NANYANG TECHNOLOGICAL UNIVERSITY
SINGAPORE

School of Electrical and Electronic Engineering
College of Engineering

#1
2026 QS World University Rankings by Subject in Singapore and Asia

#1
2025 Best Global Universities for EEE in US News and World Report

#4
2026 QS World University Rankings by Subject (Worldwide)

#5
2025 Shanghai Ranking's Global Ranking of Academic Subjects

MASTER OF SCIENCE (MSc) PROGRAMMES

PROGRAMME DETAILS

PROGRAMME STRUCTURE

There are two options of study, one with coursework only, and the other with coursework and dissertation. Each course is of 3 Academic Units (AUs), and consists of 39 hours of lectures. Candidates undertaking a 6 AU project are required to submit a dissertation and are advised to select this option **only** if they have a strong interest in pursuing further research studies.

DURATION

Full-Time: 1 Year (Minimum Candidature) / 3 Years (Maximum Candidature)
Part-Time: 2 Years (Minimum Candidature) / 4 Years (Maximum Candidature)

TUITION FEES

	Per Course	Per Dissertation	Minimum Total Tuition Fees
AY 2026 (from Aug 2026)	S$5,615.68*	S$11,231.36*	S$56,156.80*
AY 2027 (from Aug 2027)	S$5,840.31*	S$11,680.62*	S$58,403.07*

*Inclusive of 9% Goods and Services Tax

ADMISSION REQUIREMENTS

- A good and relevant bachelor's degree.
- Relevant practical/working experience is an advantage.
- TOEFL/IELTS score is required for graduates whose native language is not English.
- TOEFL Score (Test dates must be within 2 years or less from the date of application):
  - ≥ 563 (paper-based)
  - ≥ 223 (computer-based)
  - ≥ 85 (internet-based, for exams taken before January 21, 2026)
  - ≥ 4.5 (internet-based, for exams taken on or after January 21, 2026)
- IELTS Score (Test date must be within 2 years or less from the date of application):
  - ≥ 6.0

COMMUNICATIONS ENGINEERING

The MSc (Communications Engineering) is designed for aspiring engineers and information technologists who wish to improve their knowledge and skills in the broad area of communications engineering.

SPECIALISED ELECTIVE COURSES[1]

Students are required to take a minimum of 4 out of all the 6 specialised elective courses.

- 5G Communication & Beyond
- Computer Networks
- Digital Communication Systems
- Optical Fibre Communications
- RF Circuits for Wireless Communications
- Wireless & Mobile Radio Systems

GENERAL ELECTIVE COURSES[1]

- Advanced Digital Signal Processing
- Antennas & Propagation for Wireless Systems
- Artificial Intelligence & Data Mining
- Collaborative Research & Development Project
- Computer Control Networks
- Computational Intelligence
- Cyber Security & Blockchain Technology
- Electromagnetic Compatibility Design
- Genetic Algorithms & Machine Learning
- Graduate Professional Internship **NEW!**
- Image Analysis & Pattern Recognition
- Multimedia Systems & Processing
- Natural Language Processing
- Project Management & Technopreneurship
- Pattern Recognition & Deep Learning
- Probability & Random Processes
- Renewable Energy Systems in Smart Grids
- Smart Biosensors & Systems for Healthcare
- Special Topics in Communication Networks: Design & Analysis of Algorithms
- Statistical Signal Processing
- Video Analysis & Processing

[1] The curriculum is subject to regular review and continuous improvement.

Email: eee_mscadmission@ntu.edu.sg
Phone: +65 6790 6324 (General Enquiries)

COMPUTER CONTROL & AUTOMATION

The MSc (Computer Control & Automation) programme provides practising engineers with advanced practical tools in the development, integration, and operation of computer-based control and automation systems.

SPECIALISED ELECTIVE COURSES[1]

Students are required to take a minimum of 4 out of all the 6 specialised elective courses.

- Computer Control Systems
- Genetic Algorithms & Machine Learning
- Machine Vision
- Multivariable Control Systems Analysis & Design
- Robotics & Intelligent Sensors
- Systems Analysis

GENERAL ELECTIVE COURSES[1]

- Advanced Digital Signal Processing
- Artificial Intelligence & Data Mining
- Collaborative Research & Development Project
- Computational Intelligence
- Cyber Security & Blockchain Technology
- Computer Control Networks
- Graduate Professional Internship **NEW!**
- Image Analysis & Pattern Recognition
- Linear Systems
- Modern Distribution Systems with Renewable Resources
- Modern Electric Drives
- Multi-Robot Systems
- Natural Language Processing
- Neural Networks & Deep Learning
- Pattern Recognition & Deep Learning
- Power System Modelling & Control
- Probability & Random Processes
- Process Modelling & Scheduling
- Project Management & Technopreneurship
- Renewable Energy Systems in Smart Grids
- Smart Biosensors & Systems for Healthcare
- Special Topics on Reinforcement Learning
- Video Analysis & Processing

[1] The curriculum is subject to regular review and continuous improvement.

