

**OPTIONS FOR ELECTRICAL ENGINEERING MAJOR GUIDED ELECTIVES
(2019-2020)**

EE students may choose from 3 options to fulfill the required 15 hours of major guided electives:

1. **General Program**
2. **Microelectronics Concentration**
3. **Telecommunications Concentration**

Students pursuing the **General Program** take 15 semester hours from any other EE 3350 and 4000 level Electrical Engineering course not on their degree plan.

Those pursuing a **Microelectronics Concentration** or **Telecommunications Concentration** must choose 3 from the appropriate list.

Microelectronics Concentration

COURSE	PRE-REQUISITE(S)
EE 4302 Electromagnetic Engineering II	EE 4301
EE/CE 4304 Computer Architecture	CE/EE 3320
EE 4325 Introduction to VLSI Design	CE/EE 3320
EE 4330 Integrated Circuit Technology	CE/EE 3310
EE 4340 Analog Integrated Circuit Analysis & Design	CE/EE 3311
EE 4368 RF Circuit Design Principles	CE/EE 3310, EE 4301
EE 4391 Technology of Plasma	ENGR 3300 and CE/EE 3310 ENGR 3341 Recommended

Telecommunications Concentration

COURSE	PRE-REQUISITE(S)
EE 3350 Communication Systems	ENGR 3300, CE/EE 3301, CE/EE 3302 and ENGR 3341
EE 4360 Digital Communications	EE/TE 3350
EE 4361 Intro to Digital Signal Processing	EE/CE/TE 3302
EE/TE 4365 Intro to Wireless Communication	EE/CE/TE 3302 and ENGR 3341
EE/TE 4367 Telecommunication Networks	EE/TE 3350 (can be co-req)
EE 4368 RF Circuit Design Principles	CE/EE 3310, EE 4301
EE 4390 Computer Networks	EE/TE 3350 (can be co-req)
EE 4392 Intro to Optical Systems	EE/CE/TE 3302, EE 4301, & CE/EE 3310

Additional General Program Options (can choose any of the options above or below)

COURSE	PRE-REQUISITE(S)
EE 4342 Introduction to Robotics	ENGR 2300, EE 3302, and EE 4310
EE 4362 Introduction to Energy Conversion	EE 3301
EE 4363 Introduction to Power Electronics	EE 3301
EE 4370 Embedded Microprocessor Systems	CE/EE 3320 CE/EE 4304 (co-requisite)
EE 4371 Introduction to MEMS	CHEM 1311, CE/EE 3310/3110, PHYS 2325/2125

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.