

Fall 2022

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), EE 529 (4), EE 572 (4)
Signal and Image Processing	EE 483 (4), EE 503 (4), EE 510 (4)
VLSI (Digital)	EE 457 (4), EE 477 (4)
VLSI (Mixed-Signal)	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-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 510 (4), EE 520 (4) **with** EE-599: Quantum Fault Tolerance, Prof. B. Reichardt (4)

MS-Green Technologies Degree

CE 469 (2), ARCH 557 (2), ENE 527 (in lieu of EE 505) (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 would not be allowed to register in a CSCI course. No D-clearance would be granted to you. Only continuing ECE students (2nd semester or above) may request D-clearance from the CSCI Department.