

Course	Area within ECE	2010	2011	2011	2012	2012	2013
		Fall	Spring	Fall	Spring	Fall	Spring
ECE 001 Cooperative Education Program	College of Engineering	Archambault	Archambault	Archambault	Archambault	Archambault	Archambault
ECE 170 Introductory Laboratory	Devices and Circuits	Allie	Allie	Allie	Staff	Staff	Staff
ECE 220 Electrodynamics	Applied Electro-Sciences	Hitchon	Anderson	Behdad	Staff	Staff	Staff
ECE 230 Circuit Analysis	Devices and Circuits	Barner	Barner	Barner	Staff	Staff	Staff
ECE 235 - Intro-Solid State Electronics Crosslisted with Physics (ECE Primary Dept.)	Applied Electro-Sciences	Knezevic	Physics	Mawst	ECE	ECE	Physics
ECE 252 - Introduction to Computer Engineering Crosslisted with CS (ECE Primary Dept.)	Computer Engineering	Lipasti	CS: Staff	Staff	Staff	Staff	Staff
ECE 270 Circuits Laboratory I	Devices and Circuits	Allie	Allie	Allie	Staff	Staff	Staff
ECE 271 Circuits Laboratory II	Devices and Circuits	Allie	Allie	Allie	Staff	Staff	Staff
ECE 301 Transmission Lines and Networks Laboratory	Applied Electro-Sciences	Course only offered occasionally.					
ECE 304 Electric Machines Laboratory	Devices and Circuits		Jahns		Staff		Staff
ECE 305 Semiconductor Properties Laboratory	Applied Electro-Sciences	Milicic	Milicic	Milicic	Milicic	Milicic	Milicic
ECE 306 Linear Active Circuits Laboratory	Devices and Circuits	Allie	Allie	Allie	Staff	Staff	Staff
ECE 308 Nonlinear Electronic Circuits Laboratory	Devices and Circuits	Allie	Allie	Allie	Staff	Staff	Staff
ECE 310 Plasma Laboratory	Applied Electro-Sciences	Course only offered occasionally.					
ECE 313 Optoelectronics Lab	Applied Electro-Sciences	Barner	Staff	Staff	Staff	Staff	Staff
ECE 315 Intro Microprocessor Lab	Computer Engineering	Staff	Staff	Staff	Staff	Staff	Staff
ECE 316 Statistical Design and Control Laboratory - Plasma Aided Manufacturing	Applied Electro-Sciences	Course only offered occasionally.					
ECE 317 Sensors Laboratory	Devices and Circuits		Allie		Staff		Staff
ECE 320 Electrodynamics II	Applied Electro-Sciences	Shohet	Anderson	Hitchon	Staff	Staff	Staff

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ECE 321 Transmission Lines for Digital Applications	Applied Electro-Sciences	Booske	Anderson	Hitchon	Staff	Staff	Staff
ECE 330 Signals and Systems	Signals and Systems Modeling	Boston	Bucklew	Lesieutre	Staff	Staff	Staff
ECE 331 Introduction to Random Signal Analysis and Statistics	Signals and Systems Modeling	Gubner	Bucklew	Sethares	Staff	Staff	Staff
ECE 332 Feedback Control Systems	Signals and Systems Modeling	DeMarco	Cobb	Barmish	Staff	Staff	Staff
ECE 334 State Space Systems Analysis	Signals and Systems Modeling		Barmish		Staff		Staff
ECE 335 Microelectronic Devices	Applied Electro-Sciences	McCaughan	Mawst	Botez	Staff	Staff	Staff
ECE 340 Electronic Circuits I	Devices and Circuits	Hitchon	Jiang	Staff	Staff	Staff	Staff
ECE 342 Electronic Circuits II	Devices and Circuits	Staff	DeMarco	Giri	Staff	Staff	Staff
ECE 352 Digital System Fundamentals Crosslisted with CS (ECE Primary Dept.)	Computer Engineering	Davoodi/Compton	Lipasti	Staff	Staff	Staff	Staff
ECE 353 Introduction to Microprocessor Systems	Computer Engineering	Staff	Staff	Krachey	Staff	Staff	Staff
ECE 354 Machine Organization and Programming Crosslisted with CS (CS Primary)	Computer Engineering	CS: Miller	CS	CS: Miller	CS	CS	CS
ECE 355 Electromechanical Energy Conversion	Devices and Circuits	Novotny	Novotny	Staff	Staff	Staff	
ECE 356 Electric Power Processing for Alternative Energy Systems	Devices and Circuits	Jahns		Jahns		Staff	
ECE 370 Advanced Laboratory	Devices and Circuits	Allie	Allie	Allie	Staff	Allie	Allie
ECE 376 Electrical and Electronic Circuits	Devices and Circuits	Milenkovic	Milenkovic	Milenkovic	Milenkovic	Milenkovic	Milenkovic
ECE 377 Fundamentals of Electrical and Electro-mechanical Power Conversion	Devices and Circuits	Staff	Staff	Staff	Staff	Staff	Staff
ECE 379 Special Topics	Signals and Systems Modeling						
ECE 399 Independent Study	Independent Study	Staff	Staff	Staff	Staff	Staff	Staff
ECE 401 Electro-Acoustical Engineering	Signals and Systems Modeling	Sethares				Staff	

