



PROJECTED COURSES

Course	Course Name	Hours	Offered
ECEN600	Experimental Optics	2-7	Every Year
ECEN601 DL	Mathematical Methods in Signal Processing	3-0	Every Year
ECEN602 DL	Computer Communication and Networking	3-0	Every Year
ECEN604	Channel Coding for Communications Systems	3-0	Occasionally
ECEN605 DL	Linear Multivariable Systems	3-0	Every Year
ECEN606	Nonlinear Control Systems	3-0	Occasionally
ECEN607 DL	Advanced Analog Circuit Design Techniques	3 lecture hours -2 lab hours	Every Year
ECEN608 DL	Modern Control	3-0	Every Other Year
ECEN609	Adaptive Control	3-0	Every Other Year
ECEN610 DL	Mixed-Signal Interfaces	3 lecture hours -2 lab hours	Every Year
ECEN611	General Theory of Electromechanical Motion Devices	3-0	Every Other Year
ECEN612	Computer Aided Design of Electromechanical Motion Devices	3 lecture hours -3 lab hours	Occasionally
ECEN613	Rectifier and Inverter Circuits	3-0	Every Other Year
ECEN614	Power System State Estimation	3-0	Occasionally
ECEN615 DL	Methods of Electric Power Systems Analysis	3-0	Every Year
ECEN 616	Power System Electromagnetic Transients	3 lab hours	Occasionally
ECEN 617	Advanced Signal Processing for Medical Imaging	3-0	Occasionally
ECEN619	Internet Protocols and Modeling	3-0	Every Year
ECEN620 DL	Network Theory	3-0	Every Year
ECEN621	Mobile Wireless Networks	3-0	Every Year
ECEN622 DL	Active Network Synthesis	3-0	Occasionally
ECEN625	Millimeter-wave Integrated Circuits	3-0	Every Year
ECEN626	Antenna Theory and Technique	2 lecture hours -3 lab hours	Occasionally
ECEN628	Robust and Optimal Control	3-0	Every Year
ECEN629 DL	Applied Convex Optimization	3-0	Every Year
ECEN630	Analysis of Power Electronic Systems	3-0	Every Other Year
ECEN632	Motor Drive Dynamics	3-0	Occasionally
ECEN635 DL	Electromagnetic Theory	3-0	Every Year
ECEN636	Phased Arrays	3-0	Occasionally
ECEN637	Numerical Methods in Electromagnetics	3-0	Every Other Year
ECEN638	Antennas and Propagation	3-0	Every Other Year
ECEN639	Microwave Circuits	3-0	Occasionally
ECEN640	Thin Film Science and Technology	3 lecture hours -1 lab hour	Every Year
ECEN641	Microwave Solid-State Integrated Circuits	3-0	Occasionally
ECEN642	Digital Image Processing	3-0	Every Year

