

Electrical Engineering Official Degree Plan

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SCHEDULE AN APPOINTMENT WITH A FACULTY ADVISOR ACCORDING TO YOUR SELECTED CONCENTRATION AREA (EE) OR DEGREE MAJOR (CPE)

Applied Electromagnetics: Dr. David Jackson (djackson@uh.edu)

Computer & Embedded Systems & CpE Majors: Dr. Yuhua Chen (yuhuachen@uh.edu)

Electronics: Dr. Paul Ruchhoeft (pruchhoe@central.uh.edu)

Nanosystems: Dr. Stanko Brankovic (srbranko@central.uh.edu)

Power: Dr. Harish Krishnamoorthy (hskrishn@uh.edu)

Signals, Communications & Controls: Dr. Bhavin Sheth (brsheth@central.uh.edu)

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PREPARE FOR YOUR APPOINTMENT

- Complete the attached degree plan form by reflecting your degree progress using [MyUH Advisement Report](#).
- Select your electives. View the [UH Course Catalog](#) to review course descriptions and requirements.
- Use the *semester to semester plan* template to map out your remaining semesters, using the ECE expected [course offerings](#) to plan ahead.
- Bring your notes & questions to your appointment to collaborate with your faculty advisor.

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GET YOUR DEGREE PLAN APPROVED AND SUBMIT TO THE ECE OFFICE

- Save a copy of your approved degree plan and semester to semester plan document for your student records.
- Submit your **signed** degree plan form (one page only) to the ECE Office [HERE](#).
- Follow up with your faculty advisor to discuss any potential changes.

Areas of Concentration & Elective Course Selection

Concentration area courses in bold text are required electives and must be included in the total concentration electives required for EE degree majors.

APPLIED ELECTROMAGNETICS

ECE 3318	Applied Electricity & Magnetism
ECE 5317/5113	Microwave Engineering
ECE 5318/5114	Antenna Engineering
ECE 3364	Circuits & Systems
ECE 3366	Introduction to DSP
ECE 3456	Analog Electronics
ECE 4339/4119	Physical Principles of Solid State Devices
ECE 4363/4113	Energy Conversion Devices
ECE 4371/4117	Advanced Telecommunications Engineering
ECE 5319	Introduction to Nanotechnology
ECE 5358	Modern Optics & Photonics

ELECTRONICS

ECE 3364	Circuits & Systems
ECE 3456	Analog Electronics
ECE 3457	Digital Electronics
ECE 4339/4119	Physical Principles of Solid State Devices
ECE 3318	Applied Electricity & Magnetism
ECE 5317/5113	Microwave Engineering
ECE 5318/5114	Antenna Engineering
ECE 5319	Introduction to Nanotechnology
ECE 5320	Introduction to Nanomaterials Engineering
ECE 5321	Design & Fabrication of Nanoscale Devices
ECE 5340	Introduction to Well-Logging Techniques
ECE 5356	CMOS Analog Integrated Circuits
ECE 5358	Modern Optics & Photonics

POWER

ECE 3318	Applied Electricity & Magnetism
ECE 3364	Circuits & Systems
ECE 4363/4113	Energy Conversion Devices
ECE 5377/5127	Power Systems Analysis
ECE 4375/4115	Automatic Control Systems
ECE 5335/5115	State-Space Engineering
ECE 5380/5180	Power Electronics & Electric Devices
ECE 5388	Renewable Energy Technology

SIGNALS, COMMUNICATIONS & CONTROLS

ECE 3366	Introduction to DSP
ECE 5397/4117	Advanced Telecommunications Engineering
ECE 4375/4115	Automatic Controls Systems
ECE 3364	Circuits & Systems
ECE 4437	Embedded Microcomputer Systems
ECE 5317/5113	Microwave Engineering
ECE 5318/5114	Antenna Engineering
ECE 5330	Introductions to Robotics
ECE 5335/5115	State-Space Engineering
ECE 5440	Advanced Digital Design
ECE 5451	Internetworking
ECE 5357	Introduction to Cybersecurity
ECE 5397	Robotics & ROS
ECE 5397	Introduction to Machine Learning

COMPUTER & EMBEDDED SYSTEMS

ECE 4437 or	Embedded Microcomputer Systems OR
ECE 5440	Advanced Digital Design
ECE 5367	Introduction to Computer Architecture & Design
COSC 1437	Introduction to Programming
ECE 3366	Introduction to DSP
ECE 3456	Analog Electronics
ECE 3457	Digital Electronics
ECE 4375/4115	Automatic Control Systems
ECE 4437	Embedded Microcomputer Systems
ECE 5330	Introduction to Robotics
ECE 5440	Advanced Digital Design
ECE 5451	Internetworking
ECE 5357	Introduction to Cybersecurity
ECE 5397	Robotics & ROS
ECE 5397	Introduction to Machine Learning
ECE 5436	Advanced Microprocessor
COSC 2436	Programming & Data Structures

