SINGAPORE INSTITUTE OF TECHNOLOGY

2022

ENGINEERING

SIT AT A GLANCE

5 Programme Clusters

6 Campuses

6 Overseas University Partners

38 Undergraduate Degree Options

>135 Student Clubs, Committees, and Chapters

>200 Student Events and Activities

95% of Students Secured a Job Within Six Months of Completing Their Final Exam^

$3,675 Average Starting Salaries of Our Graduates^

^Source: 2020 Graduate Employment Survey

SITizen-DNA

Thinking Tinkerers

- Fundamentally Sound
- Practice-oriented

Able to Learn, Unlearn and Relearn

- Embracing Change
- Learning Beyond University

Catalysts for Transformation

- Improving Efficiency
- Creating Value Through Innovation
- Challenging Status Quo

Grounded in the Community

- Serving the Community Through Knowledge and Skills

WHY PURSUE Engineering?

APPLIED LEARNING PEDAGOGY

Applied learning requires active learning. You will be exposed to a range of learning techniques such as experiential learning, flipped classrooms, problem-based learning with real-industry context, gamifications, and sharing sessions by experienced industry players. With the technical skills and knowledge attained, you can apply what you have learnt to actual work situations in the Integrated Work Study Programme (IWSP).

SPECIALIST AND TRANSFERABLE SKILLS

While training to become a specialist in your respective engineering discipline, you will also acquire skill sets, such as critical thinking, problem-solving, decision-making, project management, and communication skills, which will enable you to stay agile and navigate across industries in the ever-evolving future.

SYMBIOTIC RELATIONSHIP WITH INDUSTRY

Our engineering programmes at SIT have been developed through extensive consultation with industry, thus creating a curriculum that supports the industry's needs in manpower development and innovation.

CAREER PROGRESSION OPPORTUNITIES

A specialised and industry-focused engineering education at SIT will enhance your adaptability and employability, as you contribute to the growth of Singapore's future economy[1].

[1]Source: Engineering Matters for Singapore's Future, Says PM Lee Hsien Loong. *The Straits Times*. (2 Jul 2016). Available from: https://www.straitstimes.com/politics/engineering-key-to-singapores-future-as-smart-nation-pm

Applied Research

Our students have the opportunity to embark on cross disciplinary applied research projects with our faculty and industry partners in areas such as healthcare, urban farming, sustainable infrastructure, artificial intelligence (AI), and many others. **Our cutting-edge projects, linked to local and overseas companies, attract significant government funding.**

Innovative Ankle Brace Project

One of our Mechanical Design and Manufacturing Engineering students was given the opportunity to work in a multidisciplinary team to fabricate an innovative ankle brace prototype that will help those with foot and ankle injuries recover better. The team comprises SIT students and professors, as well as clinicians from SingHealth and Duke NUS.

An App Way to Reduce Waste

To reduce food wastage, our very own Mechanical Engineering student and his teammate developed a prototype app that enables users to keep tabs on their food expiration dates, and help them plan their meals better. Their app, Freshify, has clinched the team a spot in the Top 15 finalists of the IKEA Southeast Asia's Young Designer Award!

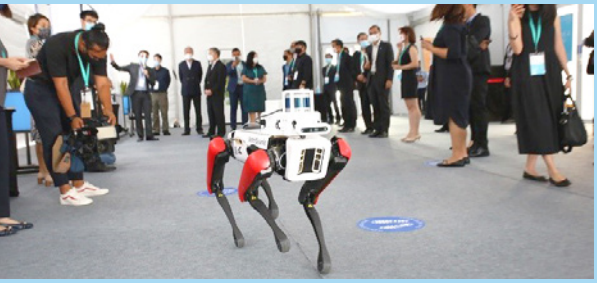
		Panel Num	TEV Name	Component	Sublocation	Phase Ref Lock	dB	PRPD	Pulse Wave	PD %
Scanned Date	20210330T093400	1	20210330T093801_TEV	Cables	1/L1	True	19	No	Yes	20
		1	20210330T093844_TEV	Cables	1/L2	True	23	Yes	Yes	100
Job Number	20210330	1	20210330T093950_TEV	Cables	1/L3	True	25	Yes	Yes	100
		2	20210330T094048_TEV	Cables	1/L1	True	16	Yes	Yes	100
Engineer Name	AWC	2	20210330T094111_TEV	Cables	1/L2	True	16	Yes	Yes	100
		2	20210330T094135_TEV	Cables	1/L3	True	15	Yes	Yes	100
Station Name	Balestier Pt	3	20210330T094228_TEV	Cables	1/L1	True	16	Yes	Yes	100
		3	20210330T094250_TEV	Cables	1/L2	True	19	Yes	Yes	100
Operating Voltage (kV)	22	3	20210330T094311_TEV	Cables	1/L3	True	13	No	No	0
		Tf_1	20210330T094447_TEV	Cables	1/L1	True	13	Yes	No	50
Max dB	25									
AI Outcome										
Max PD %	100									
Operator is urged to check if PD% >= 50%										

Machine Learning Enhances Network Reliability at Substations

Electricity powers nearly every aspect of our lives. You can imagine the inconvenience a blackout can cause to your daily life. SIT researchers have collaborated with SP Group to develop a machine learning platform that detects insulation failures to ensure a more reliable electricity distribution grid for Singapore. The machine learning platform developed by SIT increases efficiency by ten-fold, which allows SP engineers to focus on other pressing operational matters.

