

Electrical Engineering Technical Electives

Additional EE Breadth & Depth Courses -Based on your Catalog Year

EEL or EEE Graduate Level Courses

EGN4912 Research

EEL4905 Independent Study

EEL4948- Internship

Select BME Courses

Key:

*Based on Catalog Years:

EEE3308C(2015-2019) Counts as EE breadth first if additional breadth then an EE TE.

EEE4744C(2020-present) Counts as EE breadth first if additional breadth then an EE TE.

EEL4712C(2015-2020) Counts as EE breadth first if additional breadth then an EE TE. 2021-present counts as EE depth or technical elective

EEE4306(2015-2020) counts as EE depth or technical elective. 2021-present- Counts as EE breadth first if additional breadth then an EE TE.

**EEL4837 (2015-2020) counts as an technical elective. 2021-present is core requirement.

^EEL4930 Topics in ECE (2015-2019) Counts as EE breadth lab requirement first then EE TE second

Course Number	Course Title	Instructor	Syllabus
EEL 3211C	Basic Electrical Energy	Rambo Rambo Rambo	Fall 2022 Summer 2022 Spring 2022
EEE 3308C*	Electronic Circuits 1	Ebrahimi Chatterjee Fox	Spring 2023 Fall 2022 Summer 2022
EEE 3396C	Solid State Electronics	Ural Guo Ural	Spring 2023 Fall 2022 Spring 2022
EEL 3402	Remote Sensing in Engr: Science, Sensors & Apps	Judge Judge Judge	Spring 2023 Spring 2022 Spring 2021

EEL 3472	Electromagnetic Fields & Applications 1	Rakov Micu Kotovsky	Spring 2023 Fall 2022 Spring 2021
EEL 4744C*	Microprocessor Applications	Schwartz Schwartz Schwartz	Fall 2020 Summer 2020 Spring 2020
EEE 4210	Introduction to Biophotonics	Xie Xie	Spring 2020 Spring 2018
EEE 4222	Resonant MEMS	Tabrizian Tabrizian Tabrizian	Spring 2022 Spring 2021 Spring 2020
EEL 4242C	Power Electronic Circuits	Wang Wang Wang	Fall 2022 Fall 2021 Fall 2020
EEL4248	Fundamentals of RF and Power Electronic Devices	Guo Guo	Spring 2023 Spring 2022
EEL 4251	Power System Analysis	Rambo Bretas Bretas	Spring 2023 Fall 2021 Fall 2020
EEE 4260	Bioelectrical Systems	Oweiss Oweiss Oweiss	Spring 2023 Spring 2022 Fall 2019
EEL 4271	Power System Protection-HIATUS	Bretas Bretas Bretas	Spring 2021 Spring 2020 Spring 2019
EEL 4287	Smart Grid for Sustainable Energy	Meyn	Fall 2022
EEE 4306*	Electronic Circuits 2	Fox Fox Fox	Fall 2022 Spring 2022 Fall 2021

EEE 4310	Digital Integrated Circuits	Forte Thompson Forte	Spring 2023 Fall 2022 Spring 2022
EEE 4329	Future of Microelectronics	Thompson Thompson Thompson	Spring 2023 Spring 2022 Spring 2021
EEE 4331	Microelectronic Fabrication	Ural Ural Ural	Fall 2022 Fall 2021 Fall 2020
EEE 4373	Radio Frequency Electronics	Ebrahimi Eisenstadt Eisenstadt	Spring 2022 Fall 2020 Fall 2019
EEL 4403	Computational Photography	Koppal Koppal Koppal	Fall 2022 Fall 2020 Fall 2019
EEE 4404	Mixed Signal IC Test 1	Eisenstadt Eisenstadt	Spring 2019 Fall 2017
EEL 4412	Applied Magnetism and Magnetic Materials	Arnold Arnold Arnold	Spring 2022 Spring 2020 Fall 2017
EEE 4414	Modern Memory Device Technologies	Guo Guo Guo	Spring 2023 Spring 2022 Spring 2021
EEE 4420	Intro to Nanodevices	Ural Ural Ural	Fall 2022 Fall 2021 Fall 2020
EEL 4421	RF/Microwave Passive Circuits	Yoon	Spring 2021
EEL 4440	Optical Communication Systems		

EEL 4446	Laser Theory and Design	Zmuda Zmuda Zmuda	Spring 2023 Spring 2022 Fall 2020
EEL 4458	Photonics	Zmuda Zmuda Zmuda	Fall 2022 Fall 2021 Spring 2021
EEL 4461	Antenna Systems	Lin Lin Casanova	Fall 2021 Spring 2021 Spring 2019
EEL 4473	Electromagnetic Fields & Applications 2	Zmuda Zmuda Uman	Fall 2022 Fall 2021 Spring 2021
EEL 4495	Lightning	Rakov Rakov Uman	Fall 2022 Spring 2021 Spring 2020
EEE 4511C	Real-Time DSP Applications- HIATUS	Gugel Gugel Gugel	Fall 2021 Spring 2021 Fall 2020
EEL 4514C	Communication Systems & Components	Shea Wong Wong	Spring 2023 Spring 2022 Spring 2021
EEL 4516	Noise in Devices and Communication Systems	Shea Meyn Meyn	Fall 2022 Fall 2021 Fall 2020
EEL 4598	Computer Communications	McNair Fang Fang	Summer 2022 Fall 2021 Fall 2020
EEL 4599	Wireless and Mobile Networks	McNair McNair McNair	Spring 2023 Spring 2022 Spring 2021

