In addition to the required courses in the BSEE curriculum and flowchart, students choose 9 Engineering Support Electives units and 11 Technical Electives units. If you are interested in careers in any of the following Electrical Engineering RF/Microwaves/Photonics Area Examples, we would recommend that you review courses offerings from the following Engineering Support Electives and Technical Electives course listings. We provide example lists of course arrangements here (* - choose at most one of these non-EE technical electives).

**Photonics Example:**
- MATE 210 Materials Engineering (3)
- MATE 215 Materials Lab I (1)
- MATE 340 Electronics Materials Systems (3+1)
- MATE/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/BIOMED 434 Micro/Nano Fabrication (3) [W]
- PHYS 423 Advanced Optics (3+1) [S]

**Wireless and RF Electronics Example:**
- MATH 206 Linear Algebra (4) [F,W,SP,SU]
- MATH 304 Vector Analysis (4) [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]

**Microwave Systems Example:**
- MATH 206 Linear Algebra (4) [F,W,SP,SU]
- 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 Example:**
- MATH 206 Linear Algebra (4) [F,W,SP,SU]
- MATH 304 Vector Analysis (4) [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]
**Engineering Support Electives Listing for RF Microwaves and Photonics Area:**

- 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]
- MATH 206 Linear Algebra (4) [F,W,SP,SU]
- MATH 304 Vector Analysis (4) [W,SP]
- PHYS 408 Electromag. Fields & Waves I (4) [F]
- MATH 206 Linear Algebra (4)
- PHYS 322 Vibrations and Waves (3) [F]
- PHYS 408 Electromag. Fields & Waves I (4) [F]
- MATH 206 Linear Algebra (4) [F,W,SP,SU]
- PHYS 408 Electromag. Fields & Waves I (4) [F]

**Technical Electives Listing for RF Microwaves and Photonics Area**

- 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]
- 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]
- EE 502 Microwave Engineering (4) [W]
- EE 529 Microwave Device Electronics (3) [W]
- EE 533 Antennas (4) [S]
- EE 416 Digital Communications (3) [F]
- EE 456 Communication Systems Lab (1) [F]
- EE 504 Software Defined Radio (3+1) [S]
- EE 525 Stochastic Processes (4) [F]
- EE 526 Advanced Digital Commun. (4) [W]
- PHYS 409 Electromagnetic Fields and Waves II (3) [W]
- PHYS 423 Advanced Optics (3+1) [S]