Bachelor of Engineering
(Electrical and Electronic Engineering)

One Degree, A World of Opportunities
A bachelor’s degree from EEE will open up a world of opportunities. Some industries EEE graduates can enter include:

### Jobs directly related to an EEE degree include:
- Electrical Engineer
- Electronics Engineer
- Embedded Systems Engineer
- Industrial and Production Engineer
- Industrial Machinery & Tools Engineer
- Information Technology Project Manager
- Information Technology Security Specialist

### Jobs in which an EEE degree would be useful include:
- Business Development Manager
- Management Consultant
- Project Manager
- Singapore Armed Forces Personnel
- Software, Web & Multimedia Developer
- Technical Sales Engineer

**AN ABUNDANT SPREAD OF CAREER PROSPECTS**

A bachelor’s degree from EEE will open up a world of opportunities. Some industries EEE graduates can enter include:
CORPORATE LABORATORIES

A Vast Advantage Of World-Class Facilities & Industry Mentors
Industry confidence in our programmes is instrumental in attracting some of the world’s biggest multinationals to set up corporate laboratories at NTU EEE for joint research.

OUR CORPORATE LABORATORIES OFFER STUDENTS AN OPPORTUNITY TO WORK IN A TOP-NOTCH ENVIRONMENT AND GAIN INSIGHT TO INDUSTRY TRENDS AND DEVELOPMENTS.

CUTTING-EDGE FACILITIES
MENTORING BY BOTH FACULTY AND CORPORATE LEADERS

Therefore students

GAIN HANDS-ON TECHNICAL SKILLS
WORK ON REAL-WORLD PROBLEMS

Joint research laboratories at NTU EEE:
• Rolls-Royce@NTU Corporate Lab
• SMRT-NTU Smart Urban Rail Corporate Lab
• ST Engineering-NTU Corporate Lab
• Delta-NTU Corporate Lab for Cyber Physical Systems
• Satellite Research Centre (SaRC)

GARAGE@EEE
A space where you can bring your ideas into fruition, with School’s mentorship and financial support.

IN THIS WHITE SPACE, STUDENTS CAN:
- dabble in particular topics of interest
- create or join existing teams to tackle larger problems
- apply for project funding to complete a longer design cycle leading to the development of a usable prototype

An Expansive Space for Ideas & Experimentation
Garage@EEE exists to cultivate a building culture and to bridge the gap between classroom and experiential learning.

GARAGE@EEE EQUIPS YOU WITH
- HANDS-ON SKILLS
- DECISION-MAKING SKILLS
- PROJECT MANAGEMENT EXPERIENCE
- COMMUNICATION & COLLABORATION SKILLS
- RESILIENCE & PERSEVERANCE
- ENTREPRENEURIAL SPIRIT
- COMMUNICATION & COLLABORATION SKILLS

Student Ambassadors of Garage@EEE
Our student ambassadors are passionate about promoting the maker spirit to the EEE/EM Community. From various hands-on workshops to a make-a-thon camp to the annual Freshmen Orientation Programme, there are endless possibilities to what one can do as part of the Garage@EEE Family.
EEE CLUB

A Rich Mix of Warm Care & Great Fun
The best of student welfare can be found at EEE Club, which looks after our students’ academic and non-academic needs. Yearly Exam Welfare Packs, interactive workshops and memorable events — including the annual Freshman Orientation Programme and EEE Family Day — are among the many things the Club does to spice up campus life, foster cohesiveness, and build bonds among EEE students.

EEE LEAD - LEADERSHIP ENRICHMENT AND DEVELOPMENT PROGRAMME

A Generous Scope For Advancing Talent
LEAD was set up to develop the leadership and managerial skills of talented EEE students. The programme will expose them to industry best practice and expand their professional network through guidance from external advisors. The community service and humanitarian work which they will participate in also create room for students to experience personal growth and satisfaction.

EEE OUTREACH AMBASSADORS

A Rewarding Role in Shaping The Future
The EEE Outreach Ambassadors was founded to serve as a bridge between the present and the future. The goal of the EEE Outreach Ambassadors is to reach out to prospective students and share with them the EEE story in hopes that they will become a part of our family. The Ambassadors serve as the face of EEE, participating in many events to interact with students and parents. There is much to gain in being an Outreach Ambassador. Leadership skills are honed with the many events organized by the committee such as Innovation Challenge, Induction Fiesta, and Open house. The Outreach Ambassadors plays a critical role in shaping the future of EEE.
A Broad Range of Inroads To Industry Experience
There is no better way to experience the ways of the world than through immersion. The School’s impeccable reputation is often an inroad to the companies that our students want to intern with. We also have a wide industry network from which students can secure their internships.

DESIGN & INNOVATION PROJECT
The EEE Design & Innovation Project (DIP) is an interesting and practical programme that allows students to explore innovative and creative solutions for engineering challenges. Through DIP, students will learn to design, develop, construct and test innovative electronic, electrical or IT prototypes in a group project environment.

