

ECE Quarter/Semester UGrad Course Cross Reference List

4/26/2011

Programs	Quarter Course #s	Semester Course #	Course Title	Credits	Pre- and/or Co- requisites	Exclusions
CpE, EE	206, 261, 301, 351	2000	Electrical and Computer Engineering I	4.0	(Math 152 or Math 1152 or Math 1172) and (Physics 132 or Physics 1250 or Physics 1260) and (Eng Graph 167 or CSE 202 or CSE 221 or ENG H192 or CSE 1222 or CSE 2221) and (ENG 183 or ENG 193H or ENGR 1182.01 or 1282.02H or ENG 1282.03H or CIS major) and a minimum CPHR of 2.00.ENG 1182.02 or ENG 1182.03 or ENG 1282.01H or ENG	Not open to students with credit for ECE 294.01, ECE 294.02, 261, 206, or 351.
CpE, EE	205, 209, 301, 351	2100	Electrical and Computer Engineering II	4.0	Prerequisites: ECE 2000; or ECE 261 and 206	Not open to students with credit for ECE 294.01, ECE 294.02, ECE 294.03, ECE 2300, ECE 301, ECE 351, ECE 205, or ECE 209.
CpE, EE	265	2560	Introduction to Microcontroller-Based Systems	2.0	Prereq: ECE 2000 or (prereq 261 and prereq or co-req 206). Prereq EG 167 or CSE 221 or CSE 202 or CSE 205 or CSE 1221 or CSE 1222. Acceptance in ECE, CSE, or Eng Physics majors.	Not available for credit for those who have ECE 265, CSE 360, or CSE 2421
CpE, EE	294.01, 294.02	2000	Electrical and Computer Engineering I	4.0	(Math 152 or Math 1152 or Math 1172) and (Physics 132 or Physics 1250 or Physics 1260) and (Eng Graph 167 or CSE 202 or CSE 221 or ENG H192 or CSE 1222 or CSE 2221) and (ENG 183 or ENG 193H or ENGR 1182.01 or ENG 1182.02 or ENG 1182.03 or ENG 1282.01H or ENG 1282.02H or ENG 1282.03H or CIS major) and a minimum CPHR of 2.00.	Not open to students with credit for ECE 294.01, ECE 294.02, 261, 206, or 351.
CpE, EE	294.02, 294.03	2100	Electrical and Computer Engineering II	4.0	Prerequisites: ECE 2000; or ECE 261 and 206	Not open to students with credit for ECE 294.01, ECE 294.02, ECE 294.03, ECE 2300, ECE 301, ECE 351, ECE 205, or ECE 209.
	300, 309, 320	2300	Electrical Circuits and Electronic Devices	3.0	Physics 132 or Physics 1132, Math 254 or Math 1152 or Math 1172, minimum CPHR of 2.00, and in Eng college.	Not open to students with credit for ECE 300, 320, or 309; not open to Electrical and Computer Engineering majors.
CpE, EE	311, 312	3010	Introduction to Radio Frequency and Optical Engineering	3.0	Prerequisites ECE 2100 or ECE205, Physics 1251 or Physics 1261 or Physics 133, Math 415 or Math 2415, acceptance into ECE major or Eng Physics major.	Not open to students with credit for ECE 311 or ECE 312.
CpE, EE	323	3020	Introduction to Electronics	3.0	Prerequisites: ECE 2100 or ECE 294.03 or ECE 301; acceptance into the ECE major or Eng Physics major.	Not open to students who have taken ECE 323.
CpE, EE	327	3027	Electronics Laboratory	0.5	Prerequisite: ECE 2100 or ECE 209; pre- or co-requisite ECE 323 or ECE 3020; and acceptance in ECE or Eng Physics majors.	Not open to students with credit for ECE 327.
CpE, EE	341	3040	Sustainable Energy and Power Systems I	3.0	ECE 2100 or ECE 205; acceptance into the ECE major or Eng. Physics major.	Not open to students with credit for ECE 341.
CpE, EE	352	3050	Signals and Systems	3.0	Math 571 or Math 568 or Math 2568; and ECE 2100 or (ECE 351 and 301); and acceptance into the ECE major or Eng Phys major.	Not open to students with credit for ECE 352.
CpE, EE	432 and parts of 331	3030	Semiconductor Electronic Devices	3.0	Prerequisites: Physics 1251 or Physics 1261 or Physics 133; Chemistry 1250 or Chem 121; acceptance into the ECE major or Eng Physics major or MSE major. Co-requisite or prerequisite: Math 2415 or Math 415.	Not open to students with credit for ECE331 or ECE432.
CpE, EE	447	3047	Sustainable Energy and Energy Conversion Lab	1.0	Prerequisite ECE 3040 or 341, and acceptance in ECE or Eng Physics majors.	Not open to students with credit for ECE 447.
