



# 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

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

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