Course	Course Name	Hours	Offered
ECEN643	Electric Power System Reliability	3-0	Every Year
ECEN644	Discrete-Time Systems	3-0	Every Year
ECEN646	Probability and Random Processes for Information Science	3-0	Every Year
ECEN647 DL	Information Theory	3-0	Every Year
ECEN648	Principles of Magnetic Resonance Imaging	3-0	Occasionally
ECEN649 DL	Pattern Recognition	3-0	Every Term
ECEN651	Microprogrammed Control of Digital Systems	3 lecture hours -3 lab hours	Every Year
ECEN653	Computer Arithmetic Unit Design	3-0	Every Year
ECEN654	Very Large Scale Integrated Systems Design	3 lecture hours -3 lab hours	Every Year
ECEN658	Low-Noise Electronic Design	3-0	Every Year
ECEN660	BioMEMS and Lab-on-a-Chip	3-0	Occasionally
ECEN662	Estimation and Detection Theory	3-0	Every Year
ECEN663	Data Compression with Applications to Speech and Video	3-0	Occasionally
ECEN664	Nanotechnology Fabrication	3-0	Every Year
ECEN665 DL	Integrated CMOS RF Circuits and Systems	3 lecture hours -2 lab hours	Every Year
ECEN666	Power System Faults and Protective Relaying	3-0	Every Other Year
ECEN667 DL	Power System Stability	3-0	Every Other Year
ECEN668	High Voltage Direct Current (HVDC) Transmission	3-0	Every Other Year
ECEN669 DL	Engineering Applications in Genomics	3-0	Every Other Year
ECEN671	Solid State Devices	3-0	Every Other Year
ECEN676 DL	Advanced Computer Architecture	3-0	Every Year
ECEN 677	Control of Electric Power Systems	3-0	Occasionally
ECEN679	Computer Relays for Electric Power Systems	3-0	Every Other Year
ECEN681	Seminar		Every Term
ECEN683	Wireless Communication Systems	3-0	Occasionally
ECEN684	Professional Internship		Every Term
ECEN685	Directed Studies		Every Term
ECEN686	Electric and Hybrid Vehicles	3-0	Every Other Year
ECEN687	Introduction to VLSI Physical Design Automation	3-0	Every Other Year
ECEN688	IC MEMS and Sensor Fabrication	3 lecture hours -3 lab hours	Every Year
ECEN689	Special Topics in...		Every Term
ECEN691	Research		Every Term
ECEN694	Nanobiotechnology	3-0	Every Year
ECEN704 DL	VLSI Circuit Design	3 lecture hours -3 lab hours	Every Year
ECEN711	Sustainable Energy and Vehicle Engineering	3-0	Every Other Year
ECEN713	Data Sciences and Applications for Modern Power	3-0	Every Other Year
ECEN714	Digital Integrated Circuit Design	2 lecture hours -2 lab hours	Every Term
ECEN715 DL	Physical and Economical Operations of Sustainable Energy Systems	3-0	Every Other Year
ECEN 718	Neuro Electronics System		Every Year

Course	Course Name	Hours	Offered
ECEN720 DL	High-Speed Links Circuits and Systems	3 lecture hours -3 lab hours	Every Other Year
ECEN735	Electromagnetic Field Theory	3-0	Occasionally
ECEN738	Power Electronics	3 lecture hours -3 lab hours	Every Year
ECEN740	Machine Learning Engineering	3-0	Every Fall
ECEN741	Electronic Motor Drives	3 lecture hours -3 lab hours	Every Year
ECEN742	DSP Based Electromechanical Motion Control	2 lecture hours -3 lab hours	Every Year
ECEN749 DL	Microprocessor Systems Design	2 lecture hours -2 lab hours	Every Term
ECEN750	Design and Analysis of Communication Networks	3-0	Every Other Year
ECEN751	Computational Methods for Integrated System Design	3-0	Every Year
ECEN753	Theory and Applications of Network Coding	3-0	Occasionally
ECEN754	Optimization for Electrical and Computer Engineering Applications	3-0	Every Year
ECEN755	Stochastic Systems	3-0	Every Year
ECEN756	Game Theory	3-0	Every Other Year
ECEN757	Distributed Systems and Cloud Computing	3-0	Every Year
ECEN758	Data Mining and Analysis	3-0	Occasionally
ECEN759	Hardware Security	3-0	Occasionally
ECEN760 DL	Introduction to Probabilistic Graphical Models	3-0	Every Year
ECEN761	Biosensors Lab	2 lecture hours -2 lab hours	Every Year
ECEN762	Advanced Ultrasound Imaging Techniques	3-0	Occasionally
ECEN763	Magnetic Resonance Engineering	2 lecture hours -3 lab hours	Every Year
ECEN764	Medical Imaging	3 lecture hours -2 lab hours	Occasionally
ECEN765	Machine Learning with Networks	3-0	Every Year
ECEN766	Algorithms in Structural Bioinformatics	3-0	Every Other Year
ECEN767	Harnessing Solar Energy: Optics, Photovoltaics and Thermal Systems	3 lecture hours -3 lab hours	Every Year
ECEN768	Bioelectronics	3-0	Occasionally
ECEN769	Materials Informatics	3-0	Every Year
ECEN771	Fluctuations and Noise Electronics	3-0	Occasionally
ECEN772	Introduction to Microelectromechanical Devices and Systems	3-0	Every Year
ECEN773	Introduction to Nanophotonics	3-0	Occasionally
ECEN774	Laser Principles and Applications	3-0	Every Year
ECEN776	Unconditionally Secure Electronics	3-0	Every Year
ECEN777	Photonics: Fiber and Integrated Optics	3 lecture hours -3 lab hours	Every Other Year

Please note that this is not a guarantee of course offerings, but rather a tentative guide.

DL denotes a course that is available through distance learning.