

Software Information for EE Courses

Course	Topics	Matlab (Y/N)	SPICE (Y/N)	VHDL (Y/N)	Tools for embedded micro application (Y/N)	Other software packages	Level of instruction for software package(s) (1 to 5)
EE150	Electronic Tech in the World Around Us	N	N	N	N		
EE234	Analytical Methods in Engineering	Y	N	N	N		5
EE299	Fundamental of Electrical Engineering	Y	Y	N	N		5
EE301	Electrical Circuits I	N	Y	N	N		5
EE305	Electrical Circuits II (4cr.)	N	Y	N	N	Any math software package	5 for SPICE, 2 for math software
EE306	Intro. To Electrical Engineering (4cr.)	N	N	N	N	Any math software package	2
EE310	Signals and Systems	Y	N	N	N		5
EE330	Electronics I	N	Y	N	N	Express PCB, LabView	Express PCB, 2 for LabView
EE335	Electronics II	N	Y	N	N		5
EE354	Digital Logic	N	N	N	N		
EE361	Electromagnetic Fields	Y	N	N	N		2
EE362	Electromechanical Energy Conversion	Y	N	N	N		5
EE367	Introduction to Microprocessors	N	N	N	Y	iasm	5
EE410	Digital Signal Processing	Y	N	N	N		3
EE420	Random Signals and Systems	N	N	N	N		
EE421	Communication Systems	Y	N	N	N		3
EE429	Wireless Communication Systems						
EE436	Intro to Medical Instrumentation	N	N	N	N	Any math software package	2
EE437	Intro to Biomedical Imaging	Y	N	N	N		2
EE438	Bioanalytics and Biomedical Diagnostics	N	N	N	N	Magic(DNA Microarray analysis)	4
EE451	Introduction to VLSI Design	N	Y	N	N		5
EE457	Digital Logic Laboratory	N	N	Y	Y		4
EE458	Computer Architecture	N	N	N	N		
EE461	Microwave Engineering	N	N	N	N	Any math software package	2
EE462	Antenna Theory	N	N	N	N	Any math software package	2
EE465	Broadband Optical Networks	Y	N	N	N	Any math software package	2
EE471	Electrical Power Systems	Y	N	N	N	Powerworld	3
EE474	Introduction to Control Systems	Y	N	N	N		4
EE482	Intro to Nanoelectronics	N	N	N	N	web-based java simulations	2
EE490/890	Nano-Materials & Devices	N	N	N	N		
EE490/890	Introduction to Biomedical Optics	Y	N	N	N	imagej	imagej 3, Matlab 2
EE490/890	Introduction to Bio-Optical Imaging	Y	N	N	N		5
EE490/890	Fundamental of Photonics	Y	N	N	N	mathematica level 2	2
EE490/890	Microsensors	N	N	N	N		
EE490/890	GaAs Solid State Devices & Circuit	N	Y	N	N	Ansoft Designer SV	5
EE490/890	Image Metrology	Y	N	N	N		4
EE490/890	Renewable Energy Systems	Y	N	N	N	PSim	5
EE490/890	Cell and Tissue Image Analysis	Y	N	N	N	imagej	4
EE490/890	Controls for Renewable Energy	Y	N	N	N	PSim	5
EE490/890	Intro to Wind Energy	Y	N	N	N		4

Note: For level of instruction, 1 is the lowest (self taught) and 5 is the highest (with Lecture on usage).

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EE537	Fundamentals of Neuroimaging Technology	Y	N	N	N		5
EE539	Intro: Magnetic Resonance Imaging	Y	N	N	N		5
EE541	Integrated Circuits & Systems	N	Y	N	N		5
EE561	Microwave Solid State Circuit Design	N	N	N	N	math software (Agilent ADS was used)	math software 2 (ADS 4)
EE562	Telecommunication Circuits	N	Y	N	N	math software (Agilent ADS was used)	SPICE 5, math software 2 (ADS 4)
EE565	Optical Communication	Y	N	N	N	mathematica level 2	2
EE572	Power Electronics	Y	N	N	N	PSim	3
EE574	Intermediate Control Systems	Y	N	N	N		4
EE575	Analys Elec Machine/Motor	Y	N	N	N	PSim	3
EE588	Fundamentals of Nanotechnology	N	N	N	N		
EE595	Capstone Design Project	Y	Y	Y	Y	Student will use some tools dep on projects	
EE701	Adv Linear System Analysis	Y	N	N	N		4
EE710	Artificial Intelligence						
EE711	Patrn Rcqntn-Stats/Neural/Fzz	Y	N	N	N		3
EE712	Image Processing	Y	N	N	N		5
EE713	Computer Vision	Y	N	N	N		1
EE718	Nonlinear Control Systems	Y	N	N	N		4
EE721	Digital Communications	Y	N	N	N		1
EE737	Medical Imaging Signals & Systems	Y	N	N	N		4
EE741	Electromagnetic Fields and Waves	N	N	N	N	Any math software package	2
EE742	Electromagnetic Wave Theory	N	N	N	N	Any math software package	2
EE751	Switching & Automata Theory						
EE755	Information and Coding Theory	N	N	N	N		
EE760	Computer Systems Performance Evaluation						
EE762	Fault-Tolerant Computing.						
EE765	Intro to Fourier Optics and Opt Signal Proc	Y	N	N	N	imagej	Matlab 2, imagej 3
EE766	Introduction to Nonlinear Optics	Y	N	N	N	Any math software package	4
EE771	Advanced Electric Power Systems	Y	N	N	N		1
EE781	Advanced Synchronous Machinery	Y	Y	N	N	PSim	
EE810	Adv Digital Signal Processing	Y	N	N	N		1
EE816	Optimal Control Theory	Y	N	N	N		4
EE819	Adaptive Control Theory	Y	N	N	N		4
EE872	Computer Analysis of Electric Power Systems	Y	N	N	N	Powerworld	4
EE890	Advanced Power Electronics	Y	N	N	N	PSim	4
EE890	Nanoelectromagnetics	N	N	N	N	Any math software package	2
EE890	Electric Distribution System Analysis	Y	N	N	N	Powerworld	4

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