

**University of San Diego Shiley-Marcos School of Engineering**  
**Electrical Engineering Degree Checklist (2021/22 catalog)**

Complete	Core Curriculum	Course that Satisfies Requirement	Units
	First Year Writing (CFYW)	FYW 150	3
	Mathematical Reasoning (CMRP)	MATH 150	
	Second Language Competency/elective		3 to 9
	Lower-Division Theological and Religious Inquiry (FTRI)		3
	Upper-Division Theological and Religious Inquiry (FTRI)		3
	Philosophical Inquiry (FPHI)		3
	Ethical Inquiry (FETI)	PHIL 342	3
	Scientific and Technological Inquiry (ESTI)	ENGR 101	
	Historical Inquiry (EHSI)		3
	Social and Behavioral Inquiry (ESBI)		3
	Literary Inquiry (ELTI)		3
	Artistic Inquiry (EARI)		3
	Diversity, Inclusion, Social Justice (FDD1)	ENGR 103	
	Diversity, Inclusion, Social Justice (FDD2 or FDG2)		
	Advanced Writing (CADW)	ELEC 491	
	Oral Communication (CORL)	COMM 203	3
	Quantitative Reasoning (CQR)	ISYE 330	
	First Year Integration (CINL)	LLC course	
	Advanced Integration (CINT)	ELEC 492	
Complete	Math/Science Courses	Prerequisites/(Corequisites)	
	CHEM 151/151L - General Chemistry		4
	Life Science Elective		3
	MATH 150 - Calculus I		4
	MATH 151 - Calculus II	MATH 150 (C- or better)	4
	MATH 310 - Applied Math for Science and Engineering I	MATH 151 (C- or better)	3
	MATH 250 - Calculus III	MATH 151 (C- or better)	4
	MATH 311 - Applied Math for Science and Engineering II	MATH 250 (C- or better), MATH 310 (C- or better)	3
	PHYS 270/270L – Mechanics +lab	MATH 150	4
	PHYS 271/271L – Electricity & Magnetism +lab	PHYS 270 (C- or better), MATH 151	4
Complete	Engineering Core Courses	Prerequisites/(Corequisites)	33
	ISYE 330 - Engineering Statistics		3
	ELEC 201 - Electrical Circuits and lab	PHYS 271, (MATH 310)	4
	ENGR 101 - Intro to Engineering	MATH 115 or (MATH 150)	3
	ENGR 102 – Engineering Design Practice	ENGR 101, ENGR 121, MATH 150	3
	ENGR 103 – User-Centered Collaborative Design	ENGR 101, MATH 150	3
	COMP 110– Computational Problem Solving	(MATH 150)	3.5
	ELEC 311 - Semiconductor Elec. Dev.	MATH 151 CHEM 151/151L, PHYS 271	3
	MENG 210 - Statics	MATH 150, PHYS 270	3
	MENG 260 or PHYS 272	MATH 250, PHYS 271	3
Complete	EE Required Courses	Prerequisites/(Corequisites)	25.5
	ELEC 301- Electronics I	ELEC 201	4
	ELEC 302 - Electronics II	ELEC 301 (ELEC 350)	4
	ELEC 310 - Embedded System Design	ENGR 121or COMP 150, ELEC 340	4
	ELEC 311 - Semiconductor Electronic Devices	CHEM 151/L, MATH 151, PHYS 271	3
	ELEC 320 - Principles of Electrical Power	ELEC 201	3
	ELEC 340 - Digital Design	ENGR 121 or COMP 110, ELEC 201	4
	ELEC 350 - Signals and Systems	ENGR 121orCOMP 150, MATH 310, ELEC 201, (MATH 311)	3
	ELEC 430 - Applied Electromagnetics	MATH 311, PHYS 271, ELEC 350	4
	ELEC 460 - Control Systems Engineering	ELEC 320, ELEC 350, MATH 311	4
	ELEC 470 - Communication Principles and Circuits	ELEC 302, ELEC 350, MATH 311, (ISYE 330 or MATH 315)	4
	ELEC 491 - Electrical Engineering Design and Practice I	ELEC 302, ELEC 310, ELEC 350	4
	ELEC 492 - Electrical Engineering Design and Practice II	ELEC 491	3
Complete	EE Elective Courses		44
	EE Program Elective		3
	EE Program Elective		3
	Free Elective		
	Free Elective		
			6
		<b>Total EE Degree Units</b>	<b>147</b>