

**MSc subjects offered by the Department of Electrical and Electronic Engineering
(MSc in MQ)**

| Subjects Offered | | MSc in Microelectronics and Quantum Systems Engineering | | | 2024/25 | | |
|------------------|----------------------------------------------------------------------------|---------------------------------------------------------|--------------------|-----------------------------|-----------------------------------|-----------------------------------|-----------------|
| | | Without stream option | Elective Streams | | Semester 1 | Semester 2 | Summer Semester |
| | | | Design Engineering | Quantum Systems Engineering | | | |
| EEE501 | Microelectronic Devices and Fabrication [#] | | | | D | E | |
| EEE502 | The Physics of Semiconductor [#] | | | | E | | |
| EEE503 | Microphotonics and Quantum Photonic Systems [#] | | | | E | | |
| EEE504 | Wafer Fabrication and Laboratory [#] | | | | | E | |
| EEE505 | Design and Simulation of Photonic Circuits [#] | | | | | E | |
| EEE506 | Introduction to Wide-bandgap Semiconductors [#] | | | | | E | |
| EEE508 | VLSI Technology and Design | EEE508 | EEE508 | | | E | |
| EEE510 | Introduction to Quantum Physics | EEE510 | | EEE510 | | | |
| EEE511 | Fundamental Quantum Information | EEE511 | | EEE511 | | | |
| EEE513 | Introduction to Quantum Computing | EEE513 | | EEE513 | | E | |
| EEE514 | Quantum Communication | EEE514 | | EEE514 | E | | |
| EEE515 | Lasers | EEE515 | | EEE575 | | E | |
| EIE515 | Advanced Optical Communication Systems | EIE515 | | EIE515 | | D | |
| EEE516 | Research Project | EEE516 | EEE516 | EEE516 | D | D | |
| EIE577 | Optoelectronic Devices | EIE577 | | | D | | |
| EIE580 | RF and Microwave Integrated Circuits for Communication System Applications | EIE580 | EIE580 | | E | | |
| LGT5426 | Managing Innovation | | LGT5426 | | E | E | |
| AP5007 | MEMS (Microelectromechanical Systems) and Sensors | | AP5007 | | | | D |
| EEE5T03 | Engineering Ethics and Academic Integrity | | | | D / E (For Full-time students) | D / E (For Part-time students) | |

D Daytime Class
E Evening Class

Core Subjects for MSc in MQ

*The Department reserves the right of NOT offering any one of the above subjects. The offer of subjects is subject to review and changes if deemed appropriate by the Department.

(last updated in Aug 2024)