

# Planned Graduate ECE Course Offerings

## Fall 2017 – Spring 2019

Graduate ECE course offerings are subject to change without notice. Any course not listed below is not being planned at this time to be offered from Fall 2017 to Spring 2019 (inclusive). This list also includes all the graduate courses to be introduced by the new tenured/tenure-track faculty members (Profs. Alex Huang, Jean Anne Incorvia, Jaydeep Kulkarni and Hao Zhu).

Graduate ECE courses have been grouped according to the lead curriculum track: Decision, Information and Communication Engineering (DICE), Software Engineering and Systems (SES), Integrated Circuits and Systems (ICS), Architecture, Computer Systems and Embedded Systems (ACSES), Plasma, Quantum and Optical Engineering (PQE), Electromagnetics & Acoustics (E/A), Energy Systems (ES), and Solid State Electronics (SSE). Please consult with your Track Advisor and/or Research Supervisor regarding which courses may be considered major work or supporting work within your program of work, including courses taken outside of the department.

<b>Track</b>	<b>Graduate ECE Course</b>	<b>Fall 2017</b>	<b>Spring 2018</b>	<b>Fall 2018</b>	<b>Spring 2019</b>
DICE	380L-10 Data Mining		X		X
DICE	380N-11 Optimization in Eng. Sys				
DICE	381J Probability & Stoch. Proc. I	X		X	
DICE	381K-2 Digital Communications	X			
DICE	381K-5 Adv Telecom Networks				
DICE	381K-6 Estimation Theory	X			
DICE	381K-7 Information Theory				X
DICE	381K-11 Wireless Communications				
DICE	381K-13 Analysis/Des of Comm Nets				X
DICE	381K-16 Digital Video		X		X
DICE	381K-17 Wireless Comm Lab				
DICE	381K-18 Convex Optimization Theory	X		X	
DICE	381M Probability & Stoch. Proc. II				X
DICE	381S Space-Time Communications		X		
DICE	381V Advanced Algorithms				X
DICE	381V Advanced Probability		X		
DICE	381V Genomic Sig Proc & Data Sci			X	
DICE	381V Large-Scale Learning		X		
DICE	381V Machine Learning: Large Data				
DICE	381V Programming with Molecules		X		
DICE	381V Stochastic Geometry	X			

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SES	382C-3 Verification of Software			X	
SES	382C-7 Software Architectures		X		
SES	382C-11 Requirements Engineering	X			X
SES	382C-12 Multicore Computing			X	
SES	382V Advanced Programming Tools	X			
SES	382V Mobile Computing			X	
SES	382V Software Evolution	X		X	
SES	382V Software Testing		X		X
ICS	382M-1 VLSI Testing			X	
ICS	382M-2 Dependable Computing	X			
ICS	382M-7 VLSI I	X		X	
ICS	382M-8 VLSI II		X		X
ICS	382M-11 Formal Verification		X		X
ICS	382M-14 Analog IC Design	X		X	
ICS	382M-20 System on a Chip Design			X	
ICS	382M-22 VLSI Design Automation	X			
ICS	382M-23 Nanometer Scale IC Design		X		
ICS	382M-24 Data Converter Circuits				X
ICS	382M-25 RF IC Design		X		X
ICS	382M-26 Opt. Issues in VLSI/CAD			X	
ICS	382V Analog Filtering & Data Conv	X			
ACSES	380L-12 Real-Time Operating Sys.		X		X
ACSES	382N-1 Computer Architecture	X	X	X	X
ACSES	382N-4 Advanced Embedded Sys.		X		
ACSES	382N-11 Distributed Systems I	X			
ACSES	382N-14 High-Speed Comp. Arith. I		X		X
ACSES	382N-17 Superscalar Architecture			X	
ACSES	382N-19 Microarchitecture		X		
ACSES	382N-20 Comp Arch: Parallelism/Loc			X	
ACSES	382N-21 Comp. Perf. Eval.		X		
ACSES	382N-22 Comp Arch: User-Sys Inter		X		
ACSES	382N-23 Emb. Sys. Des. & Modeling	X			
ACSES	382V Activity Sensing & Recognition			X	
ACSES	382V Code Generation & Opt.				X
ACSES	382V Eng. Dynamic Program Analysis			X	
ACSES	382V Human-Robot Interaction	X		X	
ACSES	382V Security in Hardware/Software	X		X	

*Note: For Integrated Circuits and Systems (ICS) students specializing in digital IC/VLSI design, EE 382C-12, 382N-1, 382N-14, 382N-19, 382N-20, and 382N-23 would count as major work instead of supporting work.*

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PQE	383P-6 Optoelectronic Devices				X
PQE	383P-8 Optical Communications				X
PQE	383V Nanophotonics	X		X	
PQE	383V Nonlinear Optics		X		
PQE	396V Lasers and Optical Eng.		X		X
E&A	383L Electromagnetic Field Theory	X		X	
E&A	383N Electrodynamics				X
E&A	383V Electromagnetic Metamaterials		X		
E&A	384N-1 Acoustics I	X		X	
E&A	384N-2 Acoustics II		X		X
E&A	384N-3 Electromech. Transducers	X		X	
E&A	384N-4 Nonlinear Acoustics		X		
E&A	384N-5 Underwater Acoustics	X			
E&A	384N-6 Architectural Acoustics				X
E&A	384N-7 Ultrasonics		X		
E&A	392L Comp. Electromagnetics				X
BME	385J-18 Biomedical Imaging	X		X	
BME	385J-31 Biomedical Instr I	X		X	
BME	385J-32 Projects in Biomedical Eng		X		X
BME	385V Computational Neuroscience	X			
n/a	390V Texas Venture Labs	X		X	
n/a	391C Technical Entrepreneurship		X		X
ES	394-7 Power Electronic Dev & Sys	X	X	X	X
ES	394-9 Power Quality			X	
ES	394-13 Int. Motion for Robotics/Cont	X		X	
ES	394J-2 Power Systems	X			
ES	394L Power Apparatus Lab		X		X
ES	394V Energy Development/Policy	X			
ES	394V Smart Grids		X		X
ES	394V Power Sys Oper. & Control	X		X	
ES	394V <i>New Course by Prof. Huang</i>		X		X
SSE	396K-2 Semiconductor Physics		X		X
SSE	396K-8 IC Nanofabrication Tech.		X	X	X
SSE	396K-19 Plasma Proc. I			X	
SSE	396K-21 Nanoscale Dev Physics/Tech	X		X	
SSE	396K-23 Semiconductor Heterostruct		X		
SSE	396K-24 Microwave Devices		X		
SSE	396K-25 Organic & Polymer Semicon		X		
SSE	396K-26 MEMS				X
SSE	396N-1 Semicond Nanostructures	X		X	

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SSE	396V Carbon and 2D Devices	X		X	
SSE	396V High-Throughput Nanopattern		X		X
SSE	396V Magnetic Materials & Devices	X		X	
SSE	396V Solar Energy Conv. Devices				X
SSE	396V Thin Film Transistors		X		