CpE, EE	481	3080	Ethics and Professionalism	1.0	Acceptance in the ECE major.	Not open to students with credit for ECE 481.
CpE, EE		3090	Technical Writing and Presentations	1.0	Prerequisite ECE 2100 or 205, GE writing level 2, and admission to ECE major.	
CpE, EE	501, 702	5000	Introduction to Analog and Digital Communications	3.0	Prerequisite (STAT 427 or STAT 3470) and (ECE 3050 or 352), or graduate standing.	Not open to students with credit for ECE501 or ECE702.
CpE, EE	508	4007	Communications Laboratory	0.5	Prerequisite ECE 501, or co- or prerequisite ECE 5000; and acceptance in ECE or Eng Physics majors.	Not open to students with credit for ECE 508.
CpE, EE	517	3017	RF Laboratory	0.5	Prerequisites: ECE 312 or ECE 3010, and acceptance in ECE major.	Not open to students with credit for ECE 517.

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CpE, EE	551	3551	Introduction to Feedback Control Systems	3.0	Prerequisites: ECE 3050 or 352 .	Not open to students with credit for ECE 551
CpE, EE	557	3557	Control Systems Laboratory	1.0	Prerequisites: ECE 551, or prerequisite or concurrent ECE 3551; and acceptance in ECE or Eng Physics majors.	Not open to students with credit for ECE 557.
CpE, EE	561, 667	3367	Advanced Digital Design	3.0	Prerequisites: ECE 2000 or (ECE 206 and ECE 261), prereq or concurrent ECE 3020 or ECE 323, and acceptance in ECE or CSE majors.	Not open to students with credit for ECE 561 or ECE 667.
CpE, EE	567	3567	Microcontroller Lab	1.0	Prereq ECE 2560 or ECE 265 or CSE 360 or CSE 2421, and acceptance in ECE, CSE, or Engineering Physics majors.	Not available to students who have taken ECE 567.
CpE, EE	600, 801.01	5200	Introduction to Digital Signal Processing	3.0	Prerequisites: STAT 427 or STAT 3470, and ECE 3050 or 352; or graduate standing.	Not open to students with credit for ECE600 or 801.01.
CpE, EE	609	4207	Real-Time Digital Signal Processing Laboratory	0.5	Prerequisites: ECE 5200 or ECE 600; and acceptance in ECE major.	Not open to students with credit for ECE 609.
CpE, EE	620	5022	Radio frequency integrated circuits	3.0	Prerequisite: ECE 722 or ECE 5021 or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credit for ECE620.
CpE, EE	624, 724	5025	Power Electronics Devices, Circuits, and Applications	3.0	Prerequisite ECE3020 or ECE 323 or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credit for ECE 624, 724 or 844.
CpE, EE	625	5120	Introduction to Integrated Circuits Test and Measurement	3.0	Prerequisites ECE3020, or ECE 323 and 351, or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credit for ECE 694I, 694.04, or 625.
CpE, EE	628, 647	5127	Power Electronics Lab	1.0	Prerequisite ECE 3040 or 341, and acceptance in ECE major.	Not open to students with credit for ECE 628 or 647.
CpE, EE	632, 835.03	5532	Nanofabrication and Nanoscale Devices	3.0	Prerequisites: ECE 5531 or 730 or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credit for ECE 632 or ECE 835.03.
CpE, EE	637	5037	Solid State Microelectronics Laboratory	4.0	Prerequisite or co-requisite 432 or 3030 and acceptance in ECE, MSE or Eng Physics majors; or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to student with credit for ECE 637.
CpE, EE	640, 740, 741	5042	Power Systems	3.0	Prerequisite ECE3040 or ECE 341 or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credit for ECE 640, 740, or 741.
CpE, EE	643 and 743	5041	Electric Machines	3.0	Prerequisites: ECE 3040 or 341, and ECE 3020 or 323; or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credit for ECE 643 or ECE 743.
CpE, EE	643, 743	5541	Sustainable Energy and Power Systems II	3.0	Prerequisite ECE 3040 or 341 or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credit for ECE 643 or ECE 743.
CpE, EE	650, 750 and 755	5551	State-Space Control Systems	3.0	ECE 3050 or ECE 352, and MATH 530 or STAT 427 or STAT 3470.	Not open to students with credit for ECE 650, 750, or 755.
CpE, EE	662	5362	Computer architecture and design	3.0	ECE 3367 or ECE 561, and ECE 2560 or ECE 265, or graduate standing in engineering.	Not open to students with credit for ECE 662, CSE 675.01 or CSE 675.02.