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ECE 409 Introductory Feedback Control Laboratory Crosslisted with ME (ECE Primary Dept.)	Signals and Systems Modeling	Cobb		Cobb		Staff	
ECE 411 Introduction to Electric Drive Systems	Devices and Circuits	Jahns		Jahns		Staff	
ECE 412 Power Electronic Circuits	Devices and Circuits		Han		Staff		Staff
ECE 415 System Modeling, Identification and Simulation	Signals and Systems Modeling						Staff
ECE 417 Digital Control	Signals and Systems Modeling			Cobb		Staff	
ECE 420 Electromagnetic Wave Transmission	Applied Electro-Sciences	Behdad	Hagness	Wendt	Staff	Staff	Staff
ECE 427 Electric Power Systems	Signals and Systems Modeling	Lesieutre		Dobson		Lesieutre	
ECE 431 Digital Signal Processing	Signals and Systems Modeling	Vanveen		Draper		Staff	
ECE 432 Digital Signal Processing Laboratory	Signals and Systems Modeling		Milenkovic		Staff		Staff
ECE 434 Photonics	Applied Electro-Sciences		McCaughan				Staff
ECE 435 Introducution to Cryptography	Signals and Systems Modeling		Bach		Staff		Staff
ECE 436 Communication Systems I	Signals and Systems Modeling	Sayeed		Milenkovic		Staff	
ECE 437 Communication Systems Laboratory II	Signals and Systems Modeling		Sayeed				Staff
ECE 438 Communication Systems Laboratory I	Signals and Systems Modeling	Milenkovic				Staff	
ECE 439 Introduction to Robotics Crosslisted with ME (ME Primary Dept.)	Signals and Systems Modeling						
ECE 440 Electromagnetic Fields and Waves	Applied Electro-Sciences						Staff
ECE 444 Microwave Theory, Devices and Applications	Applied Electro-Sciences	Course only offered occasionally.					
ECE 445 Semiconductor Physics and Devices	Applied Electro-Sciences						Staff
ECE 447 Applied Communications Systems	Applied Electro-Sciences	vanderWeide		vanderWeide		Staff	

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ECE 453 Embedded Microprocessor System Design	Computer Engineering		Staff		Staff		Staff
ECE 454 Special Topics in Computer Engineering	Computer Engineering						
ECE 461 Mathematical and Computer Modeling of Physiological Systems	Signals and Systems Modeling						
ECE 462 Medical Instrumentation Crosslisted with BME (BME Primary Dept.)	Devices and Circuits	Webster		Webster			
ECE 463 Computers in Medicine Crosslisted with BME (BME is Primary Dept.)	Signals and Systems Modeling	Tompkins		BME: Tompkins		BME: Staff	
ECE 466 Electronics of Solids	Applied Electro-Sciences				Staff		Staff
ECE 468 Digital Computer Projects in Control and Instrumentation	Computer Engineering	Allie		Allie		Allie	
ECE 489 Honors in Research	Research	Staff	Staff	Staff	Staff	Staff	Staff
ECE 491 Senior Design Project	Research	Staff	Staff	Staff	Staff	Staff	Staff
ECE 504 Electric Machine and Drive System Laboratory	Devices and Circuits				Staff		Staff
ECE 511 Theory and Control of Synchronous Machines	Devices and Circuits		Staff				Staff
ECE 512 Power Electronics Laboratory (Offered in Summer)	Devices and Circuits	This class is offered in summer session.					
ECE 520 Foundations of Dynamic Physical Systems	Applied Electro-Sciences	Course only offered occasionally.					
ECE 525 Introduction to Plasmas Crosslisted with NE and Physics (ECE Primary Dept.)	Applied Electro-Sciences	Forest	EP: Staff	Shohet	NE: Staff	EP: Staff	ECE: Staff
ECE 526 Laboratory Course in Plasmas (NE Course)	Applied Electro-Sciences						EP: Staff
ECE 527 Plasma Confinement and Heating Crosslisted with NE and Physics (ECE Primary Dept.)	Applied Electro-Sciences	Terry			ECE: Staff		Staff

