

## MSc in IC Design Engineering – Course Schedule

Students are required to complete a total of 26 credits of courses, including 4 credits of MSc Project. Students may take EESM 5900 for a maximum of 6 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:

### 2021-22 Fall Term

- EESM 5000 CMOS VLSI Design
- EESM 5060 Embedded Systems
- EESM 5100 Analog IC Analysis and Design
- EESM 5200 Semiconductor Devices for Integrated Circuit Designs

### 2021-22 Spring Term

- EESM 5020 Digital VLSI System Design and Design Automation
- EESM 5120 Advanced Analog IC Analysis and Design
- EESM 5310 Power Management Circuits and Systems
- EESM 6980M MSc Project

*Course Description of EESM6980M:*

*The class is designed to give student an experience of the complete IC design process in the industry from product definition to production and measurement. Taking a product in the market as an example, students are going to re-design the chip all the way from system definition, protocol design, selecting technology, installing technology file, digital building block design, analog building block design, digital analog integration, ESD protection, post-design simulation, and tape out process. After that, the students will perform on-wafer testing, failure analysis, package selection, PCB design, test vector generation, reliability screening, ESD testing and data-sheet writing. Student completed this class is expected to have the equivalent experience of completing a full IC design cycle in the industry.*

### 2021-22 Summer Term

- EESM 5320 Radio-Frequency Integrated Circuits Design
- EESM 6980M MSc Project

**Courses are offered subject to needs and availability.**

For course details, please refer to:

