Professional Preparation Curriculum Planning

Computers

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

( * - choose at most one of these non-EE technical electives)

**Digital IC Design:**

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 412 Solid State Physics (3)
PHYS 452 Solid State Physics Lab (1) [SP]
CSC/CPE 202 Data Structures (3+1)
CSC/CPE 203 Object Oriented Program (3+1)
CPE 315 Computer Architecture (3+1)
or CSC/CPE 333 Computer Hardware Architecture and Design (3+1)
EE 431/CPE 441 Computer-Aided Design of VLSI Devices (4) [F]
CPE/EE 446 Des. of Fault-Tolerant Sys. (3+1) [F]
EE 531/CPE 541 Advanced VLSI Design (3+1) [F]
EE 532 VLSI Testing (1) [S]
EE 521 Computer Systems with Lab (3+1) [S]
EE 544 Solid-state Electronics and VLSI Lab (1) [?] 
EE 423/MATE 430/BMED 434 Micro/Nano Fabrication (3) [W]
IME/MATE 458/CPE 488 Microelectronics and Electronics Packaging (3+1)

**Computer IC Architect:**

CSC/CPE 202 Data Structures (3+1)
CSC/CPE 203 Object Oriented Program (3+1)
CPE 315 Computer Architecture (3+1)
or CSC/CPE 333 Computer Hardware Architecture and Design (3+1)
CPE 357 Systems Programming (3+1)
EE 431/CPE 441 Computer-Aided Design of VLSI Devices (4) [F]
CPE/EE 439 Intro. to Real-Time Operating Systems (3+1) [F]
CPE/EE 446 Des. of Fault-Tolerant Sys. (3+1) [F]
EE 521 Computer Systems with Lab (3+1) [S]
EE 522 Advanced Real-Time Operating Systems Design (3+1) [?] 
EE 523 Digital Systems Design (3+1) [F]
CPE 464 Intro. to Computer Networks (3+1)

**FPGA Digital Designer:**

CSC/CPE 202 Data Structures (3+1)
CSC/CPE 203 Object Oriented Program (3+1)
CPE 315 Computer Architecture (3+1)
or CSC/CPE 333 Computer Hardware Architecture and Design (3+1)
CPE/EE 442 Real Time Embedded Sys (3+1) [F]
CPE/EE 446 Des. of Fault-Tolerant Sys. (3+1) [F]
CPE/EE 439 Intro. to Real-Time Operating Systems (3+1) [F]
EE 523 Digital Systems Design (3+1) [F]
EE 472 Digital Control Systems Lab (1) [F]

**Robotician:**

CSC/CPE 202 Data Structures (3+1)
CSC/CPE 203 Object Oriented Program (3+1)
CPE 357 Systems Programming (3+1)
CPE/EE 414 Robotic Systems Integration (3+1)
CPE/EE 428 Computer Vision (3+1) [W]
*CPE 416 Autonomous Mobile Robotics (3+1)
*ME 405 Mechatronics (3+1) [W,S]
CPE/EE 439 Intro. to Real-Time Operating Systems (3+1) [F]
EE 432 Digital Control Systems (3) [F]
EE 472 Digital Control Systems Lab (1) [F]