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ECE 528 Plasma Processing and Technology Crosslisted with NE (NE Primary Dept.)	Applied Electro-Sciences		Shohet			EP: Staff	
ECE 531 Speech Signal Processing	Signals and Systems Modeling						Staff
ECE 532 Theory and Applications of Pattern Recognition	Signals and Systems Modeling		Sethares				
ECE 533 Image Processing Crosslisted with CS (CS Primary Dept.)	Signals and Systems Modeling	Sethares		Sethares		Staff	
ECE 534 Optical Signal Processing and Holography	Signals and Systems Modeling	Course only offered occasionally.					
ECE 535 Optical Fiber Communication	Devices and Circuits			McCaughan			
ECE 536 Integrated Optics and Optoelectronics	Applied Electro-Sciences	Mawst				Staff	
ECE 537 Communication Networks	Signals and Systems Modeling				Staff		Staff
ECE 539 Introduction to Artificial Neural Network and Fuzzy Systems Crosslisted with CS and ME (ECE Primary Dept.)	Signals and Systems Modeling	Hu				Staff	
ECE 541 Analog Mos Integrated Circuit Design	Devices and Circuits						
ECE 542 Introduction to Microelectromechanical Systems	Devices and Circuits	Jiang				Staff	
ECE 543 Numerical Modleing of Semiconductor Devices and Processing	Devices and Circuits	Course only offered occasionally.					
ECE 544 Processing of Electronic Materials Crosslisted with CBE and MS&E (ECE Primary Dept.)	Applied Electro-Sciences						Staff
ECE 545 Advanced Microwave Measurements for Communications	Applied Electro-Sciences	Course only offered occasionally.					
ECE 546 Lasers Crosslisted with Physics (Physics Primary Dept.)	Applied Electro-Sciences	Course only offered occasionally.					
ECE 547 Advanced Communications Circuit Design	Devices and Circuits		van der Weide				

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ECE 548 Integrated Circuit Design	Applied Electro-Sciences	Milicic		Milicic		Staff	
ECE 549 Integrated Circuit Fabrication Laboratory	Devices and Circuits		Milicic		Staff		Staff
ECE 551 Digital System Design and Synthesis	Computer Engineering	Staff	Staff	Staff	Staff	Staff	Staff
ECE 552 Introduction to Computer Architecture Crosslisted with CS (ECE Primary Dept.)	Computer Engineering	Lipasti	ECE/CS Staff	ECE: Hu	CS: Staff	CS: Staff	ECE/CS: Staff
ECE 553 Testing and Testable Design of Digital Systems	Computer Engineering	Saluja		Saluja		Staff	
ECE 554 Digital Engineering Laboratory	Computer Engineering	Saluja	Staff	Staff	Staff	Staff	Staff
ECE 555 Digital Circuits and Components	Computer Engineering	Kim		Kim		Staff	
ECE 556 Design Automation of Digital Systems	Computer Engineering		Davoodi		Staff		Staff
ECE 561 Introduction to Charged Particle Accelerators Crosslisted with NE and Physics (NE Primary Dept.)	Applied Electro-Sciences				NE: Staff		
ECE 562 Applied Superconductivity Crosslisted with NEEP and MS&E (NEEP Primary Dept.)	Applied Electro-Sciences	Course only offered occasionally.					
ECE 577 Automatic Controls Laboratory Crosslisted with ME (ME Primary Dept.)	Signals and Systems Modeling		ME: Staff		ME: Staff		ME: staff
ECE 600 Seminar in Electrical and Computer Engineering	All Areas	Jiang	Jiang	Staff	Staff	Staff	Staff
ECE 630 All of Signal Processing	Signals and Systems Modeling		Van Veen				
ECE 641 Introduction to Error-Correcting Codes Crosslisted with Math (ECE Primary Dept.)	Signals and Systems Modeling			Draper	Staff		

