Professional Preparation Curriculum Planning

Rf / Photonics / Microwaves

In addition to the required courses in the BSEE curriculum and flowchart, if you are interested in careers in any of the following Electrical Engineering Specialty Areas, we would recommend that you choose from the following Engineering Support Electives and Technical Electives.

**Photonics:**
- MATE 210 Materials Engineering (3)
- MATE 215 Materials Lab I (1)
- MATE 340 Electronics Materials Systems (3+1)
- MATE 430/BMED 434 Micro/Nano Fabrication (3)
- MATE/BMED 435 Microfabrication Lab (1)
- PHYS 315 Introduction to Lasers and Laser Applications (3) [S]
- PHYS 323 Optics (3+1) [W]
- PHYS 423 Advanced Optics (3+1) [S]
- EE 403 Fiber Optic Communication (3) [F]
- EE 443 Fiber Optics Laboratory (1) [F]
- EE 418 Photonic Engineering (3) [S]
- EE 458 Photonic Engineering Lab (1) [S]
- EE 530 Fourier Optics (4) [W]
- EE 423/MATE 430/BMED 434 Micro/Nano Fabrication (3) [W]
- PHYS 423 Advanced Optics (3+1) [S]

**Microwave Systems:**
- MATH 206 Linear Algebra (4)
- MATH 304 Vector Analysis (4) [W,SP]
- PHYS 322 Vibrations and Waves (3) [F]
- PHYS 408 Electromag. Fields & Waves I (4) [F]
- EE 440 Wireless Communications (3) [W]
- EE 480 Wireless Communications Lab (1) [W]
- EE 502 Microwave Engineering (4) [W]
- EE 529 Microwave Device Electronics (3) [W]
- EE 533 Antennas (4) [S]
- PHYS 409 Electromagnetic Fields and Waves II (3) [W]

**Wireless and RF Communications:**
- MATH 206 Linear Algebra (4) [F,W,SP,SU]
- MATH 304 Vector Analysis (4) [F,W,SP]
- PHYS 408 Electromag. Fields & Waves I (4) [F]
- EE 416 Digital Communications (3) [F]
- EE 456 Communication Systems Lab (1) [F]
- EE 440 Wireless Communications (3) [W]
- EE 480 Wireless Communications Lab (1) [W]
- EE 504 Software Defined Radio (3+1) [S]
- EE 525 Stochastic Processes (4) [F]
- EE 526 Advanced Digital Commun. (4) [W]

**Wireless and RF Electronics:**
- MATH 206 Linear Algebra (4) [F,W,SP,SU]
- MATH 304 Vector Analysis (4) [F,W,SP]
- PHYS 408 Electromag. Fields & Waves I (4) [F]
- EE 440 Wireless Communications (3) [W]
- EE 480 Wireless Communications Lab (1) [W]
- EE 405 High Frequency Amplifier Design (3) [F]
- EE 445 High Frequency Amp Design Lab (1) [F]
- EE 412 Advanced Analog Circuits (3) [W]
- EE 452 Advanced Analog Circuits Lab (1) [W]
- EE 413 Advanced Electronic Design (4) [SP]
- EE 425 Analog Filter Design (3) [SP]
- EE 455 Analog Filter Design Lab (1) [SP]
- EE 524 Solid State Electronics (3) [SP]
- EE 525 Stochastic Processes (4) [F]
- EE 529 Microwave Device Electronics (3) [W]