Curriculum

❒ Undergraduate Course

Classification	Subject No.	Subject Name	Lec.:Lab.: Credit(Homework)	Semester	Remark
Mandatory Major Course	EE201	Circuit Theory	3:1:3(6)	Spring·Fall	
	EE202	Signals and Systems	3:1:3(6)	Spring·Fall	
	EE204	Electromagnetics	3:0:3(6)	Spring·Fall	
	EE209	Programming Structure for Electrical Engineering	3:0:3(6)	Spring·Fall	
	EE305	Introduction to electronics design Lab	1:6:3(6)	Fall	
	EE405	Electronics Design Lab.	1:6:3(6)	Spring	
Elective Major Course	EE205	Data Structures and Algorithms for Electrical Engineering	3:0:3(6)	Fall	
	EE210	Probability and Introductory Random Processes	3:0:3(6)	Spring·Fall	
	EE211	Introduction to Physical Electronics	3:0:3(6)	Spring·Fall	
	EE303	Digital System Design	3:1:3(6)	Spring·Fall	*CS211
	EE304	ElectronicCircuits	3:1:3(6)	Spring·Fall	
	EE311	Operating Systems and System Programming for Electrical Engineering	3:0:3(6)	Spring	
	EE312	IntroductiontoComputerArchitecture	3:1:3(6)	Fall	*CS311
	EE321	Communication Engineering	3:0:3(6)	Spring	
	EE323	Computer Network	3:0:3(6)	Spring	
	EE324	Network Programming	3:1:3(6)	Fall	
	EE326	Introduction to Information and Coding Theory	3:0:3(6)	Fall	
	EE341	Electromagnetic waves and antennas	3:0:3(6)	Spring	
	EE342	Radio Engineering	3:1:3(6)	Fall	
	EE362	Semiconductor Devices	3:0:3(6)	Spring·Fall	
	EE372	Digital Electronic Circuits	3:0:3(6)	Fall	
	EE381	Control System Engneering	3:0:3(6)	Spring	
	EE391	Electronic Control of Electric Machines	3:0:3(6)	Spring	
	EE401	Communication Skills	2:0:2(4)	Spring	
	EE402	Future Society and Electrical Engineering	2:0:2(4)	Fall	
	EE403	Analog Electronic Circuits	3:0:3(6)	Spring	
	EE411	Switching and Automata Theory	3:0:3(6)	Spring	
	EE414	Embedded Systems	3:1:3(6)	Fall	
	EE421	Wireless Communication Systems	3:0:3(6)	Spring	
	EE425	Wireless Network	3:0:3(6)	Spring	
	EE432	Digital Signal Processing	3:0:3(6)	Spring·Fall	
	EE441	Introduction to Fiber Optic Communication Systems	3:0:3(6)	Spring	
	EE450	Technology entrepreneurship	3:0:3(6)	Fall	*MSB450
	EE451	IT venture start-up	3:0:3(6)	Spring	*MSB451
	EE452	Fundamentals of Photonics	3:0:3(6)	Fall	
	EE463	Semiconductor IC Technology	3:0:3(6)	Spring	
	EE464	Electrical Engineering for Green Energy	3:0:3(6)	Fall	
	EE466	Introduction to Biomedical Electronics	3:0:3(6)	Fall	
	EE474	Introduction to Multimedia	3:0:3(6)	Spring	
	EE476	Audio-Visual Perception Model	3:0:3(6)	Fall	
	EE481	Intelligent Systems	3:0:3(6)	Spring	
	EE485	Special Topics in Electronic Engineering Ⅰ	1:0:!	Spring·Fall	
	EE486	Special Topics in Electronic Engineering Ⅱ	2:0:2	Spring·Fall	
	EE488	Special Topics in Electronic Engineering	3:0:3(6)	Spring·Fall	
Research	EE490	B.S. Thesis Research	0:6:3	Spring·Fall	

Classification	Subject No.	Subject Name	Lec.:Lab.: Credit(Homework)	Semester	Remark
	EE495	Individual Study	0:6:1		
	EE496	Seminar	1:0:1	Spring	

※ Notes: 1) 400 and 500 level courses except EE405, EE406 open to both undergraduate and graduate students
2) * stands for substitutable courses