CpE, EE	675	5400	Instrumentation, signals, and control in transportation applications	3.0	Prerequisites: ECE 2100 or ECE 301, and Math 415 or Math 2415, or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credit for Civil En 4750, Civil En 6750, ECE 675, or Civil En 675.
CpE, EE	682	4900	Capstone Design	3.0	Prerequisites: ECE Major in the Electrical Engineering Program of Study (EES subplan) and ECE 2560, 3010, 3020, 3030, 3040, 3050, 3090, prerequisite or corequisite ECE 3080, and senior standing; or ECE Major in the Computer Engineering Program of Study (CES subplan) and ECE 3020, 3367, 3567, 3090, CSE 2231, CSE 2451, prerequisite or corequisite ECE 3080 and ECE 5362, and senior standing.	Not open to students with credit for ECE 682 or 683 or 683H or 4900H.
CpE, EE	683	4901	Capstone Design Special	3.0	Prerequisites: ECE Major in the Electrical Engineering Program of Study (EES subplan) and ECE 2560, 3010, 3020, 3030, 3040, 3050, 3090, prerequisite or corequisite ECE 3080, and senior standing; or ECE Major in the Computer Engineering Program of Study (CES subplan) and ECE 3020, 3367, 3567, 3090, CSE 2231, CSE 2451, prerequisite or corequisite ECE 3080 and ECE 5362, and senior standing.	Not open to students with credit for ECE 682 or 683 or 683H or 4900.

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CpE, EE	683H	4900H	Design with Honors Thesis Project	3.0	Prerequisites: ECE Major in the Electrical Engineering Program of Study (EES subplan) and ECE 2560, 3010, 3020, 3030, 3040, 3050, 3090, prerequisite or corequisite ECE 3080, and senior standing, and Honors Status; or ECE Major in the Computer Engineering Program of Study (CES subplan) and ECE 3020, 3367, 3567, 3090, CSE 2231, CSE 2451, prerequisite or corequisite ECE 3080 and ECE 4362, and senior standing, and Honors Status.	Not open to students with credit for ECE 682 or 683 or 683H or 4900.
CpE, EE	699	2998.01	Undergraduate Research	0.5 - 3.0	Permission of instructor.	
CpE, EE	699	2998.02	Undergraduate Research	0.5 - 3.0	Permission of instructor.	
CpE, EE	699	4998.01	Undergraduate Research	0.5 - 3.0	Permission of instructor.	
CpE, EE	699	4998.02	Undergraduate Research	0.5 - 3.0	Permission of instructor.	
CpE, EE	699	4998.01H	Honors Undergraduate Research	0.5 - 3.0	Honors Status or minimum GPA of 3.4 and permission of instructor.	
CpE, EE	706	5206.01	Medical Imaging and Processing	3.0	Prerequisite: ECE 352 or ECE 3050, Co- or prerequisite: ECE 582 or ECE 3090; or graduate standing in ECE, Biomedical Engineering or Biophysics	Not open to students with credit for ECE 706 or ECE 5206.02.
CpE, EE	706	5206.02	Medical Imaging and Processing	3.0	Prerequisite: ECE 352 or ECE 3050, Co- or prerequisite: ECE 582 or ECE 3090; or graduate standing in ECE, Biomedical Engineering or Biophysics	Not open to students with credit for ECE 706 or ECE 5206.01.
CpE, EE	707	5460	Image Processing	3.0	ECE 600 or ECE 5200; and Math 530 or STATS 427 or STATS 3470; or graduate standing in engineering, or biological sciences, statistics, bioinformatics, or math & physical sciences.	Not open to students with credit for ECE 707.
CpE, EE	710	5017	Microwave Engineering	4.0	Prerequisites: Acceptance in ECE major, and ECE 3010 or ECE 312; or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credit for ECE710.
CpE, EE	711	5011	Antennas	3.0	ECE 3010 or 312 or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credit for ECE 711.
CpE, EE	713	5010	Wireless Propagation and Radar	3.0	Prerequisite ECE 3010 or ECE 312 or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credit for ECE 713.
CpE, EE	715	5510	Introduction to Computational Electromagnetics	3.0	Prerequisites: ECE 5010 and 5011; or ECE 711 and 713; or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credit for ECE 715 or ECE 813.
CpE, EE	717	5012	Integrated Optics	3.0	Prerequisite: ECE 3010 or 312 or graduate standing in engineering or biological sciences or math & physical sciences.	Not open for students with credit for ECE 717
CpE, EE	720 and 722	5021	Analog Integrated Circuits	3.0	Prerequisites: ECE3020 or 323 or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credit for 720 or 722.