NANOSYSTEMS

ECE 4339/4119	Physical Principles of Solid State Devices
ECE 5319	Introduction to Nanotechnology
ECE 5320	Introduction to Nanomaterials Engineering
ECE 5321	Design & Fabrication of Nanoscale Devices
ECE 3318	Applied Electricity & Magnetism
ECE 3364	Circuits & Systems
ECE 4363/4113	Energy Conversion Devices
ECE 5317/5113	Microwave Engineering
ECE 5318/5114	Antenna Engineering
ECE 5356	CMOS Analog Integrated Circuits
ECE 5380/5180	Power Electronics & Electric Devices

TECHNICAL ELECTIVE OPTIONS

ECE ****	Choice of 3000 - 5000 level ECE elective
PHYS 3312	Modern Optics
PHYS 3315	Modern Physics I
MATH 3355	Vector Analysis
MATH 3364	Complex Analysis
MATH 4364	Numerical Analysis
MECE 2334	Introduction to Thermodynamics
MECE 3400	Introduction to Mechanics

Degree Plan: *Electrical Engineering*

Name:

PeopleSoft ID:

Date:

ECE BASE

UH	TR		
<input type="checkbox"/>	<input type="checkbox"/>	ENGI 1100	Introduction to Engineering
<input type="checkbox"/>	<input type="checkbox"/>	ENGI 1331	Computing for Engineers
<input type="checkbox"/>	<input type="checkbox"/>	ENGI 2304	Technical Communications
<input type="checkbox"/>	<input type="checkbox"/>	ECE 2201	Circuits Analysis I
<input type="checkbox"/>	<input type="checkbox"/>	ECE 2202	Circuit Analysis II
<input type="checkbox"/>	<input type="checkbox"/>	ECE 2100	Circuit Analysis Lab
<input type="checkbox"/>	<input type="checkbox"/>	ECE 3331	Programming Applications in ECE
<input type="checkbox"/>	<input type="checkbox"/>	ECE 3441	Digital Logic Design
<input type="checkbox"/>	<input type="checkbox"/>	ECE 3155	Electronics Lab
<input type="checkbox"/>	<input type="checkbox"/>	ECE 3355	Electronics
<input type="checkbox"/>	<input type="checkbox"/>	ECE 3337	Signals & Systems Analysis
<input type="checkbox"/>	<input type="checkbox"/>	ECE 3317	Applied EM Waves
<input type="checkbox"/>	<input type="checkbox"/>	ECE 3436	Microprocessor Systems
<input type="checkbox"/>	<input type="checkbox"/>	ECE 3340	Numerical Methods
<input type="checkbox"/>	<input type="checkbox"/>	INDE 2333	Engineering Statistics

MATHEMATICS

<input type="checkbox"/>	<input type="checkbox"/>	MATH 2413	Calculus I
<input type="checkbox"/>	<input type="checkbox"/>	MATH 2414	Calculus II
<input type="checkbox"/>	<input type="checkbox"/>	MATH 2415	Calculus III
<input type="checkbox"/>	<input type="checkbox"/>	MATH 3321	Engineering Mathematics
<input type="checkbox"/>	<input type="checkbox"/>	OR MATH 3331	Ordinary Differential Equations
AND AND			
<input type="checkbox"/>	<input type="checkbox"/>	MATH 2318	Linear Algebra

SCIENCE

<input type="checkbox"/>	<input type="checkbox"/>	CHEM 1311	Fundamentals of Chemistry*
<input type="checkbox"/>	<input type="checkbox"/>	CHEM 1111	Fundamentals of Chemistry Lab
<input type="checkbox"/>	<input type="checkbox"/>	PHYS 2325	University Physics I
<input type="checkbox"/>	<input type="checkbox"/>	PHYS 2125	University Physics Lab I
<input type="checkbox"/>	<input type="checkbox"/>	PHYS 2326	University Physics II
<input type="checkbox"/>	<input type="checkbox"/>	PHYS 2126	University Physics Lab II

