ELECTRICAL & ELECTRONIC ENGINEERING

1st AMONG ELECTRICAL & ELECTRONIC ENGINEERING SCHOOLS IN ASIA*

6th AMONG ELECTRICAL & ELECTRONIC SCHOOLS WORLDWIDE*

*Based on the QS World University Rankings by Subject 2019

PROGRAMMES WE OFFER:
- Bachelor of Engineering in Electrical and Electronic Engineering (EEE)
- Double Degree in Bachelor of Engineering (EEE) and Bachelor of Arts (Economics)
- Bachelor of Engineering (EEE) with a Second Major in Business
- Bachelor of Engineering (EEE) with a Second Major in Society and Urban Systems

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=

SPECIALISATION:
- Biomedical Electronics
- Intelligent Systems & Control Engineering
- Electrical Power & Energy
- Integrated Circuit Design
- Microelectronics
- Communication Engineering
- Computer Engineering
- Data Intelligence & Processing

ELECTRICAL & ELECTRONIC ENGINEERING CURRICULUM AT A GLANCE

1st YEAR
- Mathematics 1 & 2
- Physics
- Physics Foundation for EEE
- Introduction to Engineering & Practices
- EEE Laboratory I
- Engineers & Society
- Introduction to Computational Thinking

2nd YEAR
- Circuit Analysis
- Analog & Digital Electronics
- Semiconductor Fundamentals
- Engineering Mathematics I
- Introduction to Data Science & AI
- Signals & Systems
- Data Structures & Algorithms
- Introduction to EEE Design & Project
- Electrical Devices & Machines

Polytechnic diploma holders who are directly admitted to the second year are required to take Mathematics A, Physics A, and Physics.

3rd YEAR
- Engineering Electromagnetics
- Microprocessors
- Design & Innovation Project
- Internship
- Technical Electives 1 & 2**
- Engineering Mathematics II

4th YEAR
- Final Year Project
- 2 Design & 3 Technical Electives**

For more information

CAREER PROSPECTS FOR EEE

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

- Electrical Products
- Information & Communication
- Public Administration & Defence
- Finance & Business
- Engineering Manufacturing

TOP 5 INDUSTRIES WHERE OUR GRADUATES EXCEL

1. Electrical Products
2. Information & Communication
3. Public Administration & Defence
4. Finance & Business
5. Engineering Manufacturing

33% 19% 10% 8% 8%

Electrical Products
Information & Communication
Public Administration & Defence
Finance & Business
Engineering Manufacturing

AVIATION
Rolls-Royce, Boeing

BANKING & FINANCE
DBS, OCBC

BIOMEDICAL & HEALTHCARE ENGINEERING
Siemens AG, NUH

CONTROL & AUTOMATION
Molex, Continental

COMPUTER ENGINEERING
Intel, IBM

ELECTRONIC PRODUCTS
Apple, Samsung

ELECTRONICS, SEMICONDUCTORS & IC DESIGN
ST Electronics, NXP Semiconductor

INFORMATION & COMMUNICATION
Google, Facebook

INTERNET SERVICES
AT&T, Singtel

MACHINERY & EQUIPMENT
Siemens, Continental

MANUFACTURING
National Instruments, Singapore Technologies

POWER & CLEAN ENERGY
Energy Market Authority, Singapore Power

PUBLIC ADMINISTRATION & DEFENCE
DSTA, HDB

DATA INTELLIGENCE & PROCESSING

For more information
**DESIGN & INNOVATION PROJECT**

The EEE Design & Innovation Project (DIP) is a 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.

**INTERNERNSHIP PROGRAMMES**

**A Broad Range of Inroads To Industry Experience**

There is no better way to experience the working world than through internships. The School’s impeccable reputation is often an inroad to the companies that our students want to intern with. With a wide array of industry networks, students have ample opportunities to secure their internships.

**CORPORATE LABORATORIES**

**A Vast Advantage Of World-Class Facilities & Industry Mentors**

Our programmes provide students confidence in industries and 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.**

**THEMATIC PROGRAMMES**

- **SMART ELECTRONICS**
- **ROBOTICS**
- **MACHINE LEARNING & DATA ANALYTICS**
- **SMART & MICRO GRIDS FOR INTEGRATION OF RENEWABLE ENERGY SOURCES**
- **ELECTROMEDICAL & MOBILE COMPUTING TECHNOLOGIES**
- **PHOTONICS, RADAR & SATELLITE SYSTEMS**
- **ESCAPE ROOM DESIGN & IMPLEMENTATION**
- **UAVIONICS**
- **SMART MOBILE APPS**

**Our Internship Programmes Include:**

<table>
<thead>
<tr>
<th>Professional Internship (PI)</th>
<th>Professional Attachment (PA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 weeks</td>
<td>10 weeks</td>
</tr>
<tr>
<td>single, double-degree &amp; second major programmes</td>
<td>second major and double-degree programmes</td>
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**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)
- Singapore Power Group (SP Group)
**GARAGE@EEE**

A makerspace where you can bring your ideas into fruition, with School’s mentorship and financial support.

