE 115	3	Computer Organization	ECE 71 [†] , 85	
Core	ECE 118	3	Microprocessor Architecture and Programming	ECE 71 [†] , 85	
Lab Elect	ECE 119LA	1	Senior Laboratory A	Instructor Permission	
Lab Elect	ECE 119LB	1	Senior Laboratory B	ECE 71 [†] , 118	
Lab Elect	ECE 120L	1	Computer Systems Lab	ECE 118	
Core	ECE 121	3	Electromechanical Systems and Energy Conv.	ECE 90 or 91	
Lab Elect	ECE 121L	1	Electromechanical Systems and Energy Conv. Lab	ECE 121 (Concurrent)	
Core	ECE 124	3	Signal and Systems	ECE 71 [†] , 90, Math 81	
Core	ECE 125	3	Random Signals and Stochastic System Analysis	ECE 124	
Core	ECE 126	3	Electromagnetic Theory and Applications I	ECE 90, Math 81 (Conc.)	
Core	ECE 128	3	Electronics I	ECE 90	
Core	ECE 128L	1	Electronics I Lab	ECE 90L, 128 (Conc.)	
Tech Area	ECE 132	3	Design of Digital Systems	ECE 115, 118	
Core	ECE 134	3	Analog and Digital Communication Engineering	ECE 124	
Tech Area	ECE 135	3	Wireless Communications Systems	ECE 125, 134	
Tech Area	ECE 136	3	Electromagnetic Theory and Applications II	ECE 126	
Lab Elect	ECE 136L	1	Electromagnetic Theory and Applications II Lab	ECE 136 (Conc.)	
Core	ECE 138	3	Electronics II	ECE 102, 124, 128	
Core	ECE 138L	1	Electronics II Lab	ECE 128L, 138 (Conc.)	
Tech Area	ECE 140	3	VLSI System Design	ECE 118, 128	
Tech Area	ECE 146	3	Computer Networking and Distributed Processing	ECE 118, ECE 125	
Tech Area	ECE 148	3	Analysis and Design of Digital Circuits	ECE 85, 128	
Tech Area	ECE 151	3	Electrical Power Systems	ECE 90	
Tech Area	ECE 152	3	Power Systems Analysis and Control	ECE 151, 155	
Core	ECE 155	3	Control Systems	ECE 124	
Tech Area	ECE 162	3	Analog Integrated Circuits and Applications	ECE 138	
Tech Area	ECE 166	3	Microwave Devices and Circuits Design	ECE 136	
Tech Area	ECE 168	3	Microwave Amplifier and Oscillator Design	ECE 136	
Tech Area	ECE 171	3	Quantum Electronics	ECE 126	
Tech Area	ECE 172	3	Sequential Machine and Automata Theory	ECE 106	
Tech Area	ECE 173	3	Robotics Fundamentals	ECE 118, 128, Math 81	
Tech Area	ECE 174	3	Advanced Computer Architecture	ECE 115 or 118	
Tech Area	ECE 176	3	Computer-Aided Engineering in Digital Design	ECE 120L (Conc.)	
Core	ECE 186A	1	Senior Design I	Instructor Permission	
	ECE 186B	1	Senior Design II	ECE 186A	

*All core classes required

*Three technical area courses required

*PLSI 120 or BA 104 required

*Two lab electives required

*CE 29 or ME 29 or ME 136 required

*Phil 1 or 10 required

*One course required from ECE 191T, Math 121, 123, 128, 152, 171, 181, 182

*Econ 40 or 50 required

*Additional Requirements: Biol 10, Chem 3A, ECE 186B, Math 75, 76, 77, 81 (or ENGR 101), Phil 120, Phys 4A, 4B, 4BL,

*Total 128 units (GE not listed)

[†] CSCI 40 can also be used as a prerequisite in lieu of ECE 71

(This sheet is for informational purposes only. More details can be found in the University Catalog and by consulting your advisor.)