

Professional Preparation Curriculum Planning

Electronics

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**.

IC Design and Fabrication:

MATE 210 Materials Engineering (3)
MATE 215 Materials Lab I (1)
MATE 340 Electronics Materials Systems (4)
PHYS 412 Solid State Physics (3) [F]
PHYS 452 Solid State Physics Lab (1) [SP]
EE/PHYS 422 Polymer Electronics Lab (1) [F,W]
EE 431/CPE 441 Computer-Aided Design of VLSI Devices (3+1) [F]
BMED 434/EE 423/MATE 430 Micro/Nano Fabrication (3) [W]
BMED 435 Microfabrication Lab (2) [W]
EE 524 Solid State Electronics (3) [S]
EE 531/CPE 541 Advanced VLSI Design (3+1) [F]
EE 532 VLSI Testing (1) [S]
EE 544 Solid-State Electronics & VLSI Lab (1) [S]
IME/MATE 458/CPE 488 Microelectronics and Electronics Packaging (3+1)

Wireless and RF Electronics:

MATH 206 Linear Algebra I (4)
MATH 304 Vector Analysis (4) [W,S]
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) [S]
EE 425 Analog Filter Design (3) [S]
EE 455 Analog Filter Design Lab (1) [S]
EE 524 Solid State Electronics (3) [S]
EE 525 Stochastic Processes (4) [F]
EE 529 Microwave Device Electronics (3) [W]

Sustainability in Electronics:

ME 211 Engineering Statics (3)
ME 212 Engineering Dynamics (3)
ME 302 Thermodynamics (3)
PHYS 310 Physics of Energy (3) [SP]
EE 410 Power Electronics I (3+1) [F]
EE 411 Power Electronics II (3+1) [W]
EE 413 Advanced Electronic Design (4) [SP]

Biomedical Instrumentation:

BMED 310 Measurement/Analysis (4) [FW]
BMED 440 Bioelectronics and Instrumentation (3+1) [FW]
EE 412 Advanced Analog Circuits (3) [W]
EE 452 Advanced Analog Circuits Lab (1) [W]
EE 413 Advanced Electronic Design (3+1) [S]
EE 419 Digital Signal Processing (3) [W]
EE 459 Digital Signal Process. Lab (1) [W]
CPE/EE 442 Real-Time Embedded Systems (3+1) [F]
CPE/EE 447 Stringed Musical Instrument..Design (3+1) [S]