❒ **Graduate Course**

Classification	Subject No.	Subject Name	Lec.:Lab.: Credit(Homework)	Semester	Remark
General Course (Select 1 out of 7)	CC010	SpecialLectureonLeadership	1:0:0	Fall	
	CC020	Ethics and Safety I	1AU	Spring·Fall	
	CC500	Scientific Writing	3:0:3(4)	Spring·Fall	
	CC510	Introduction to Computer Application	2:3:3(10)	Spring·Fall	
	CC511	ProbabilityandStatistics	2:3:3(6)	Spring·Fall	*EE528
	CC512	Introduction to Materials and Engineering	3:0:3(3)	Spring·Fall	
	CC513	Engineering Economy and Cost Analysis	3:0:3(6)	Fall	
	CC530	Enterpreneurship and Business Strategies	3:0:3(6)	Fall	
	CC531	Patent Analysis and Invention Disclosure	3:0:3(6)	Spring·Fall	
	CC532	Collaborative System Design and Engineering	4:0:04	Spring	
Mandatory Major Course	EE505	Electronics design Lab.	1:6:3(6)	Spring	
Elective Course	EE509	Technical Writing	1:0:1(2)	Fall	
	EE511	Computer Architecture	3:0:3(6)	Spring	
	EE512	System Programming	3:0:3(6)	Fall	
	EE513	Operating Systems for Networked Systems	3:0:3(6)	Spring	
	EE515	Theory of Hacking	3:0:3(6)	Fall	
	EE516	Embedded Software	1:6:3(6)	Fall	
	EE520	Telecommunication Networks	3:0:3(6)	Spring	
	EE522	Communication Theory	3:0:3(6)	Spring	
	EE525	Networking Technology and Applications	1:6:3(6)	Spring	
	EE527	Data Communication	3:0:3(6)	Spring	
	EE528	Engineering Random Processes	3:0:3(6)	Spring·Fall	
	EE531	Statistical Learning Theory	3:0:3(6)	Fall	
	EE532	Introduction to brain IT	3:0:3(6)	Spring	
	EE533	Digital Speech Processing	3:0:3(6)	Spring	
	EE535	Digital Image Processing	3:0:3(6)	Spring	
	EE538	NeuralNetworks	3:0:3(6)	Spring	
	EE539	Nonlinear Statistical Signal Processing	3:0:3(6)	Fall	
	EE541	Electromagnetic Theory	3:0:3(6)	Spring	
	EE542	Microwave Engineering	3:1:3(6)	Fall	
	EE543	Antenna Engineering	3:1:3(6)	Spring	
	EE546	Fields and Waves	3:0:3(6)	Fall	
	EE555	Optical Electronics	3:0:3(6)	Spring	
	EE561	Introduction to VLSI Devices	3:0:3(6)	Spring	
	EE563	Display Engineering	3:0:3(6)	Spring	
	EE565	Modern Physics for Engineers	3:0:3(6)	Spring	
	EE566	MEMS in EE Perspective	3:0:3(6)	Fall	
	EE567	Photovoltaic Power Generation	3:0:3(6)	Spring	
	EE568	IntroductiontoOrganicElectronics	3:0:3(6)	Spring	
	EE569	Nanobioelectronics	3:0:3(6)	Spring	
	EE571	Advanced Electronic Circuits	3:0:3(6)	Spring	
	EE572	Technology Futures and Management strategies: Future New Media	3:0:3(6)	Fall	
	EE573	Introduction to VLSI Systems	3:0:3(6)	Spring	
	EE574	Computer Aided Design of VLSI Circuits and Systems	3:0:3(6)	Fall	
	EE575	Entertainment Platform	3:0:3(6)	Fall	
	EE581	Linear Systems	3:0:3(6)	Spring	

