

**OPTIONS FOR ELECTRICAL ENGINEERING MAJOR GUIDED ELECTIVES
(2022-2023)**

EE students may choose from 6 options to fulfill the required 12 hours of major guided electives:

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|---------------------------------|--|-------------------------------|
| 1. General Program | 2. Circuits | 3. Computing Systems |
| 4. Devices Concentration | 5. Power Electronics and Energy Systems | 6. Signals and Systems |

Students pursuing the **General Program** take 12 semester hours from any other EE 3350 and 4000 level Electrical Engineering course not on their degree plan.

Those pursuing a **concentration** must choose 2 from the appropriate list.

Circuits Concentration

COURSE	PRE-REQUISITE(S)
EE 4168 RF/Microwave Laboratory	EE 4368 (co-requisite)
EE 4325 Introduction to VLSI Design	CE/EE 3320
EE 4340 Analog Integrated Circuit Analysis & Design	CE/EE 3311
EE 4368 RF Circuit Design Principles	CE/EE 3310 and EE 4301
EE 4v95 Undergraduate Topics in Electrical Engineering	Instructor consent required
EE 4202 Electrical and Computer Engineering Laboratory in Circuits	CE/EE 3202 or instructor consent

Computing Systems Concentration

COURSE	PRE-REQUISITE(S)
EE 4304 Computer Architecture	CE/EE 3320
EE 4V95 Undergraduate Topics in Electrical Engineering	Instructor consent required
EE 4201 Electrical and Computer Engineering Laboratory in Computing Systems and Computer Engineering	CE/EE 3202 or instructor consent required

Devices Concentration

COURSE	PRE-REQUISITE(S)
EE 4330 Integrated Circuit Technology	CE/EE 3310
EE 4391 Technology of Plasma	ENGR 3300 and CE/EE 3310 ENGR 3341(recommended)
EE 4371 Introduction to MEMs	CHEM 1311, CE/EE 3310, and PHYS 2325/2125
EE 4V95 Undergraduate Topics in Electrical Engineering	Instructor consent required
EE 4204 Electrical and Computer Engineering Laboratory in Devices	CE/EE 3202 or instructor consent required

Power Electronics and Energy Systems Concentration

COURSE	PRE-REQUISITE(S)
EE 4362 Introduction to Energy Conversion	EE 3301
EE 4363 Introduction to Power Electronics	EE 3301
EE 4V95 Undergraduate Topics in Electrical Engineering	Instructor consent required
EE 4205 Electrical and Computer Engineering Laboratory in Power Electronics and Energy Systems	CE/EE 3202 or instructor consent required

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Signals and Systems Concentration

COURSE	PRE-REQUISITE(S)
EE 3350 Communication Systems	ENGR 3300, CE/EE 3301, EE 3302 and ENGR 3341
EE 4331 Applied Machine Learning	(MATH 2414 or MATH 2417) and ENGR 2300 and ENGR 3341
EE 4360 Digital Communications	ENGR 3341 and EE 3302
EE 4361 Intro to Digital Signal Processing	EE 3302
EE 4365 Intro to Wireless Communication	EE 3302 and ENGR 3341
EE 4367 Telecommunication Networks	EE 3350 (co-requisite)
EE 4342 Introduction to Robotics	
EE 4V95 Undergraduate Topics in Electrical Engineering	Instructor consent required
EE 4203 Electrical and Computer Engineering Laboratory in Signals and Systems	CE/EE 3202 or instructor consent required

EE 4V95 Undergraduate Topics in Electrical Engineering may be used only if it is a scheduled special topics class (not independent study).

Independent Study in Electrical Engineering (EE 4V97), Undergraduate Research in Electrical Engineering (EE 4V98), or Senior Honors in Electrical Engineering (EE 4399) may be used for up to 6 of these hours with consent of the department. Please consult your Academic Advisor for more information.

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