EEL 4610	State Variable Methods	Hammer Hammer Hammer	Fall 2022 Summer 2022 Spring 2022
EEL 4657C	Linear Control System	Biron Biron Biron	Fall 2022 Fall 2021 Fall 2020
EEL 4665C	Intelligent Machine Design Lab		
EEE 4701	Automated HW/SW Verification	Yavuz Yavuz Yavuz	Fall 2022 Fall 2021 Fall 2020
EEL 4712C*	Digital Design	Stitt Cheney Stitt	Spring 2023 Fall 2022 Spring 2022
EEL 4713C	Digital Computer Architecture	Ramirez Gordon-Ross Cheney	Spring 2023 Spring 2020 Spring 2018
EEE 4714	Introduction to Hardware Security and Trust	Farahmandi Tehranipoor Tehranipoor	Fall 2022 Spring 2021 Spring 2020
EEE 4720	Acoustics	Sheplak Sheplak Sheplak	Spring 2021 Spring 2020 Spring 2018
EEL 4720	Reconfigurable Computing	Stitt Stitt Lam	Fall 2022 Fall 2021 Spring 2021
EEL 4732	Advanced Systems Programming	Yavuz Yavuz Yavuz	Spring 2023 Spring 2022 Spring 2021

EEL 4736	Principles of Computer System Design	Figueiredo Figueiredo Figueiredo	Fall 2022 Fall 2021 Fall 2020
EEL 4744C	Microprocessor Applications	Schwartz Schwartz Schwartz	Spring 2023 Fall 2022 Summer 2022
EEL 4745C	Microprocessor Applications 2	Islam Jin	Fall 2022 Spring 2021
EEL 4750	Foundations of Digital Signal Processing	Wong Harley Harley	Fall 2022 Fall 2021 Fall 2020
EEE 4773	Fundamentals of Machine Learning	Silva Silva Silva	Spring 2023 Summer 2022 Spring 2022
EEE 4800	Neural Signals, Systems and Technology	Oweiss	Fall 2022
EEL 4837**	Programming for Electrical Engineering II	Ruchkin Ray Ramirez	Spring 2023 Fall 2022 Spring 2022
EEL 4853	Cross Layered System Security	Oliveira Oliveira Oliveira	Spring 2020 Spring 2019 Spring 2018
EEL 4905	Individual Problems in EE	Rambo Shea	Fall 2022 Fall 2022
EEL 4930	Advanced Robot Perception	Koppal	Spring 2021
EEL 4930	Advanced Systems Programming	Yavuz	Spring 2017
EEL 4930	Applied Machine Learning Systems	Silva	Fall 2022

EEL 4930	Approximate Computing	Stitt	Fall 2020
EEL 4930	Automatic Feedback Control in Human Biology	Hammer Hammer Hammer	Spring 2023 Spring 2022 Spring 2021
EEL 4930	Autonomous Robots	Islam Bobda	Spring 2023 Spring 2022
EEL 4930	Biosignals and Systems Analysis	Napoli Napoli	Spring 2023 Spring 2021
EEL 4930	Cross Layered Sys Sec	Oliveira	Spring 2017
EEL 4930 [^]	Current Topics in ECE	Patrick	Spring 2023
EEL 4930	Fabrication of Micro/Nano Systems	Judy	Fall 2022
EEL 4930	Formal Methods for Robotics and AI	Fu	Fall 2022
EEL 4930	Fundamentals of Electric Drive Systems	Ge	Spring 2023
EEL 4930	Fundamentals of Electromagnetic Fields	Rakov Rakov	Spring 2022 Fall 2021
EEL 4930	Fundamentals of Machine Learning	Zare Zare Principe, Zare	Fall 2019 Fall 2018 Fall 2017
EEL 4930	Future Micro/Nano Systems and their Applications	Judy	Fall 2022
EEL 4930	Introduction to Biomedical Image Analysis	Sarder	Spring 2023
EEL 4930	Intro to Biophotonics	Xie	Spring 2017

EEL 4930	Intro to Hardware Security	Bhunja , Tehranipoor	Spring 2017
EEL 4930	Introduction to Machine Learning	Silva Zare Zare	Spring 2020 Spring 2019 Spring 2018
EEL 4930	Introduction to Quantum Computing	Guo Guo	Fall 2022 Fall 2021
EEL 4930	Introduction to Quantum Devices and Quantum Engineering	Feng Feng Feng	Fall 2022 Fall 2021 Fall 2020
EEL 4930	Introduction to RF Circuits	Yoon Yoon	Fall 2022 Fall 2021
EEL 4930	Micro/Nano Machined Metamaterials	Yoon Yoon	Spring 2023 Spring 2022
EEL 4930	Microprocessor Applications II	Jin Jin Jin	Spring 2020 Spring 2019 Fall 2018
EEL 4930	Modern Memory Dev Tech	Guo Guo	Spring 2019 Spring 2018
EEL 4930	Neuro-AI	Saxena Saxena	Spring 2023 Fall 2021
EEL 4930	Neural Signals, Systems and Technology	Oweiss Oweiss Oweiss	Fall 2020 Spring 2020 Spring 2019
EEL 4930	Optical Engineering	Xie	Fall 2019
EEL 4930	Physical Attacks & Inspection of Electronics	Asadi Asadi Asadi	Spring 2023 Fall 2020 Fall 2019

EEL 4930	Plasma Physics for EE	Uman	Spring 2017
EEL 4930	RF Measurements and Instrumentation	Mandal	Fall 2020
EEL 4930	RF/Power Electronic Devices	Guo Guo	Fall 2018 Fall 2017
EEL4930	Power Electronics II	Wang Wang Wang	Spring 2023 Spring 2022 Spring 2021
EEL 4930	Reconfigurable Computing 2	Stitt	Spring 2023
EEL 4930	Resonant Mems	Tabrizian	Spring 2017
EEL 4930	System-On-Chip Design	Bobda Bobda	Spring 2023 Spring 2021