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INTEGRATED CIRCUITS & MICROELECTRONICS

The MSc (Integrated Circuits & Microelectronics) programme is offered on a part-time and full-time basis for engineers in the microelectronics industry who would like to have graduate training in various topics.

SPECIALISED ELECTIVE COURSES[1]

Students are required to take a minimum of 4 out of all the 6 specialised elective courses.

- Analog Integrated Circuit (IC) Design
- Advanced Wafer Processing
- Advanced Topics in Semiconductor Devices
- Digital Integrated Circuit (IC) Design
- Integrated Circuit (IC) Packaging
- VLSI Systems

GENERAL ELECTIVE COURSES[1]

- Collaborative Research & Development Project
- Chip Security with Machine Learning
- Computer Architecture
- Cyber Security & Blockchain Technology
- Digital IC for Testability
- Digital IC Frontend Design
- Digital IC Backend Design
- Electromagnetic Compatibility Design
- Genetic Algorithms & Machine Learning
- Graduate Professional Internship **NEW!**
- Integrated Circuit for AI
- Integrated Circuit Technology
- Laser Technology
- Optoelectronics Engineering: Design the Future with Light
- Power Management IC Design: Powering AI & Beyond
- Project Management & Technopreneurship
- Quantum Information & Engineering
- RF Integrated Circuit Design for Smart System
- Semiconductor Physics & Applications
- Smart Biosensors & Systems for Healthcare

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POWER ENGINEERING

The MSc (Power Engineering) programme is designed for Electrical Engineering graduates who are practicing engineers, R&D managers, power system designers or industry planners.

SPECIALISED ELECTIVE COURSES[1]

Students are required to take a minimum of 4 out of all the 6 specialised elective courses.

- Modern Electric Drives
- Power Electronic Converters
- Power Quality
- Power System Modelling & Control
- Power System Operation & Planning
- Renewable Energy Systems in Smart Grids

GENERAL ELECTIVE COURSES[1]

- Advanced AI Applications in Smart Power & Energy Systems
- Artificial Intelligence & Data Mining
- Collaborative Research & Development Project
- Computational Intelligence
- Cyber Security & Blockchain Technology
- Electromagnetic Compatibility Design
- Energy Storage Systems & Applications in Power Systems
- Genetic Algorithms & Machine Learning
- Graduate Professional Internship **NEW!**
- Linear Systems
- Modern Distribution Systems with Renewable Resources
- Multivariable Control Systems Analysis & Design
- Natural Language Processing
- Neural Networks & Deep Learning
- Numerical Methods & Algorithms for Power/Electric Engineering Applications
- Pattern Recognition & Deep Learning
- Power Semiconductor Based Converter in Renewable Energy Systems
- Project Management & Technopreneurship
- Robotics & Intelligent Sensors
- Smart Biosensors & Systems for Healthcare
- Special Topics in Clean Energy System Design
- Switched Mode Power Supplies

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SIGNAL PROCESSING & MACHINE LEARNING

The MSc (Signal Processing & Machine Learning) programme is designed for practicing engineers, hardware and software designers, data scientists, R&D managers, and industry planners who seek an understanding of current approaches and evolving directions for DSP and AI technologies. It is also intended for engineers and data scientists who anticipate future involvement in these areas.

SPECIALISED ELECTIVE COURSES[1]

Students are required to take a minimum of 4 out of all the 6 specialised elective courses.

- Advanced Digital Signal Processing
- Analytic & Ensemble Machine Learning
- Genetic Algorithms & Machine Learning
- Natural Language Processing
- Real-Time DSP Design & Applications
- Video Analysis & Processing

GENERAL ELECTIVE COURSES[1]

- Artificial Intelligence & Data Mining
- Collaborative Research & Development Project
- Computational Intelligence
- Cyber Security & Blockchain Technology
- Digital Communication Systems
- Graduate Professional Internship **NEW!**
- Image Analysis & Pattern Recognition
- Linear Systems
- Machine Vision
- Multimedia Systems & Processing
- Neural Networks & Deep Learning
- Pattern Recognition & Deep Learning
- Probability & Random Processes
- Project Management & Technopreneurship
- Robotics & Intelligent Sensors
- Smart Biosensors & Systems for Healthcare
- Special Topics in Machine Learning
- Special Topics in Signal Processing
- Statistical Signal Processing
- Systems Analysis
- Wireless & Mobile Radio Systems

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MSc PROGRAMME OFFICE

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Find out more

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