

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

Degree Plan for Electrical Engineering (BSEE)

LAST NAME: _____ **FIRST NAME:** _____ **STUDENT ID #** _____

In the last two years of the BSEE degree plan, students must choose one of the six Concentration Areas below prior to enrolling in any of the Concentration Electives. A list of Faculty Advisors assigned to each of the Concentration Areas is posted on the ECE web site.

To apply for a Concentration Area, fill out this form and take it to the Faculty Advisor for your chosen Concentration Area (or visit 2-3 advisors until you are ready to choose a Concentration Area). When the advisor has signed above indicating approval of your plan, turn in the signed form to the ECE Department front desk. The Department will then remove your enrollment stop and you may begin enrolling in Concentration Electives. Your selection is not necessarily permanent; you may change your Concentration Area later if you wish.

CHOSEN CONCENTRATION AREA: CIRCLE the column heading below for your chosen Concentration Area.

CONCENTRATION ELECTIVES: Students take **seven (7)** electives in their chosen Concentration in Categories 1 and 2, as described below.

Category 1: Required Courses. Students must take **ALL** of the courses listed in this category in their chosen Concentration Area.

Concentration Areas: Category 1 Electives					
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	2317: Applied Electricity & Magnetism	2317: Applied Electricity & Magnetism	3441: Digital Logic Design
4371/4117 Intro to Telecommunications Engineering	3456: Analog Electronics	5319/5119: Intro to Nanotechnology	5317/5113 Microwave Engineering	3364: Circuits & Systems	4437 Embedded Microcomputer Sys OR 5440 Adv Digital Design
4375/4115: Automatic Control Systems	3457: Digital Electronics	5320/5120: Intro to Nanomaterials Engineering	5318/5114 Antenna Engineering	4363/4113: Electromechanical Energy Conversion	5367: Intro to Computer Architecture & Design
	4339/4119: Physical Principles of Solid State Devices	5321/5121: Design & Fabrication of Nanoscale Devices		5377/5127: Power Transmission & Distribution	COSC 1320: Intro to Computer Science II
	3441: Digital Logic Design				

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Category 2: Students must take additional courses from Category 2 in the chosen Concentration to total **seven (7)** courses in the Concentration. CIRCLE the courses in **your chosen Concentration Area only** that you are currently planning to take. This is for planning purposes only. You may change your mind later.

Concentration Areas: Category 2 Electives					
Signals, Communications & Controls	Electronics	Nanosystems	Applied Electromagnetics	Power & Renewable Energy	Computers & Embedded Systems
<i>(Circle 4)</i>	<i>(Circle 2)</i>	<i>(Circle 3)</i>	<i>(Circle 4)</i>	<i>(Circle 3)</i>	<i>(Circle 3)</i>
3364: Circuits & Systems	2317: Applied Electricity & Magnetism	2317: Applied Electricity & Magnetism	3364: Circuits & Systems	4375/4115: Automatic Control Systems	3366: Intro to DSP
3441: Digital Logic Design	5317/5113 Microwave Engineering	3364: Circuits & Systems	3366: Intro to DSP	5335/5115: State-Space Control Systems	3456: Analog Electronics
4437: Embedded Microcomputer Systems	5318/5114 Antenna Engineering	3441: Digital Logic Design	3456: Analog Electronics	5380: Power Electronics & Electric Drives	3457: Digital Electronics
5317/5113 Microwave Engineering	5319/5119: Intro to Nanotechnology	4363/4113: Energy Conversion Devices	4339/4119: Physical Principles of Solid State Devices	5397: Renewable Energy Technology	4375/4115: Automatic Control Systems
5318/5114 Antenna Engineering	5340 Intro to Well-Logging Techniques	5317/5113 Microwave Engineering	4363/4113: Electromechanical Energy Conversion	5397: Smart Grid Technology	4437: Embedded Microcomputer Systems
5335/5115: State-Space Control Systems	5344: Signal Integrity	5318/5114 Antenna Engineering	4371/4117 Intro to Telecomm Engineering		5344: Signal Integrity
5354: Digital Video	5346: VLSI Design	5322: Nanoengineering Research	5319/5119: Intro to Nanotechnology		5346: VLSI Design
5440 Advanced Digital Design	5356: CMOS Analog Integrated Circuits	5346: VLSI Design	5340 Intro to Well-Logging Techniques		5354: Digital Video
5451: Internetworking	5358: Modern Optics & Photonics	5356: CMOS Analog Integrated Circuits	5344 Signal Integrity		5436: Advanced Microprocessor Systems
5397: Smart Grid Technology		5380: Power Electronics & Electric Drives	5346: VLSI Design		5440 Advanced Digital Design
5397: Introduction to Robotics		5436: Advanced Microprocessor Systems	5358 Modern Optics & Photonics		5451: Internetworking
					5397: Introduction to Robotics

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ECE ELECTIVES. Students must take **two (2)** additional ECE 3000-, 4000-, or 5000-level courses.
Please LIST the two courses you are currently planning to take:

ECE ELECTIVE #1: _____ ECE ELECTIVE #2: _____

ELECTIVE LABS. Students must take a minimum of **four (4)** 1-hour lab courses associated with their Concentration Electives, ECE Electives, and/or Technical Elective. Students taking seven (7) or more 1-hour lab courses may use those additional 3+ hours in place of 1 ECE Elective. **If that is your plan**, put “3 Labs” as ECE ELECTIVE #2 above, and list all 7 Elective Lab courses you plan to take (labs associated with non-elective required courses such as ECE 3155 cannot be used here):

7 Labs: _____

TECHNICAL ELECTIVE. Students must take **one (1)** of the following courses. Please CIRCLE the one that you are currently planning to take.

Any ECE 3000-, 4000-, or 5000-level course: _____

PHYS 3312 Modern Optics

PHYS 3315 Modern Physics I

MATH 3335 Vector Analysis

MATH 3364 Complex Analysis

MATH 4364 Numerical Analysis

ENGI 2334 Intro to Thermodynamics

MECE 3400 Intro to Mechanics