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ECE 699 Advanced Independent Study	Independent Study	Staff	Staff	Staff	Staff	Staff	Staff
ECE 702 Graduate Cooperative Education Program	College of Engineering	Archambault	Archambault	Archambault	Archambault	Archambault	Archambault
ECE 707 Mobile and Wireless Networking Crosslisted with CS (CS Primary Dept.)	Computer Engineering	CS: Staff	Ramanathan			CS: Staff	
ECE 711 Dynamics and Control of AC Drives	Devices and Circuits		Staff		Staff		Staff
ECE 712 Solid State Power Conversion	Devices and Circuits	Giri		Han		Staff	
ECE 713 Electromagnetic Design of AC Machines	Devices and Circuits			Lipo			
ECE 714 Utility Application of Power Electronics	Signals and Systems Modeling	Giri			Staff	Staff	
ECE 717 Linear Systems	Signals and Systems Modeling	Barmish		DeMarco		Staff	
ECE 719 Optimal Systems	Signals and Systems Modeling				Staff		
ECE 720 Discrete Time Stochastic Systems	Signals and Systems Modeling						
ECE 723 On-Line Control of Power Systems	Signals and Systems Modeling		Lesieutre				Staff
ECE 724 Waves and Instabilities in Plasmas Crosslisted with NE and Physics (ECE Primary Dept.)	Applied Electro-Sciences				Staff		ECE: Staff
ECE 725 Plasma Kinetic Theory and Radiation Processes Crosslisted with NE and Physics (Physics Primary Dept.)	Applied Electro-Sciences		Hitchon			EP: Staff	
ECE 726 Plasma Magnetohydrodynamics Crosslisted with NE and Physics (NE Primary)	Applied Electro-Sciences	NE: Staff			Physics: Staff		Staff
ECE 729 Theory of Information Processing and Transmission	Signals and Systems Modeling		Draper		Staff		Staff
ECE 730 Modern Probability Theory and Stochastic Processes	Signals and Systems Modeling		Gubner		Staff		Staff
ECE 731 Advanced Power System Analysis	Signals and Systems Modeling						

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ECE 732 Advanced Digital Signal Processing	Signals and Systems Modeling	Course only offered occasionally.						
ECE 733 Computational Methods for Large Sparse Systems Crosslisted with CS and Math (Ece Primary Dept.)	Signals and Systems Modeling							
ECE 734 VLSI Array Structures for Digital Signal Processing	Computer Engineering							
ECE 735 Signal Synthesis and Recovery Techniques	Signals and Systems Modeling	Gubner		Gubner		Staff		
ECE 736 Wireless Communications	Signals and Systems Modeling							
ECE 738 Advanced Digital Image Processing	Signals and Systems Modeling						Staff	
ECE 739 Advanced Automation and Robotics Crosslisted with ME (ME Primary Dept.)	Signals and Systems Modeling	Ferrier	ME: Staff	ME: Staff	ME: Staff	ME: Staff		
ECE 740 Electromagnetic Theory	Applied Electro-Sciences	Hagness		Hagness		Staff		
ECE 741 Semiconductor Diode Lasers and other Optoelectronic Devices	Applied Electro-Sciences		Botez				Staff	
ECE 742 Computational Methods in Electromagnetics	Applied Electro-Sciences				Staff		Staff	
ECE 743 High-Power Diode Lasers and Amplifiers	Applied Electro-Sciences							
ECE 744 Theory of Microwave Circuits and Devices	Applied Electro-Sciences		Behdad				Staff	
ECE 745 Solid State Electronics (offered in spring)	Applied Electro-Sciences						Staff	
ECE 746 Quantum Electronics Crosslisted with Physics (ECE Primary Dept.)	Applied Electro-Sciences			Blick		ECE: Staff		
ECE 748 Linear Waves Crosslisted with Physics (ECE Primary Dept.)	Applied Electro-Sciences	Shohet		Shohet		Staff		

