SYSTEMS CONCENTRATION

Approved Electives ¹
Select from the following:

- BMED 310 Biomedical Engineering Measurement and Analysis
- CPE/CSC 202 Data Structures
- CPE/CSC 203 Project-Based Object-Oriented Programming and Design
- CPE 333 Computer Hardware Architecture and Design
- IME 301 Operations Research I
- IME 305 Operations Research II
- MATH 206 Linear Algebra I
- MATH 306 Linear Algebra II
- MATH 410 Complex Analysis I
- MATH 411 Complex Analysis II
- MATH 451 Numerical Analysis I
- ME 211 Engineering Statics
- ME 212 Engineering Dynamics
- PHYS 323 Optics
- PHYS 428 Nonlinear Dynamical Systems

Technical Electives ¹
Select from the following:

- BMED 440 Bioelectronics and Instrumentation
- CPE 315 Computer Architecture
- CPE 333 Computer Hardware Architecture and Design
- CPE/CSC 357 Systems Programming
- CPE/EE 414 Robotic Systems Integration
- CPE 416 Autonomous Mobile Robotics
- CPE/EE 428 Computer Vision
- CPE/EE 432 Digital Control Systems
- CPE/EE 442 Real Time Embedded Systems
- CPE/EE 447 Stringed Musical Instrument Acoustics, Mechanics, and Transducer Design
- CPE 464 Introduction to Computer Networks
- CPE/EE 472 Digital Control Systems Laboratory
- EE 403 Introduction to Photonics and Fiber Optics
- EE 415 Communication Systems Design
- EE 416 Digital Communication Systems
- EE 419 Digital Signal Processing
- EE 424 Introduction to Remote Sensing
- EE 425 Analog Filter Design
- EE 440 Wireless Communications
- EE 443 Introduction to Photonics and Fiber Optics Laboratory
- EE 455 Analog Filter Design Laboratory
- EE 456 Digital Communication Systems Laboratory
- EE 459 Digital Signal Processing Laboratory

EE 475 Communication Networks and Systems Laboratory
EE 480 Wireless Communications Laboratory
EE 504 Software Defined Radio
EE 509 Computational Intelligence
EE 513 Control Systems Theory
EE 514 Advanced Topics in Automatic Control
EE 515 Discrete Time Filters
EE 516 Pattern Recognition
EE 525 Stochastic Processes
EE 526 Advanced Digital Communications
EE 528 Digital Image Processing
IME 301 Operations Research I
IME 305 Operations Research II
MATH 306 Linear Algebra II
MATH 406 Linear Algebra III
MATH 410 Complex Analysis I
MATH 411 Complex Analysis II
MATH 453 Numerical Optimization
ME 405 Mechatronics
MU 311 Introduction to Recording, Synthesis, and Production
MU 312 Advanced Recording, Synthesis, and Production
MU 411 Sonic Interactions with Technology

Total units ² 20

¹ A course cannot be double-counted as a Approved Elective and a Technical Elective.

² Including total units for all approved and technical electives.