

EE Professional Preparation Curriculum Planning

Computers Area Examples

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 Computers 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).

Digital IC Design Example:

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 Micro/Nano Fabrication (3) [W]
IME/MATE 458/CPE 488 Microelectronics and
Electronics Packaging (3+1)

FPGA Digital Designer

Example:

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 475 Communication Networks and Systems
Laboratory (1) [F]

Computer IC Architect Example:

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) [F]
EE 523 Digital Systems Design (3+1) [F]
CPE 464 Intro. to Computer Networks (3+1)

Robotist Example:

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]

Engineering Support Electives Listing for Computers 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 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)
CPE 357 Systems Programming (3+1)

Technical Electives Listing for Computers Area

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 Micro/Nano Fabrication (3) [W]
IME/MATE 458/CPE 488 Microelectronics and
Electronics Packaging (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 475 Communication Networks and Systems
Laboratory (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)
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]
EE 432 Digital Control Systems (3) [F]
EE 472 Digital Control Systems Lab (1) [F]