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ECE 749 Coherent Generation and Particle Beams Crosslisted with NE and Physics (ECE Primary Dept.)	Applied Electro-Sciences	Course only offered occasionally.						
ECE 750 Real-time Computing Systems Crosslisted with CS (ECE Primary Dept.)	Computer Engineering	Ramanathan				Staff		
ECE 751 Algorithmic Logic Design	Computer Engineering	Course only offered occasionally.						
ECE 752 Advanced Computer Architecture I Crosslisted with CS (CS Primary Dept.)	Computer Engineering	Sankaralingam	Kim	Hill	Staff			
ECE 753 Fault-Tolerant Computing	Computer Engineering		Saluja				Staff	
ECE 754 Switching Theory	Computer Engineering							
ECE 755 Vlsi Systems Design Crosslisted with CS (CS Primary Dept.)	Computer Engineering						Staff	
ECE 756 Cinoter-Aided Design for Vlsi Crosslisted with CS (ECE Primary Dept.)	Computer Engineering			Davoodi		Staff		
ECE 757 Advanced Computer Architecture II Crosslisted with CS (CS Primary Dept.)	Computer Engineering		CS: Staff		CS: Staff		Staff	
ECE 762 Biomedical Instrumentation Crosslisted with BME (BME Primary Dept.)	Devices and Circuits		BME: Staff					
ECE 763 Projects in Computers in Medicine Crosslisted with BME (BME Primary Dept.)	Devices and Circuits		BME: Staff					
ECE 777 Nonlinear Dynamics, Bifurcations and Chaos	Signals and Systems Modeling						Staff	

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ECE 780 Robot Motion Planning Crosslisted with CS and ME (ME Primary Dept.)	Signals and Systems Modeling	Course only offered occasionally.						
ECE 790 Master's Research or Thesis	Research	Staff	Staff	Staff	Staff	Staff	Staff	
ECE 817 Nonlinear Systems	Signals and Systems Modeling		Dobson					
ECE 818 Analysis and Design of Linear Multivariable Feedback Systems	Signals and Systems Modeling				Staff			
ECE 821 Optimal Control and Variational Methods	Signals and Systems Modeling							
ECE 830 Estimation and Decision Theory	Signals and Systems Modeling	Nowak		Nowak		Staff		
ECE 841 Electromagnetic Radiation and Transmission	Applied Electro-Sciences				Staff			
ECE 842 Topics in Applied Algebra Crosslisted with Math (Math Primary)	Signals and Systems Modeling		Math: Staff		Math: Staff			
ECE 843 Mathematical Methods of Electromagnetic Theory	Applied Electro-Sciences							
ECE 845 Transport in Semiconductor Devices (fall every other year)	Applied Electro-Sciences	Knezevic				Staff		
ECE 848 Nonlinear Waves Crosslisted with Physics (ECE Primary)	Applied Electro-Sciences		Shohet		Staff		Staff	
ECE 890 Pre-Dissertator's Research	Research	Staff	Staff	Staff	Staff	Staff	Staff	
ECE 901 Special Topics in Communications	Signals and Systems Modeling			Staff				
ECE 902 Special Topics in Computers	Computer Engineering							
ECE 903 Special Topics in Control	Signals and Systems Modeling							
ECE 904 Special Topics in Physical Electronics	Applied Electro-Sciences			Ma				
ECE 905 Special Topics in Power Systems	Devices and Circuits							
ECE 906 Special Topics in Electromagnetic Fields	Applied Electro-Sciences							

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ECE 908 Special Topics in Plasmas and Controlled Fusion	Applied Electro-Sciences						
ECE 922 Seminar in Plasma Physics Crosslisted with NE and Physics (NE Primary Dept.)	Applied Electro-Sciences	Anderson	NE: Staff	EP: Hegna	ECE: Staff	Physics: Staff	EP: Staff
ECE 926 Seminar in Plasma-Aided Manufacutring	Applied Electro-Sciences						
ECE 990 Research or Thesis (Dissertators)	Research	Staff	Staff	Staff	Staff	Staff	Staff
ECE 999 Advanced Independent Study	Independent Study	Staff	Staff	Staff	Staff	Staff	Staff

ECE Dept. Tentative Course Offerings can be found at <http://www.engr.wisc.edu/cmsdocuments/ECE-Tentative-Course-Offerings.pdf>