Classification	Subject No.	Subject Name	Lec.:Lab.: Credit(Homework)	Semester	Remark
Elective Course	EE582	Digital Control	3:1:3(6)	Spring	
	EE594	Power Electronics Systems	3:0:3(6)	Fall	
	EE612	Discrete Event System Modelingand Simulation	3:0:3(6)	Fall	*CS655
	EE613	Distributed Computing Systems	3:0:3(6)	Spring	
	EE614	Service Oriented Computing Systems	3:0:3(6)	Spring	
	EE615	Architecture of Systems Problem Solving	3:0:3(6)	Spring	
	EE617	Parallel Computing Systems and Programming	3:0:3(6)	Fall	
	EE621	Coding Theory	3:0:3(6)	Spring	
	EE622	Detection and Estimation	3:0:3(6)	Fall	
	EE623	Information Theory	3:0:3(6)	Fall	
	EE624	Cellular Communication Systems and Protocols	3:0:3(6)	Fall	
	EE625	Applied Detection and Estimation	3:0:3(6)	Spring	
	EE626	Advanced Communication Theory	3:0:3(6)	Fall	
	EE627	Performance Analysis of Communication Networks	3:0:3(6)	Spring	
	EE628	Visual Communication Systems	3:0:3(6)	Fall	
	EE629	Mobile Communication Engineering	3:0:3(6)	Fall	
	EE631	Advanced Digital Signal Processing	3:0:3(6)	Spring	
	EE634	PatternRecognition	3:0:3(6)	Fall	*CS676
	EE635	Functional Brain Imaging	3:0:3(6)	Fall	
	EE636	Digital Video Processing	3:0:3(6)	Fall	
	EE637	Speech & Audio Coding Theory	3:0:3(6)	Spring	
	EE641	Monolithic Microwave Integrated Circuits	3:0:3(6)	Fall	
	EE643	MMIC Design	3:0:3(6)	Fall	
	EE645	Wireless Transceiver Systems	3:0:3(6)	Spring	
	EE647	Nano-Photonics	3:0:3(6)	Spring	
	EE650	Optimization in Communication Network	3:0:3(6)	Spring	
	EE651	Digital Switching Engineering	3:0:3(6)	Spring	
	EE652	Optical Communication	3:0:3(6)	Fall	
	EE653	Network Security	3:0:3(6)	Spring	
	EE654	MIMO Wireless Communications	3:0:3(6)	Fall	
	EE655	Economics in Communication Network	3:0:3(6)	Spring	
	EE657	Local Area Network/Metropolitan Area Network (LAN/MAN)	3:0:3(6)	Spring	
	EE658	Queueing theory with applications	3:0:3(6)	Fall	
	EE659	Wireless Communication Protocols and Analysis	3:0:3(6)	Spring	
	EE661	Solid State Physics	3:0:3(6)	Fall	
	EE663	High Frequency Electronic Devices	3:0:3(6)	Spring	
	EE665	CMOS Front-end Process Technology	3:0:3(6)	Spring	
	EE666	Optoelectronic Semiconductor Devices and Their Applications	3:0:3(6)	Fall	
	EE669	Experimental Methods in Biotechnology	3:0:3(6)	Spring	
	EE676	Analog Integrated Circuits	3:0:3(6)	Fall	
	EE678	Digital Integrated Circuits	3:0:3(6)	Fall	
	EE679	Analog and Mixed Signal Circuits for Communication	3:0:3(6)	Spring	
	EE681	Nonlinear Control	3:0:3(6)	Fall	
	EE682	Intelligent Control Theory	3:0:3(6)	Fall	
Elective Course	EE683	Robot Control	3:0:3(6)	Fall	
	EE684	Evolutionary Computation	3:0:3(6)	Fall	