**Garage@EEE Ambassador**

Our student ambassadors are passionate about promoting the maker spirit to the EEE/IEM 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.

**IN THIS WHITE SPACE, STUDENTS CAN:**

- Cultivate entrepreneurial and innovative learning
- Bridge the gap between classroom and experiential learning
- Get financial funding and mentorship to kickstart technopreneurship journey

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**MLDA@EEE**

The Machine Learning and Data Analytics lab (MLDA@EEE) empowers students to pursue the application of Artificial Intelligence (AI) to established EEE disciplines.

**Academic**

Acquire relevant MLDA knowledge through specialised workshops and training programmes

**Projects**

Work with reputable industry partners, such as Shopee, NVIDIA and OCBC Bank, on a wide variety of AI-related projects

**Career**

Network with industry partners through company visits and career sharings

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**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 with our renowned partner universities. Students go beyond the classroom, build up life skills and develop new networks.

**Duan Jiafei**
EEE Year 3
Currently in OGEM Explorer programme at Georgia Institute of Technology (USA)

**Khor Kai Sherng**
EEE Year 4
Research attachment at Massachusetts Institute of Technology (USA)

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Australia  Canada  China  Czech Republic  Denmark  Finland  France  Germany  Hong Kong  Norway  UK  USA  South Korea  Spain  Sweden  Switzerland  Taiwan  Turkey
EEE CLUB

The Voice of the Students
As part of NTU Students’ Union, the EEE Club strives to enhance the vibrancy of the school, empower voices and build bonds among EEE students. EEE Club serves as a bridge between the students and the school, taking up the responsibility of being the voice and speaking up for our students. Spicing up the campus life of students, the EEE Club organises both academic and non-academic events which includes workshops, welfare initiatives and EEE Week.

EEE OUTREACH

A Rewarding Role in Shaping The Future
The EEE Outreach Ambassadors serves as a bridge between the present and the future students. The EEE Ambassadors participate in events to share their EEE story to prospective students. Leadership skills are honed with various events organised by the committee such as Innovation Challenge, Induction Fiesta, and Open house. EEE Outreach Ambassadors plays a critical role in shaping the future of EEE.

EEE LEAD

A Generous Scope For Advancing Talent
LEAD (Leadership Enrichment And Development) develops leadership and managerial skills of EEE students. This programme exposes them to industry best practices and expand their professional networks through guidance from external advisors. Students experience personal growth and satisfaction through community service and humanitarian projects.
When you mix Art, Design and Media with classical Engineering studies, you get a whole new exciting programme called the Bachelor of Engineering in Information Engineering and Media.

By merging art and creativity with information, communications and digital media technology, new breakthroughs have been achieved. Remarkable progress in movies and games, for instance, are made possible with technology working hand in hand with art and creativity.

This new revolution has opened up new possibilities, experiences and business opportunities that will radically change the world. It has created the need for a new breed of infocommunication engineers equipped with sound understanding of the artistic and creative processes in media design and production. Information Engineering and Media (IEM) programme is the new age engineering.

PROGRAMMES WE OFFER:
• Bachelor of Engineering in Information Engineering & Media (IEM)
• Double Degree in Bachelor of Engineering (IEM) and Bachelor of Arts (Economics)
• Bachelor of Engineering (IEM) with a Second Major in Business

CAREER PROSPECTS FOR IEM

GAMING, ANIMATION & INTERACTIVE ENTERTAINMENT
MEDIA
TELECOMMUNICATIONS
RESEARCH & DEVELOPMENT
ELECTRONIC PRODUCTS
DEFENCE
BUSINESS & MANAGEMENT
IT & COMMUNICATIONS
EDUCATION
BANKING & FINANCE
SERVICE & OTHERS

TOP 5 INDUSTRIES WHERE OUR GRADUATES EXCEL

Information & Communication 60%
Finance & Business 19%
Public Administration & Defence 11%
Electronic Products 5%
Advertising & Market Research 5%

AREA OF INTEREST:

Digital Media Processing
Information Technology
Communications & Networking
Visualisation & Interactive Media
Art, Design & Media Production

For more information
WHERE TECHNOLOGY MEETS ART

BACHELOR OF ENGINEERING (Information Engineering & Media)

School of Electrical & Electronic Engineering
In collaboration with
School of Art, Design & Media
School of Computer Science and Engineering, and
Wee Kim Wee School of Communication & Information

ADMISSION ENQUIRIES
School of Electrical & Electronic Engineering
Office of Admissions
Nanyang Technological University
Student Services Centre, Level 3
42 Nanyang Avenue
Singapore 639815
adm_local@ntu.edu.sg (for local students)
adm_intnl@ntu.edu.sg (for international students)
http://admissions.ntu.edu.sg/UndergraduateAdmissions

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