

Electronics

Overview

Smart electronics devices, flexible hybrid electronics, 5G mobile network, advanced manufacturing, artificial intelligence, Internet of Things and autonomous vehicles are some of the cutting-edge technologies that are becoming more pervasive in today's hyper-connected world. Electronic circuits and devices are the key enablers of the technological advancements behind the current digital transformation.

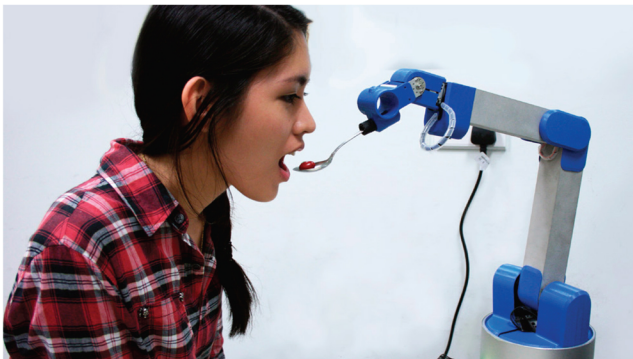
Through an industry-relevant curriculum, hands-on training, and internship opportunities, this course will bring you on a multi-disciplinary experiential learning journey and give you a head-start in a broad range of career options.

Career Opportunities

You will have excellent and flexible career prospects in the aerospace, telecommunications, instrumentation & control, computing, consumer and industrial electronics industries.

Here are some of the exciting jobs that could be yours!

- Electronics / Automation Engineers
- IoT / System Integration Engineers
- Maintenance / Equipment Engineers
- Production / Marketing / Process Engineers
- Sales / Marketing Engineers



Entry Requirements

5 GCE 'O' Level subjects comprising:

English Language (EL1)	(Grades 1-7)
Mathematics (E or A Maths)	(Grades 1-6)
One of the following subjects *	(Grades 1-6)
Any two other subjects (except CCA)	--

* *Biology, Biotechnology, Chemistry, Combined Science, Computing / Computer Studies, Design & Technology, Electronics / Fundamentals of Electronics, Physics / Engineering Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry) / Physical Science.*

Note: Applicants should not be suffering from severe colour vision deficiency, uncontrolled epilepsy, profound hearing loss or severe vision impairment.

Diploma Core Subjects

Year 1:

- Circuit Analysis
- Computer Programming for Problem Solving
- Digital Fundamentals 1 & 2
- Electronic Devices & Circuits
- Electronic Prototyping
- Engineering Mathematics 1 & 2
- Engineering Physics

Year 2:

- Advanced Electronics & Communication
- Circuit & Control Systems
- Data Visualisation & Analytics
- Digital Sensors & Integrated Circuit Applications
- Engineering Mathematics 3
- Integrated Project
- Microcontroller Applications
- Power Electronics & Drives
- Printed Circuit Board Design

Year 3:

- Major Project

Elective Clusters:

- Advanced Engineering Skills
- Avionics
- Industrial Artificial Intelligence
- Intralogistics & Cybersecurity
- Robotics
- Semiconductor Technology
- TP-SUTD University Pathway Programme



Further Studies

You can gain admission into a wide range of degree programmes at local and overseas universities such as those in USA, UK, Australia and New Zealand. Advance standing for specific modules or up to 2 years exemption may be given depending on the relevance of the degree programme.

You can also join the University Pathway Programme which allows you to take university modules in your final year of this course, and get a one-year exemption for selected degree courses at local universities.

Success Stories

Singapore Robotic Games

Showing their excellent programming skills and robotics knowledge, as well as sound fundamental electronics know-how, students from the Diploma in Electronics snatched the Gold medal in the Singapore Robotic

Games competition 2019 – an annual contest in which students design and program robots to compete in various tasks.



They won the medal in the Autonomous Sumo Robot category, in which the robots are programmed to wrestle each other and push their opponent out of a circular ring in order to win.

Second Chance for Success



Josiah Tham was devastated when he could not get a place in TP via the Polytechnic Foundation Programme. On his father's advice, he signed up for the Higher NITEC (Electronics Engineering) course at ITE Central. There, he worked his way back from the depths of demotivation, and through sheer grit and hard work, he finally did well enough to fulfil his dream of entering the Diploma in Electronics course at Temasek Polytechnic.

In TP, he continued to strive and did so well that he was placed on the Director's List (the School's roll of honour for the top 10% of academic achievers) for two consecutive years, and also clinched the Micron Foundation scholarship. Not surprisingly, Josiah was selected to represent TP in the prestigious WorldSkills Singapore competition in 2020, winning a silver medal in the mobile robotics category. An exemplary leader, he was appointed vice-president of the Engineering Peer Mentors Club, where he coached fellow students who were weak in Mathematics.

Josiah will be pursuing the Electrical & Electronics Engineering degree programme at NTU.

WorldSkills Singapore



Applying the skills they had acquired in their diploma course, **Ler Woon Seah** (above) as well as **Muhammad Hasnaat Islam & Ryan Lim**, won a Gold and Silver award (Electronics) in the prestigious WorldSkills Singapore (WSS) competition in 2020 and 2021 respectively.

The WSS is a national competition in which hundreds of young skilled individuals convene from around the world to compete before the public in the skills of their various trades and test themselves against rigorous and demanding international standards.

Core Strengths

You will have the opportunity to carry out research & development in some of our Centres of Excellence, such as the TP Advanced Manufacturing Centre, the Healthcare Engineering Centre, or the Robotics & Automation Centre. These well-equipped Centres focus on the latest technologies, enabling you to build skill-sets that are highly relevant to the industry.

Furthermore, you will get to experience authentic learning in a multi-disciplinary context, and work with partners who are industry leaders and experts in their respective fields. This gives you a strong foundation for a future ready career!



Student Life & Facilities

Your life on campus will be varied and vibrant. Sporting competitions, artistic pursuits, adventure learning programmes, team building games, student club gatherings, as well as the annual Campus Care Network Day carnival when students and staff join forces to raise funds, are some of the many exciting activities that will pepper your life as a student.

Located in a picturesque environment that is close to nature, the campus provides you with the ideal setting for work, play and recreation.



Always at the forefront of technology, the School emphasises innovation, creativity, problem-based learning and a practical, hands-on approach. With a wide range of modern and well-equipped facilities, and a rigorous and industry-relevant curriculum, we are well positioned to prepare you for a bright future.

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School of Engineering

*The information in this brochure is accurate at the time of printing
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