MSc in Electronic Engineering – Course Schedule

Students are required to complete a total of 24 credits of coursework. An Independent Study can also be undertaken for a maximum of 3 credits. Subject to prior approval of the Program Director, students may take a maximum of 9 credits of courses offered by other MSc programs.

Tentative course offering schedule:

2020-21 Fall Term

- EESM 5000 CMOS VLSI Design
- EESM 5060 Embedded Systems
- EESM 5620 Flat Panel Displays
- EESM 5650 Digital Communication Networks and Systems
- EESM 5770 Engineering Research and Career Development

2020-21 Spring Term

- EESM 5600 Photonics Technology and Applications
- EESM 5670 Advanced Architectures and Designs for Communication Networks
- EESM 5720 Signal Analysis and Pattern Recognition
- EESM 5730 Modern Control Systems Design
- EESM 5900H Special Topics: Computer Architecture

Course Description of EESM5900H:

Fundamental quantitative principles of computer design and modern techniques for performance enhancement are covered. Role of technology and factors affecting the cost of computer systems are addressed. Instruction set principles are reviewed. RISC-V architecture is examined as a case study. Memory hierarchy in computer systems is examined. Principles of cache and virtual memory are introduced. Instruction-level parallelism and pipelining concepts are explained. Design approaches to exploit data-level parallelism are introduced. Vector, SIMD, and GPU architectures are examined. Multiprocessors that achieve higher performance by simultaneously executing multiple instruction streams on different processors are explained. Design guidelines for domain-specific architectures for enhanced performance and energy-efficiency in computer systems are introduced.

Courses are offered subject to needs and availability.

For course details, please refer to:

Course Catalog

(Version: 12 June 2020)