EXCHANGE PROGRAMMES
A Far-Reaching Network of Global Connections
Students at EEE have the advantage of enriching their education and life experience through the myriad global exchange programmes that we have with renowned partner universities. Students go beyond the classroom, build up life skills and develop new networks.

Our Internship Programmes Include:
- Professional Internship (PI): 20 weeks single-degree programme
- Professional Attachment (PA): 10 weeks second major and double-degree programmes

Interdisciplinary Themes:
- Photonic, Radar & Satellite Systems
- Electromedical & Mobile Computing
- Robotics
- Smart Electronics
- UAV Applications
- Smart Grids for Renewable Energy

6 Thematic Programmes Which Are Adapted From Current Technological Trends

Our Internship Programmes

Professional Internship (PI)
20 weeks
- Single-degree programme

Professional Attachment (PA)
10 weeks
- Second major and double-degree programmes

FOO XIANG BING
EEE Year 3
Currently in OGEM Explorer programme at University of Ottawa (Canada)

Khor Kai Sherng
EEE Year 3
Currently in research attachment at Massachusetts Institute of Technology (USA)

Countries We Have Exchange Programmes With:
- Australia
- Canada
- China
- Czech Republic
- Denmark
- Finland
- France
- Germany
- Hong Kong
- Norway
- UK
- USA
- South Korea
- Spain
- Sweden
- Switzerland
- Taiwan
- Turkey
A DIVERSE PLETHORA OF OPTIONS & DIRECTIONS

Our Bachelor of Engineering curriculum at a glance:

FULL-TIME

BACHELOR OF ENGINEERING (EEE)
4-year direct-honours programme
Offered with a choice of specialisation

DOUBLE-DEGREE PROGRAMME
Bachelor of Engineering and Bachelor of Arts (Honours) in Economics
5-year double-discipline programme
For a multidimensional view of economics and engineering

SECOND MAJORS
Bachelor of Engineering with a Second Major in Business
4-year double-discipline programme
To gain the advantage of a business edge in engineering

Bachelor of Engineering with a Second Major in Society & Urban Systems
4-year double-discipline programme
To understand and master the engineering that empowers urban communities

Our programmes are accredited by the Engineering Accreditation Board (EAB) of the Institution of Engineers Singapore (IES), an eminent member of the reputable Washington Accord (WA). Hence, our degrees are recognised by all the signatory countries of the WA, such as the USA, the UK and Australia.

ADMISSION REQUIREMENTS

GCE "A" Level
Pass in H2 Level in Mathematics, and
Pass in H2 Level in Physics/Chemistry/Biology/Computing, and
Pass in H1 Level/GCE "O" Level Physics/equivalent*

Polytechnic Diploma
Applicants with Polytechnic Diploma or Final Year students with relevant diplomas from a local polytechnic in Singapore will be considered for direct entry into the second year**

*Pass in GCE "O" Level Physics is required for applicants who have not taken Physics at H2 or H1 Level.
**The list of acceptable diplomas is available at https://wis.ntu.edu.sg/webexe/owa/adm_appl_relevant_diploma?student_type=

THE B.ENG (EEE) CURRICULUM

FIRST YEAR
Mathematics 1 & 2
Physics
Physics Foundation for EEE
Introduction to Materials for Electronics
Introduction to Engineering & Practices
EEE Laboratory I
From Computational Thinking to Programming
English Proficiency*
Engineering Communication I
Sustainability: Seeing through the Haze
Engineers & Society
GER Prescribed Elective 1
Unrestricted Elective 1 & 2

*Students who have at least a C6 in GCE 'A' Level General Paper and those who pass the Qualifying English Test are exempted.

SECOND YEAR
Circuit Analysis
Analog & Digital Electronics
Semiconductor Fundamentals
Engineering Mathematics I & II
Introduction to Data Science & Artificial Intelligence
Signals & Systems
Data Structures & Algorithms
Introduction to EEE Design & Project
Ethics & Moral Reasoning
GER Prescribed Elective 2

Polytechnic diploma holders who are directly admitted to the second year are required to take Mathematics A, Physics A, and Physics Foundation for EEE to strengthen their foundation for the degree programme.

THIRD YEAR
Engineering Electromagnetics
Microprocessors
Design & Innovation Project
Internship
Technical Electives 1 & 2**
Engineering Communication II
Career Preparatory Course
Unrestricted Elective

**Students will choose courses depending on their specialisations.

FOURTH YEAR
Final Year Project
2 Design & 3 Technical Electives**
Enterprise & Innovation
GER Prescribed Elective 3
Unrestricted Elective

**Students can opt for a broad-based education under 3 main categories, or they can choose an in-depth study from 1 of 8 specialisations.