

Electrical Engineering Technical Elective (TE) Courses

In addition to completing one specialization and with the approval of a faculty advisor, students must complete a minimum of **3** other Technical Elective (TE) courses, comprising of at least ten units:

- **All EECS courses NOT** required for the major and **NOT** used for the specialization are approved to count as TE.

EECS 20**	EECS 112L	EECS 120	EECS 152A**	EECS 176**
EECS 22**	EECS 113	EECS 121	EECS 152B**	EECS 179**
EECS 22L	EECS 114	EECS 141A**	EECS 163	EECS 180B**
EECS 40	EECS 116	EECS 141B**	EECS 166A**	EECS 180C**
EECS 101**	EECS 117	EECS 144**	EECS 170D**	EECS 182**
EECS 111	EECS 118	EECS 148**	EECS 170E**	EECS 188**
EECS 112**	EECS 119	EECS 195	EECS 174**	

Please check prerequisites for all courses before registering.

** course cannot count as a TE if it is being used to complete a specialization.

- Student may also elect to choose course from the following list:

BME 130	MAE 151	MAE 52
BME 135	MAE 152	MAE 91
BME 136	MAE 172	MAE 107
BME 140	MAE 175	MAE 115
CEE 121	MAE 183	MAE 120
CEE 122	ENGR 54	MAE 130A
CEE 123	MAE 30	MAE 185
	ENGR 7A & 7B*	

Please check prerequisites for all courses before registering.

*ENGR 7A & 7B must both be taken to count as a TE. ENGR 7A & 7B are available only to first year student in Fall & Winter quarters.

Notes:

- At least one of these courses must be from outside the student's specialization.
- You may submit a [variation to degree](#) petition to your Academic Counselor if you would like to have a course, that is not listed above to count as a TE. This includes graduate courses, non-EECS courses.
- A course must be 3 units for it to count as one TE.
- If Electrical Engineering students complete EECS 10 and EECS 12, EECS 12 will not account as a TE.
- Only a maximum of 4 units of Design Type courses such MAE 189, EECS 199, and/or MAE 193 count as one TE. ENGRMAE 93 can be petitioned to count as Design Type course.

Specialization Information

All students are required to complete at least one specialization.

Multiple specializations can be completed.

Specialization courses cannot overlap with EE TE or core EE major requirements!

- **Electronic Circuit Design**: Learn about integrated circuits. Topics include how to design ICs, how ICs are made, and the physics behind semiconductors.
 - If you enjoyed: EECS 170A, EECS 170B, EECS 170C
 - Overlaps with:
 - Semiconductors and Optoelectronics
 - RF, Antennas, and Microwave
- **Semiconductors and Optoelectronics**: Learn about semiconductor devices. Focus on the physical properties of semiconductors and its applications to various electronics including ICs, lasers, and photodiodes.
 - If you enjoyed: EECS 170A
 - Overlaps with:
 - Electronic Circuit Design
 - RF, Antennas, and Microwave
- **RF, Antennas, and Microwave**: Learn about communications hardware including RF ICs, MMICs, and antennas. Electromagnetics is also covered in depth.
 - If you enjoyed: EECS 180A, Physics 7E
 - Overlaps with:
 - Electronic Circuit Design
 - Semiconductors and Optoelectronics
- **Digital Signal Processing**: Learn about digital signal processing for computer and communications applications. DSP has a software focus with a course in C programming and MATLAB usage.
 - If you enjoyed: EECS 10, EECS 50, EECS 150
 - Overlaps with: Communications.
- **Communications**: Learn about digital and analog communication methods. Optional classes cover a wide range of topics including antenna design, DSP, fiber optics, RF ICs, and computer networks.
 - If you enjoyed: EECS 10, EECS 50, EECS 55, EECS 150
 - Overlaps with: Digital Signal Processing