SYSTEMS CONCENTRATION

Approved Electives
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 408 Complex Analysis I
- MATH 409 Complex Analysis II
- MATH 451 Numerical Analysis I
- ME 211 Engineering Statics
- ME 212 Engineering Dynamics
- PHYS 322 Vibrations and Waves
- PHYS 323 Optics
- PHYS 417 Nonlinear Dynamical Systems

Technical Electives
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 408 Complex Analysis I
- MATH 409 Complex Analysis II
- MATH 453 Numerical Optimization
- ME 405 Mechatronics
- MU 311 Sound Design: Technologies
- MU 312 Sound Design: Recording
- MU 411 Sound Design: Synthesis
- PHYS 322 Vibrations and Waves
- PHYS 475 Communication Networks and 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 408 Complex Analysis I
- MATH 409 Complex Analysis II
- MATH 453 Numerical Optimization
- ME 405 Mechatronics
- MU 311 Sound Design: Technologies
- MU 312 Sound Design: Recording
- MU 411 Sound Design: Synthesis
- PHYS 322 Vibrations and Waves

Total units: 20

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