Fall 2023  
USC Ming Hsieh Department of Electrical and Computer Engineering  
1st Semester Course Recommendations

The following lists are recommended courses in the first semester by major/degree programs. The number in parentheses indicates the units per class.  

*We recommend no more than two courses (8.0 units) in the first semester with the exception of the MS in ECE-Machine Learning and Data Science and MS in Financial Engineering degree majors.*

**MSEE-General Degree Focus Areas Only**

- Communications  
  EE 450 (4), EE 503 (4), EE 510 (4)
- Computer Architecture  
  EE 450 (4), EE 451 (4), EE 457 (4), EE 477 (4)
- Computer Networks  
  EE 450 (4), EE 457 (4), EE 503 (4)
- Controls  
  EE 482 (3), EE 503 (4), EE 510 (4)
- Data Science  
  EE 503 (4), EE 510 (4), EE 483 (4)
- Electric Power Systems  
  EE 443 (4), EE 444 (4)
- Electromagnetics, Optics, Photonics  
  EE 471 (4) or EE 539 (4), EE 572 (4)
- Signal and Image Processing  
  EE 483 (4), EE 503 (4), EE 510 (4)
- VLSI/CAD  
  EE 457 (4), EE 477 (4)
- Analog, Mixed-Signal, and Radiofreq.  
  EE 477 (4), EE 536a (4), EE 537 (4)

**MSEE-Computer Architecture Degree**

EE 450 (4), EE 451 (4), EE 457 (4), EE 477 (4)

**MS-Computer Engineering (CENG) Degree**

EE 450 (4), EE 457 (4), EE 477 (4), EE 503 (4), EE 451 (4)

**MSEE-Computer Networks Degree**

EE 450 (4), EE 457 (4), EE 503 (4)

**MS in ECE-Machine Learning and Data Science Degree**

EE 503 (4), EE 510 (4), plus EE 538 (2) or EE 541 (2)

**MSEE-Electric Power Degree**

EE 443 (4), EE 444 (4)

**MSEE-VLSI Design Degree**

EE 457 (4), EE 477 (4), EE 537 (4)
MSEE-Wireless Networks Degree
EE 450 (Placement Exam), EE 503 (4), EE 483 (4)

MS-Financial Engineering (MS-FINE) Degree
EE 503 (4), EE 518 (4) and/or GSBA 548 (3)

MS-Quantum Information Science
EE 520 (4), plus EE 514 (4) or PHYS 559 (4)

MS-ECE (Analog, Mixed-Signal and Radio-frequency Integrated Circuits)
EE 536a (4), EE 537 (4)

MS-Applied Physics
EE 604 (4), AME 508 (4)

MS-Electrical Engineering/Engineering Management (EEMG) Dual Degree
Follow the MSEE-general degree and ISE degree requirements per catalogue policy.
Please contact your academic advisor for specific details.

Notes:
• Full-time enrollment for MS students at USC is a minimum of 8.0 units (2-3 courses).
• Placement Exams are available for the following courses: EE 450, EE 457, EE 477.
• EE 590 (Directed Research) and EE 598 are not allowed in your first semester.
• Students enrolled in the MSEE-Wireless Networks degree program must pass the EE 450 placement exam or register for EE 450. Please note that if you register for EE 450, this course will not count toward your degree.
• No CSCI courses in the 1st semester: As a first semester ECE graduate student, you are not allowed to register in a CSCI course. No D-clearance will be granted to you. Only continuing ECE students (2nd semester or above) may request D-clearance from the CSCI Department.