CpE, EE	721	5020	Mixed Signal VLSI	3.0	Prerequisites: 3020 or 323 or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credit for ECE721
CpE, EE	723	5027	Microwave Electronics	4.0	Prerequisites: Acceptance in ECE major and ECE 3020 or 323; or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credits for ECE723
CpE, EE	730	5530	Fundamentals of Semiconductors for Microelectronics and Photonics	3.0	Prerequisite ECE 3030 or ECE 432 or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credit for ECE 730
CpE, EE	732	5131	Lasers	3.0	Prerequisites ECE 3030 or 432, and ECE 3010 or 312; or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to student with credit for ECE 732.
CpE, EE	734, 735, and part of 632	5031	Semiconductor Process Technology	3.0	Prerequisites: ECE 3030 or ECE 432 or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credit for ECE734 or ECE735.
CpE, EE	736	5033	Surfaces and Interfaces of Electronic Materials	3.0	Physics 132 or Physics 1132, and ECE 3030 or ECE 331, or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credit for ECE 736.
CpE, EE	737	5137	Photonics Lab	0.5	Prerequisites ECE 3030 or 432, and 3010 or 312, and acceptance in ECE major; or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to student with credit for ECE 737 or ECE 294.05.
CpE, EE	747	5047	High Voltage Engineering and Laboratory	3.0	Prerequisite: Acceptance in ECE major, and ECE 3040 or ECE 341; or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credit for ECE 747.

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CpE, EE	750	5750	Linear Systems Theory	3.0	Prerequisites ECE 5551 or ECE 551 or graduate standing in engineering or math & physical sciences.	Not open to students with credit for ECE 750.
CpE, EE	753.01	5553.01	Powertrain Control Systems	3.0	Prerequisites: ECE 3551 or ECE 551 or ECE 5551 or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credit for 753.01.
CpE, EE	753.02	5553.02	Autonomy in Vehicles	3.0	Prerequisites: ECE 3551 or ECE 551 or ECE 5551 or graduate standing in engineering.	Not open to students with credit for 753.02.
CpE, EE	754	5754	Nonlinear Systems Theory	3.0	Prerequisites: ECE 5551 or ECE 551 or graduate standing.	Not open to students with credit for ECE 754.
CpE, EE	758	5557	Control System Implementation Laboratory	1.0	Prerequisites: ECE 5551 or ECE 551, and acceptance in ECE major; or graduate standing in engineering or math & physical sciences.	Not open to students with credit for ECE 758.
CpE, EE	759	5759	Optimization for Static and Dynamic Systems	3.0	Prerequisites: ECE 551 or ECE 3551 or ECE 5551 or graduate standing in engineering or math & physical sciences.	Not open to students with credit for ECE 759.
CpE, EE	762, 764	5462	HDL Design and Verification	3.0	Prerequisites: ECE 4362, or (ECE 561 and ECE 662) or (CS&E 675.01 or equivalent) or graduate standing in engineering.	Not open to students with credit for ECE 762 or ECE 764.
CpE, EE	763	5463	Introduction to Real Time Robotics Systems	3.0	Prerequisites: ECE 2560 or ECE 265, ECE 3020 or ECE 323, and ECE 3050 or ECE 551; or graduate standing in engineering.	Not open to students with credit for ECE 763.
CpE, EE	765	5465	Advanced Microcomputers	3.0	Prerequisites ECE 5362 or (ECE 662 and ECE 694A) or graduate standing in engineering.	Not open to students with credit for ECE 765.
CpE, EE	783H	4999.01H	Undergraduate Honors Thesis Research	0.5 - 3.0	Honors Status or minimum GPA of 3.4 and approved Honors Thesis (Distinction) Project. Open only to Electrical and Computer Engineering majors.	
CpE, EE	831	5531	Fundamentals of Semiconductor Devices	3.0	Prerequisite ECE 4530 or ECE 730 or graduate standing in engineering or biological sciences or math & physical sciences.	Not open to students with credit for ECE 831.
CpE, EE		5101	Introduction to Wireless Networking	3.0	ECE 2100 or 561 or graduate standing in engineering or math & physical sciences.	
CpE, EE		5132	Photonics	3.0	Prerequisites ECE 3030 or 3030.01 or 432, and ECE 3010 or 3010.01 or 3010.02 or 312, or graduate standing in engineering or biological sciences or math & physical sciences.	
CpE, EE		5237	Photovoltaics Laboratory	3.0	Prerequisite ECE 3030 or ECE 432, and acceptance in ECE or MSE majors; or graduate standing in engineering or biological sciences or math & physical sciences.	
CpE, EE		5467	Firmware Development for Embedded Systems	3.0	ECE 3367 or (ECE 561 and 667), and ECE 2100 or (ECE 301 and 351), and acceptance in ECE or CSE majors; or graduate standing in engineering or science	
CpE, EE		5511	Nonlinear Optics	3.0	Prerequisite: ECE 5012 or graduate standing in engineering.	