UNIVERSITY of **HOUSTON** | ENGINEERING
Department of Electrical & Computer Engineering

Degree Plan for Electrical Engineering (BSEE)

LAST NAME: _____ FIRST NAME: _____ STUDENT ID # _____ Catalog Year _____

**Degree plan will not be processed without declared degree catalog year

Approved by Advisor: _____(sign)_____(print) Date: _____

STEP ONE: Choose Concentration Area
Students must take all courses in Category 1.

STEP TWO: Select courses
Students must take a total of 6 concentration courses, 2 ECE electives, and 1 technical elective. Course selections must include a minimum of 3 labs. Students with 6 or more labs can substitute 3 labs for one ECE elective. *If this is your plan, list the 3 extra labs in one of the ECE elective boxes.*

STEP THREE: Get approved by concentration advisor
Students must have this formed signed by their concentration advisor before submission. Submit to the ECE front office located in N308, Engineering Bldg. 1.

CATERGORY 1: CONCENTRATION AREAS & REQUIRED CONCENTRATION COURSES
Students must take **ALL** of the courses listed in this category in their chosen Concentration Area.

Signals, Communications & Controls	Electronics	Nanosystems	Applied Electromagnetics	Power & Renewable Energy	Computers & Embedded Systems
3366: Intro to DSP	3364: Circuits & Systems	4339/4119: Physical Principles of Solid State Devices	3318: Applied Electricity & Magnetism	3318: Applied Electricity & Magnetism	4437 Embedded Microcomputer Sys **OR** 5440 Adv Digital Design
5397/4117 Advanced Telecommunications Engineering	3456: Analog Electronics	5319/5119: Intro to Nanotechnology	5317/5113 Microwave Engineering	3364: Circuits & Systems	5367: Intro to Computer Architecture & Design
4375/4115: Automatic Control Systems	3457: Digital Electronics	5320/5120: Intro to Nanomaterials Engineering	5318/5114 Antenna Engineering	4363/4113: Electromechanical Energy Conversion	COSC 1437: Intro to Programming
	4339/4119: Physical Principles of Solid State Devices	5321/5121: Design & Fabrication of Nanoscale Devices		5377/5127: Power Transmission & Distribution	

CATEGORY 2: CONCENTRATION ELECTIVES

Students are free to choose from the following courses to complete (6) Concentration Electives in total.

Signals, Communications & Controls	Electronics	Nanosystems	Applied Electromagnetics	Power & Renewable Energy	Computers & Embedded Systems
Select 3	*Select 2*	*Select 2*	*Select 3*	*Select 2*	*Select 3*
☐ 3364: Circuits & Systems	☐ 3318: Applied Electricity & Magnetism	☐ 3318: Applied Electricity & Magnetism	☐ 3364: Circuits & Systems	☐ 4375/4115: Automatic Control Systems	☐ 3366: Intro to DSP
☐ 4437: Embedded Microcomputer Systems	☐ 5317/5113 Microwave Engineering	☐ 3364: Circuits & Systems	☐ 3366: Intro to DSP	☐ 5335/5115: State-Space Control Systems	☐ 3456: Analog Electronics
☐ 5317/5113 Microwave Engineering	☐ 5318/5114 Antenna Engineering	☐ 4363/4113: Energy Conversion Devices	☐ 3456: Analog Electronics	☐ 5380/5180: Power Electronics & Electric Drives	☐ 3457: Digital Electronics
☐ 5318/5114 Antenna Engineering	☐ 5319/5119: Intro to Nanotechnology	☐ 5317/5113 Microwave Engineering	☐ 4339/4119: Physical Principles of Solid State Devices	☐ 5388: Renewable Energy Technology	☐ 4375/4115: Automatic Control Systems
☐ 5335/5115: State-Space Control Systems	☐ 5340 Intro to Well-Logging Techniques	☐ 5318/5114 Antenna Engineering	☐ 4363/4113: Electromechanical Energy Conversion		☐ 4437: Embedded Microcomputer Systems
☐ 5354: Digital Video	☐ 5346: VLSI Design	☐ 5322: Nanoengineering Research	☐ 4371/4117 Advanced Telecomm Engineering		☐ 5346: VLSI Design
☐ 5440 Advanced Digital Design	☐ 5356: CMOS Analog Integrated Circuits	☐ 5346: VLSI Design	☐ 5319/5119: Intro to Nanotechnology		☐ 5354: Digital Video
☐ 5451: Internetworking	☐ 5358: Modern Optics & Photonics	☐ 5356: CMOS Analog Integrated Circuits	☐ 5340 Intro to Well-Logging Techniques		☐ 5440 Advanced Digital Design
☐ 5330: Introduction to Robotics	☐ 5320: Intro to Nanomaterials Engineering	☐ 5380/5180: Power Electronics & Electric Drives	☐ 5344 Signal Integrity		☐ 5451: Internetworking
☐ 5357: Introduction to Cybersecurity	☐ 5321: Design & Fabrication of Nanoscale Devices		☐ 5346: VLSI Design		☐ 5330: Introduction to Robotics
☐ 5397: Robotics & ROS			☐ 5358 Modern Optics & Photonics		☐ 5357: Introduction to Cybersecurity
☐ 5397: Intro to Machine Learning					☐ COSC 2436: Programming & Data Structures:
					☐ 5397: Robotics & ROS
					☐ 5397: Intro to Machine Learning
					☐ 5436: Advanced Microprocessor

ECE ELECTIVES

Students must take **two** additional ECE 3000-, 4000-, or 5000-level courses.

ECE ELECTIVE	ECE ELECTIVE

TECHNICAL ELECTIVE : Students must take one of the following courses.

☐ ECE _____ Any ECE 3000-, 4000-, or 5000-level course	☐ MECE 2334 Intro to Thermodynamics	☐ MATH 3364 Complex Analysis	☐ MATH 4364 Numerical Analysis
☐ PHYS 3312 Modern Optics	☐ PHYS 3315 Modern Physics I	☐ MATH 3335 Vector Analysis	☐ MECE 3400 Intro to Mechanics

ELECTIVE LABS

Electives must include at least **three** labs. 4 credit hour courses are lecture & lab, 4th credit hour can be used as an elective lab hour

ECE LAB	ECE LAB
ECE LAB	