Classification	Subject No.	Subject Name	Lec.:Lab.: Credit(Homework)	Semester	Remark
	EE686	Optimization Theory	3:0:3(6)	Fall	
	EE687	Real-Time Control	3:0:3(6)	Spring	
	EE688	Optimal Control Theory	3:0:3(6)	Fall	
	EE690	Overlay Networking	3:0:3(6)	Fall	
	EE691	Telecom. Network Management	3:0:3(6)	Spring	
	EE692	Parallel and Distributed Computation in Communication Network	3:0:3(6)	Fall	
	EE694	Telephone and IP Telephony Network	3:0:3(6)	Fall	
	EE696	Telecommunication Software Design	3:1:3(6)	Fall	
	EE698	Multimedia Communication Middleware	3:0:3(6)	Fall	
	EE722	Advanced Signal Detection	3:0:3(6)	Fall	
	EE727	Broadband Network Design and Analysis	3:0:3(6)	Fall	
	EE731	Adaptive Signal Processing	3:0:3(6)	Spring	
	EE733	Multirate Signal Processing	3:0:3(6)	Fall	
	EE734	Image Understanding	3:0:3(6)	Spring	
	EE735	Computer Vision	3:0:3(6)	Fall	
	EE737	Medical Imaging Technology	3:0:3(6)	Spring	
	EE738	Speech Recognition Systems	3:0:3(6)	Fall	
	EE739	Cognitive Information Processing	3:0:3(6)	Fall	
	EE741	Radiation and Diffraction of Waves	3:0:3(6)	Spring	
	EE742	Ray Analysis for Electromagnetic Scattering Problems	3:0:3(6)	Fall	
	EE745	EMI / EMC Design and Analysis	3:0:3(6)	Spring	
	EE746	Radar System	3:0:3(6)	Fall	
	EE748	High-Frequency Passive Devices	3:0:3(6)	Fall	
	EE755	Advanced Coding Theory	3:0:3(6)	Fall	
	EE756	Advanced Information Theory	3:0:3(6)	Fall	
	EE757	Nonlinear Fiber Optics	3:0:3(6)	Spring	
	EE758	Optical Networks	3:0:3(6)	Fall	
	EE762	Advanced MOS Device Physics	3:0:3(6)	Fall	
	EE764	Quantum Engineering for Nanoelectronic Devices	3:0:3(6)	Fall	
	EE766	Plasma Electronics	3:0:3(6)	Fall	
	EE772	Electronic Circuits for Green Energy	3:0:3(6)	Fall	
	EE773	Bio-Medical CMOS IC Design	3:0:3(6)	Spring	
	EE774	VLSI Design Methodology	3:0:3(6)	Fall	
	EE775	Communication Core IP Design	3:0:3(6)	Spring	
	EE783	Adaptive Control Theory	3:0:3(6)	Spring	
	EE785	Robust Control Theory	3:0:3(6)	Spring	
	EE788	Robot Cognition and Planning	3:0:3(6)	Fall	
	EE791	Power Conversion Circuits and Systems	3:0:3(6)	Spring	
	EE807	Special Topics in Electrical Engineering	3:0:3(6)	Spring	
	EE808	Special Topics in Electronic Engineering Ⅰ	1:0:1	Spring-Fall	
	EE809	Special Topics in Electronic Engineering Ⅱ	2:0:2	Spring-Fall	
	EE817	Special Topics in Computer Engineering	3:0:3(6)	Spring	
	EE827	Special Topics in Communication	3:0:3(6)	Spring-Fall	
	EE837	Special Topics in Signal Processing	3:0:3(6)	Spring-Fall	
	EE838	Special Topics in Image Engineering	3:0:3(6)	Fall	
Elective Course	EE847	Special Topics in Electromagnetics	3:0:3(6)	Spring-Fall	
	EE857	Special Topics in Optical Engineering	3:0:3(6)	Spring	
	EE867	Special Topics in Physical Electronics	3:0:3(6)	Spring-Fall	

Classification	Subject No.	Subject Name	Lec.:Lab.: Credit(Homework)	Semester	Remark
	EE868	Special Topics in Solid-State Physics	3:0:3(6)	Fall	
	EE877	Special Topics in Integrated Circuits	3:0:3(6)	Spring·Fall	
	EE878	Special Topics in VLSI	3:0:3(6)	Fall	
	EE887	Special Topics in Robotics	3:0:3(6)	Spring	
	EE888	Special Topics in Control Theory	3:0:3(6)	Spring·Fall	
	EE897	Special Topics in Power Electronics	3:0:3(6)	Spring·Fall	
	EE898	Special Topics in Intelligent Information Processing	3:0:3(6)	Fall	
Research	EE960	M.S. Thesis		Spring·Fall	
	EE965	M.S. Individual Study	0:6:1		
	EE966	M.S. Seminar	1:0:1	Spring	
	EE980	Ph.D. Thesis		Spring·Fall	
	EE986	Ph.D. Seminar	1:0:1	Spring	

※ Notes: 1) 400 and 500 level courses except EE505, EE525, EE572 open to both undergraduate and graduate students

2) * stands for substitutable courses