

ECE Electives

ECE Elective

Code	Title	Hours	Counts towards
ECE 402	Communications Engineering	3	
ECE 403	Electronics Engineering	3	
ECE 404	Introduction to Solid-State Devices	3	
ECE 406/506	Architecture Of Parallel Computers	3	
ECE 407	Introduction to Computer Networking	3	
ECE 418/518	Wearable Biosensors and Microsystems	3	
ECE 420	Wireless Communication Systems	3	
ECE 421	Introduction to Signal Processing	3	
ECE 422	Transmission Lines and Antennas for Wireless	3	
ECE 423	Introduction to Photonics and Optical Communications	3	
ECE 424/524	Radio System Design	3	
ECE 426	Analog Electronics Laboratory	3	
ECE 434	Fundamentals of Power Electronics	3	
ECE 436	Digital Control Systems	3	
ECE 442	Introduction to Integrated Circuit Technology and Fabrication	3	
ECE 451	Power System Analysis	3	
ECE 452/552	Renewable Electric Energy Systems	3	
ECE 453	Electric Motor Drives	3	

ECE 455	Industrial Robot Systems	3	
ECE 456/556	Mechatronics	3	
ECE 460/560	Embedded System Architectures	3	
ECE 461/561	Embedded System Analysis and Optimization	3	
ECE 463/563	Microprocessor Architecture	3	
ECE 464/564	ASIC and FPGA Design with Verilog	3	
ECE 466/566	Compiler Optimization and Scheduling	3	
ECE 470	Internetworking	3	
ECE 489/589	Solid State Solar and Thermal Energy Harvesting	3	
ECE 492	Special Topics in Electrical and Computer Engineering	1-4	
ECE 505	Neural Interface Engineering	3	
ECE 510	Introduction to Signal Processing	3	
ECE 513	Advanced Digital Signal Processing	3	
ECE 514	Random Processes	3	
ECE 515	Digital Communications	3	
ECE 516	System Control Engineering	3	
ECE 517	Object-Oriented Design and Development	3	
ECE 522	Medical Instrumentation	3	
ECE 523	Photonics and Optical Communications	3	
ECE 530	Physical Electronics	3	
ECE 531	Principles Of Transistor Devices	3	
ECE 532	Principles Of Microwave Circuits	3	

ECE 533	Power Electronics Design & Packaging	3	ECE 582	Wireless Communication Systems	3
ECE 534	Power Electronics	3	ECE 583	Electric Power Engineering Practicum I	3
ECE 535	Design of Electromechanical Systems	3	ECE 585	The Business of the Electric Utility Industry	3
ECE 540	Electromagnetic Fields	3	ECE 586	Communication and SCADA Systems for Smart Grid	3
ECE 542	Neural Networks	3	ECE 592	Special Topics In Electrical Engineering	1-6
ECE 544	Design Of Electronic Packaging and Interconnects	3			
ECE 546	VLSI Systems Design	3			
ECE 549	RF Design for Wireless	3			
ECE 550	Power System Operation and Control	3			
ECE 551	Smart Electric Power Distribution Systems	3			
ECE 553	Semiconductor Power Devices	3			
ECE 555	Autonomous Robot Systems	3			
ECE 557	Principles Of MOS Transistors	3			
ECE 558	Digital Imaging Systems	3			
ECE 568	Conventional and Emerging Nanomanufacturing Techniques and Their Applications in Nanosystems	3			
ECE 570	Computer Networks	3			
ECE 573	Internet Protocols	3			
ECE 574	Computer and Network Security	3			
ECE 575	Introduction to Wireless Networking	3			
ECE 577	Switched Network Management	3			
ECE 581	Electric Power System Protection	3			