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 Systems 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 non-EE technical electives).

**Digital Signal Processing**

**Example:**
- CSC/CPE 202 Data Structures (3+1)
- CSC/CPE 203 Object Oriented Programming (3+1)
- CPE 357 Systems Programming (3+1)
- MATH 206 Linear Algebra I (4)
- MATH 248 Methods of Proof in Math. (4)
- MATH 306 Linear Algebra II (4)
- EE 419 Digital Signal Processing (3) [W]
- EE 459 Digital Signal Process. Lab (1) [W]
- EE 515 Discrete Time Filters (4) [F]
- EE 509 Computational Intelligence (4) [S]
- EE 525 Stochastic Processes (4) [F]

**Image Processing / Computer Vision Example:**
- CSC 202 Data Structures (4)
- MATH 206 Linear Algebra I (4)
- PHYS 323 Optics (4) [W]
- CPE/EE 428 Computer Vision (3+1) [W]
- EE 528 Digital Image Processing (4) [F]
- EE 424 Intro. to Remote Sensing (3+1) [W]
- EE 516 Pattern Recognition (3+1) [S]

**Robotics/Mechatronics**

**Example:**
- ME 211 Engineering Statics (3)
- ME 212 Engineering Dynamics (3)
- MATE 210 Materials Engineering (3)
- MATE 215 Materials Laboratory I (1)
- CPE/EE 414 Robotic Systems Integration (3+1)
- EE 432 Digital Control Systems (3) [F]
- EE 472 Digital Control Systems Lab (1) [F]
- CPE/EE 428 Computer Vision (3+1) [W]
- CPE/EE 439 Intro. to Real-Time Op.Sys. (3+1)
- CPE/EE 442 Real-Time Embedded Syst. (3+1)
- EE 513 Control System Theory (4) [W]
- *CPE 416 Autonomous Mobile Robotics (3+1)

**Communications Example:**
- MATH 206 Linear Algebra I (4)
- MATH 248 Methods of Proof in Math. (4)
- MATH 306 Linear Algebra II (4)
- PHYS 322 Vibrations and Waves (3) [F]
- EE 415 Communication System Design (3) [F]
- EE 416 Digital Communications (3) [F]
- EE 456 Communication Systems Lab (1) [F]
- EE 476 Com. Networks and Systems Lab (1) [F]
- EE 403 Fiber Optic Communication (3) [F]
- EE 443 Fiber Optic Communication 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]

**Audio Engineering Example:**
- PHYS 322 Vibrations and Waves (3) [F]
- MU 311 Sound Design: Technologies (3+1) [F]
- EE 419 Digital Signal Processing (3) [W]
- EE 459 Digital Signal Process. Lab (1) [W]
- EE 447 Stringed Musical Instrument (3+1) [S]
- EE 425 Analog Filter Design (3) [S]
- EE 455 Analog Filter Design Lab (1) [S]
- EE 515 Discrete Time Filters (4) [F]

**Control Systems Example:**
- MATH 206 Linear Algebra I (4)
- ME 211 Engineering Statics (3)
- ME 212 Engineering Dynamics (3)
- EE 432 Digital Control Systems (3) [F]
- EE 472 Digital Control Systems Lab (1) [F]
- EE 513 Control System Theory (4) [W]
- EE 509 Computational Intelligence (4) [S]
- EE 514 Adv. Topics in Auto. Control (4) [S]
Engineering Support Electives Listing for Systems Area:

CSC/CPE 202 Data Structures (3+1)
CSC/CPE 203 Object Oriented Program (3+1)
CPE 357 Systems Programming (3+1)
MATH 206 Linear Algebra I (4)
MATH 248 Methods of Proof in Math. (4)
MATH 306 Linear Algebra II (4)
PHYS 323 Optics (4) [W]
ME 211 Engineering Statics (3)
ME 212 Engineering Dynamics (3)
MATE 210 Materials Engineering (3)
MATE 215 Materials Laboratory I (1)
MATH 248 Methods of Proof in Math. (4)
MATH 306 Linear Algebra II (4)
PHYS 322 Vibrations and Waves (3) [F]

Technical Electives Listing for Systems Area:

EE 419 Digital Signal Processing (3) [W]
EE 459 Digital Signal Process. Lab (1) [W]
EE 515 Discrete Time Filters (4) [F]
EE 509 Computational Intelligence (4) [S]
EE 525 Stochastic Processes (4) [F]
CPE/EE 428 Computer Vision (3+1) [W]
EE 528 Digital Image Processing (4) [F]
EE 424 Intro. to Remote Sensing (3+1) [W]
EE 516 Pattern Recognition (3+1) [S]
CPE/EE 414 Robotic Systems Integration (3+1)
EE 432 Digital Control Systems (3) [F]
EE 472 Digital Control Systems Lab (1) [F]
CPE/EE 428 Computer Vision (3+1) [W]
CPE/EE 439 Intro. to Real-Time Op.Sys. (3+1)
CPE/EE 442 Real-Time Embedded Syst. (3+1)
EE 513 Control System Theory (4) [W]
*CPE 416 Autonomous Mobile Robotics (3+1)
*ME 405 Mechatronics (3+1) [W,S]
*PHYS 417 Nonlinear Dynamic. Syst. (3+1) [S]
EE 415 Communication System Design (3) [F]
EE 416 Digital Communications (3) [F]
EE 456 Communication Systems Lab (1) [F]
EE 475 Com. Networks and Systems Lab (1) [F]
EE 403 Fiber Optic Communication (3) [F]
EE 443 Fiber Optic Communication 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]
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MU 311 Sound Design: Technologies (3+1) [F]
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EE 432 Digital Control Systems (3) [F]
EE 472 Digital Control Systems Lab (1) [F]
EE 513 Control System Theory (4) [W]
EE 509 Computational Intelligence (4) [S]
EE 514 Adv. Topics in Auto. Control (4) [S]