

# EE COURSE OFFERINGS 2025 - 2026 ACADEMIC YEAR

8/1/2025

**Required** Courses for **EE's** in Red  
**Required** Courses for **CPE's** in Blue  
**Service** Courses in Green

EE students are expected to take the course in the quarter marked with X. A reduced number of sections of courses may be offered in quarters marked with an asterisk (\*) depending upon demand and resources available.

Course #	Course Title	Type	Units	Fall	Winter	Spring	Summer
<b>BS DEGREE REQUIRED COURSES:</b>							
<b>Freshman Core Courses</b>							
EE 111	Intro to Electrical Eng	Lec	1	X			
EE 151	Intro to Electrical Eng Lab	Lab	1	X			
EE 113	Electric Circuit Analysis I	Lec	3	*			
EE 143	Elec Manu & Circ Analysis Lab	Lab	1	*			
CPE 133	Digital Design	Lec/Lab	4	X	*	X	
<b>Sophomore Core Courses</b>							
EE 211	Electric Circuit Analysis II	Lec	3	X	*		
EE 241	Electric Circuit An Lab II	Lab	1	X	*		
EE 212	Electric Circuit Analysis III	Lec	3	X	X	*	
EE 242	Electric Circuit An Lab III	Lab	1	X	X	*	
EE 228	Continuous-Time Signals & Systems	Lec	4	X	*	X	
CPE 233	Comp Des & Asm Lang Prog	Lec/Lab	4		X	*	
EE 255	Energy Conversion Electromagnetics	Lec	3	*	*	X	
EE 295	Energy Conversion EM Lab	Lab	1	*	*	X	
<b>Junior Core Courses</b>							
EE 302	Classical Control Systems	Lec	3		X	*	
EE 342	Classical Control Systems Lab	Lab	1		X	*	
EE 306	Semiconductor Device Electronics	Lec	3	X	*		
EE 346	Semiconductor Dev Electr Lab	Lab	1	X	*		
EE 307	Digital Electronics and Int Circuits	Lec	3		X	*	
EE 347	Digital Electronics & Int Circ Lab	Lab	1		X	*	
EE 308	Analog Electronics & Int Circuits	Lec	3	*		X	
EE 348	Analog Electronics & Int Circ Lab	Lab	1	*		X	
EE 314	Intro to Communication Systems	Lec	3	Not offered in 25-26 academic year			
EE 328 <sup>1</sup>	Discrete Time Signals & Systems	Lec	3	X	*		
EE 368 <sup>1</sup>	Signals and Systems Lab	Lab	1	X	*		
EE 329	Prog Logic & $\mu$ P-Based Sys Design	Lec/Lab	4	*		X	
EE 336	Comp Hardware Arch and Design	Lec/Lab	4	Not offered in 25-26 academic year			
EE 335	EM Fields & Transmission	Lec	4	*			
EE 375	EM Fields & Transmission Lab	Lab	1	*			
<b>Senior Core Courses</b>							
EE 402	Electromagnetic Waves	Lec	4	X	*		
EE 409	Electronic Design	Lec	3	X	*		
EE 449	Electronic Design Lab	Lab	1	X	*		
EE 460	Senior Project Preparation	Lec	2	X	*		
EE 461	Senior Project Qtr. 1	Superv	3		X		
EE 462	Senior Project Qtr. 2	Superv	2	X		X	
EE 463	Senior Project Design Lab I	Lab	3		X	X	
EE 464	Senior Project Design Lab 2	Lab	2			X	X
<b>SUPPORT ELECTIVES</b>							
EE 261	Intro C Progr. with a HW Emphasis	Lab	1	Not offered in 25-26 academic year			
EE 262	Intro C++ Progr. with a HW Emphasis	Lab	1	Not offered in 25-26 academic year			