STATE CORE REQUIREMENTS

UH	TR	<u>COMMUNICATIONS (6 hours)</u>	
<input type="checkbox"/>	<input type="checkbox"/>	ENGL 1301	First Year Writing I
<input type="checkbox"/>	<input type="checkbox"/>	ENGL 1302	First Year Writing II
<u>AMERICAN HISTORY (6 hours)</u>			
<input type="checkbox"/>	<input type="checkbox"/>	HIST 1301	The United States to 1877
<input type="checkbox"/>	<input type="checkbox"/>	HIST 1302	The United States since 1877
<u>GOVERNMENT/POLITICAL SCIENCE (6 hours)</u>			
<input type="checkbox"/>	<input type="checkbox"/>	GOVT 2305	U.S. Government
<input type="checkbox"/>	<input type="checkbox"/>	GOVT 2306	U.S. & TX Constitution & Politics
<u>APPROVED CORE (6 hours)</u>			
<input type="checkbox"/>	<input type="checkbox"/>	- ECON 2302 -	Social & Behavioral Sciences
<input type="checkbox"/>	<input type="checkbox"/>	- ENGI 2304 -	Writing in the Discipline
<input type="checkbox"/>	<input type="checkbox"/>	_____	Language, Philosophy & Culture
<input type="checkbox"/>	<input type="checkbox"/>	_____	Creative Arts

Category 1: Concentration Area

- EE students must include the required concentration electives and chose their remaining electives from their concentration area.
- EE students are responsible to complete a total of 6 concentration electives in all.

CONCENTRATION AREA : _____

<input type="checkbox"/>	<input type="checkbox"/>	Concentration Elective
<input type="checkbox"/>	<input type="checkbox"/>	Concentration Elective
<input type="checkbox"/>	<input type="checkbox"/>	Concentration Elective
<input type="checkbox"/>	<input type="checkbox"/>	Concentration Elective
<input type="checkbox"/>	<input type="checkbox"/>	Concentration Elective
<input type="checkbox"/>	<input type="checkbox"/>	Concentration Elective

Category 2: Elective Courses

EE students are required to choose

- 2 ECE Electives (ECE elective be any ECE 3000 - 5000 ECE course)
- 1 Technical Elective (Choose one from the technical course elective options)

<input type="checkbox"/>	<input type="checkbox"/>	ECE Elective
<input type="checkbox"/>	<input type="checkbox"/>	ECE Elective
<input type="checkbox"/>	<input type="checkbox"/>	Tech Elective

Category 3: ECE Labs

EE students are required to complete 3 ECE labs.

- ECE labs will come from concentration and/or elective course selections.
- 4 credit electives include a lab hour (Ex: ECE 5440)
- 1 credit courses partner with many 3 credit ECE elective options (Ex: ECE 4375/4115)

<input type="checkbox"/>	<input type="checkbox"/>	ECE Lab
<input type="checkbox"/>	<input type="checkbox"/>	ECE Lab
<input type="checkbox"/>	<input type="checkbox"/>	ECE Lab

ECE CAPSTONE DESIGN

Students must attend a Capstone Design Orientation the semester before enrolling in ECE 4335. Check Capstone Design website for details.

<input type="checkbox"/>	ECE 4335	Capstone Senior Design I
<input type="checkbox"/>	ECE 4336	Capstone Senior Design II

RULES YOU NEED TO KNOW:

1. C- Rule: COE requires a grade of "C-" or better for credit in any mathematics, science, or engineering course that applies toward the bachelor's degree. In addition, the "C-" is required for any mathematics, science, or engineering course used as a prerequisite for a subsequent course.
2. Last 30 hours must be exclusively completed at UH
3. MAXIMUM of 66 lower level transfer hours may be applied towards UH degree
4. MAX NUMBER OF ATTEMPTS: COE does not allow a student to attempt Engineering courses more than two times and science or mathematics more than three times
5. MINIMUM of a 2.00 GPA in cumulative, major, and minor GPA to graduate

Comments:

I certify I met with the student above and reviewed their remaining concentration and degree electives.

Advisor's Name (printed): _____ Advisor's Signature: _____

Submit your signed degree plan form to the ECE Office [HERE](#).

Semester to Semester Plan

Name _____
 Cougar ID _____
 Degree Program _____

Projected Graduation Date _____
Semester *Year*

Semester:

Course Title	Credit Hours

Semester:

Course Title	Credit Hours

Semester:

Course Title	Credit Hours

Semester:

Course Title	Credit Hours

Semester:

Course Title	Credit Hours

Semester:

Course Title	Credit Hours

Semester:

Course Title	Credit Hours

Semester:

Course Title	Credit Hours

Semester:

Course Title	Credit Hours