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TECHNICAL ELECTIVES <sup>2</sup>							
<b>Electronics</b>							
EE 412	Advanced Analog Circuits	Lec	3		X		
EE 452	Advanced Analog Circuits Lab	Lab	1		X		
EE 413	Advanced Electronic Design	Lec/Lab	4	Not offered in 25-26 academic year			
EE 422	Polymer Electronics Laboratory	Lab	1			X	
EE 425	Analog Filter Design	Lec	3			X	
EE 455	Analog Filter Design Lab	Lab	1			X	
EE 431	CAD Design of VLSI Devices	Lec/Lab	4	X			
EE 423	Micro/Nano Fabrication	Lec	3		X		
EE 473	Micro/Nano Fabrication Lab	Lab	1		X		
<b>Microwave/Photonics</b>							
EE 403	Fiber Optic Communication	Lec	3	Not offered in 25-26 academic year			
EE 443	Fiber Optic Communication Lab	Lab	1	Not offered in 25-26 academic year			
EE 405	High-frequency Amplifier Design	Lec	3	Not offered in 25-26 academic year			
EE 445	High-freq. Amplifier Design Lab	Lab	1	Not offered in 25-26 academic year			
EE 418	Photonic Engineering	Lec	3			X	
EE 458	Photonic Engineering Lab	Lab	1			X	
EE 440	Wireless Communications	Lec	3	Not offered in 25-26 academic year			
EE 480	Wireless Communications Lab	Lab	1	Not offered in 25-26 academic year			
<b>Power</b>							
EE 406	Power Systems Analysis I	Lec	4	*			
EE 407	Power Systems Analysis II	Lec	4		*		
EE 410	Power Electronics I	Lec/Lab	4	*			
EE 411	Power Electronics II	Lec/Lab	4		*		
EE 417	Alternating Current Machines	Lec/Lab	4	*			
EE 420	Sustainable Elec Energy Conversion	Lec/Lab	4		*		
EE 433 <sup>3</sup>	Introduction to Magnetic Design	Lec/Lab	4	Not offered in 25-26 academic year			
EE 434	Alternative Energy Vehicles	Lec/Lab	4	Not offered in 25-26 academic year			
EE 435	Industrial Power Control and Automation	Lab	1			X	
EE 444	Power Systems Laboratory	Lab	1			X	
EE 450	Solar Photovoltaic System Engineering	Lec/Lab	4	Not offered in 25-26 academic year			
<b>Systems (Communications, Signal Processing, Controls)</b>							
EE 415 <sup>4</sup>	Communication Systems Design	Lec	3	X			
EE 416 <sup>4</sup>	Digital Communication Systems	Lec	3	Not offered in 25-26 academic year			
EE 419	Digital Signal Processing	Lec	3		X		
EE 459	Digital Signal Processing Lab	Lab	1		X		
EE 424	Intro to Remote Sensing	Lec/Lab	4		X		
EE 428	Computer Vision	Lec/Lab	4		X		
EE 432	Digital Control Systems	Lec	3	X			
EE 472	Digital Control Systems Lab	Lab	1	X			
EE 456	Communication Systems Lab	Lab	1	Not offered in 25-26 academic year			
EE 475	Comm Networks and Systems Lab	Lab	1	X			
<b>Special Topics</b>							
EE 271	Selected Laboratory	Lab	1	Not offered in 25-26 academic year			
EE 470	Selected Advanced Topics	Lec	1-4	X		X	
EE 471	Selected Advanced Lab	Lab	1-4	X		X	

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GRADUATE COURSES							
EE 563	Graduate Seminar	Sem	1	X	X	X	
EE 599	Design Project (Thesis)	Superv	1-9	X	X	X	
Electronics							
EE 524	Solid State Electronics	Sem	3	Not offered in 25-26 academic year			
EE 531	Advanced VLSI Design	Lec/Lab	4		X		
EE 532	VLSI Circuit Testing	Lab	1	Not offered in 25-26 academic year			
EE 544	Solid-state Electronics Lab	Lab	1	Not offered in 25-26 academic year			
Microwave / Photonics							
EE 502	Microwave Engineering	Sem	4	Not offered in 25-26 academic year			
EE 529	Adv Topics in Microwave Device Elec	Sem	3	Not offered in 25-26 academic year			
EE 530	Fourier Optics	Sem	4	Not offered in 25-26 academic year			
EE 533	Antennas	Sem	4	Not offered in 25-26 academic year			
EE 534	Advanced Photonic Systems	Lec/Lab	4	Not offered in 25-26 academic year			
EE 541	Microwave Engineering Lab	Lab	2		X		
Power							
EE 511	Electric Machines Theory	Sem	4		X		
EE 518	Power System Protection	Lec/Lab	4			X	
EE 519	Adv Analysis of Power Systems	Sem	4	Not offered in 25-26 academic year			
EE 520	Solar-Photovoltaic Systems Design	Sem	4			X	
EE 527 <sup>3</sup>	Adv Topics in Power Electronics	Sem	4			X	
Systems (Communications, Signal/Image Processing, Controls)							
EE 504	Software Defined Radio	Sem/Lab	4		X	X	
EE 509	Computational Intelligence	Sem	4			X	
EE 513	Control Systems Theory	Sem	4		X		
EE 514	Adv Topics in Automatic Control	Sem	4			X	
EE 515	Discrete Time Filters	Sem	4	X			
EE 516	Pattern Recognition	Sem/Lab	4			X	
EE 525	Stochastic Processes for Eng.	Sem	4	X			
EE 526	Digital Communications	Sem	4		X		
EE 528	Digital Image Processing	Sem	4	X			
SERVICE COURSES							
EE 115	Electrical and Electronic Circuits I	Lec	3	X	*		
EE 145	Electrical and Electronic Circuits I Lab	Lab	1	X	*		
EE 201	Electric Circuit Theory	Lec	3	X	X	X	X
EE 251	Electric Circuits Lab	Lab	1	X	X	X	X
EE 215	Electrical and Electronic Circuits II	Lec	3	X	X	*	
EE 245	Electrical and Electronic Circuits II Lab	Lab	1	X	X	*	
EE 315	Electrical and Electronic Circuits III	Lec/Lab	4		X	X	
EE 321	Electronics	Lec	3	X	X	X	X
EE 361	Electronics Lab	Lab	1	X	X	X	X
EE 322	Microcontrollers for Everyone	Lec/Lab	4			*	
EE 327	Digital Signals & Systems	Lec	3		*		
EE 367	Digital Signals and Systems Lab	Lab	1		*		

## Footnotes:

- <sup>1</sup> - EE 328 / EE 368 can be used for the CSC/EE/Math/Science elective for CPE students in earlier catalogs.
- <sup>2</sup> - Technical Elective offerings may be limited or cancelled based on available resources and enrollments.
- <sup>3</sup> - EE 433 and EE 527 will alternate years.
- <sup>4</sup> - EE 415 and EE 416 will alternate years.