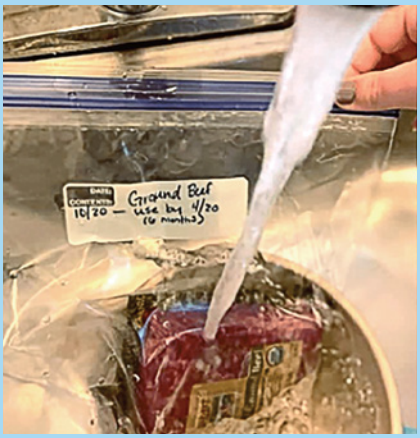
Boosting Innovation in the Construction Industry

SIT launched the Construction Technology Innovation Laboratory (CTIL) in collaboration with construction and civil engineering company Woh Hup (Private) Limited to boost applied research efforts and develop innovative construction technologies for building structures and sub-structures. Our Civil Engineering students will gain practical hands-on experience in industrial environments and be exposed to applied research and innovation projects.



Tinkering with Disruptive Technologies

Boston Dynamics, a US-based robotics company best known for its 'Spot' robot, will partner SIT and local startup dConstruct Technologies on learning and applied research of robotics systems as they set up their base at the upcoming Punggol Digital District. Our students will be able to use the Spot robot and dConstruct's software programming tool to develop robotics solutions for the Punggol Digital District.



Saving Water and Energy Through Innovation

Thawing frozen food under running water is wasteful and expensive. In an innovation project, students are trained to examine human behaviours and motivations of this practice and provide a solution to the problem. For this project, students came up with innovative ideas working alongside industry partners such as The Regent Singapore, paving the way for more efficient water and energy saving practices.

MEET VICTOR

Victor Lee Guo Wei
Graduate (2020)
Sustainable Infrastructure Engineering (Land)

Executive Engineer
Land Transport Authority

One fictional character I wish to be
Captain America! I admire his strong values and leadership skills.

My job
I am an engineer with Land Transport Authority (LTA). At LTA, we review and assess trains and depot equipment specifications. My team also looks into various innovative engineering technology to enhance our train systems.

My IWSP experience
My IWSP experience was at LTA's Rail Asset Operation Maintenance (RAOM). I had the opportunity to better understand the current technical systems in the Railway Transit System.

Memorable campus moment
Organising the student orientation camp. We planned the logistics for all the activities and ensured that there were food choices. We looked out for everyone who participated!

Proudest moment/achievement in SIT
Representing SIT at Singapore International Energy Week, where we showcased our project on a smart lighting system in the park.

Click here to watch my video.

Built Environment

The IWSP allows the students to fully immerse themselves in the company culture, while providing them with the opportunity to experience the working life of an engineer.

SIT students are dedicated, industrious, and highly responsible.

Throughout their internship, the students have shown that they take initiative and are good team players and have what it takes to make a project successful.

MS IRENE YONG
Director (Building Services)
Beca Carter Hollings & Ferner (SEA) Pte Ltd

Through regular engagements with industry partners, SIT has successfully created the IWSP. We are confident that this will be a fruitful platform for the industry to gain bright talents from the university. This programme is also

highly beneficial for the students, who will have a clear perspective prior to entering the industry.

We are excited to embark on this programme with SIT and look forward to welcoming future IWSP participants for a mutually rewarding experience.

MR YONG DERONG
Executive Director
Woh Hup (Private) Limited

Click here to find out more.

Civil Engineering

Campus Location

SIT@Dover

Career Opportunities

You can look forward to careers in these areas:

- Building and Construction
- Engineering Design Consultancy Firms
- Facility Operator
- Government Agencies
- Property Developer

With a strong industry-focused curriculum, the SIT and University of Glasgow joint degree with honours in Civil Engineering will equip you with practical knowledge and skills to plan, design, construct, maintain, and operate infrastructures, including roads, rails, bridges, buildings, canals, ports, and underground structures. You will also acquire deeper skill sets by specialising in structural engineering and geotechnical engineering at the graduate level.

Upon successful completion of the BEng Civil Engineering programme, you may continue with the MSc Civil Engineering, which will qualify you to sit for the professional registration examinations, conducted by the Professional Engineers Board Singapore.

The MSc Civil Engineering with BEng Civil Engineering has been granted Provisional Accreditation by the Engineering Accreditation Board. Strong emphasis is placed on the industrial relevance in the curriculum development of the Civil Engineering programmes, which are developed in consultation with government agencies and companies from the construction sector.

Curriculum Highlights

- Structural and Geotechnical Design
- Construction Technology
- Building Information Modelling (BIM) for Civil Engineers
- Hydraulics and Hydrology
- Capstone Project
- Eight-month Integrated Work Study Programme (IWSP)
- Overseas Immersion Programme (OIP)

Click here to find out more.

Sustainable Infrastructure Engineering (Building Services)

Campus Locations

- SIT@Dover
- SIT@SP Building

Career Opportunities

- Design Engineer (with focus on HVAC and other relevant building mechanical engineering areas)
- BIM Manager
- Facility Manager (Mechanical)
- Sustainable Building Consultant

The Sustainable Infrastructure Engineering (SIE) (Building Services) programme is developed in consultation with the Building and Construction Authority (BCA), Singapore. The direct honours degree programme provides mechanical engineering training with specialisation in sustainable buildings to prepare you to become a building mechanical engineer.

You will also develop lifelong skills to ensure you stay relevant in the building services engineering industry in Singapore and beyond. You will go through rigorous academic training, conducted by highly qualified professors and professional officers, as well as an eight-month Integrated Work Study Programme in the industry. As a trained SIE (Building Services) student, you will be eligible for the Professional Engineering (Mechanical) qualification.

If you perform well in the programme, you may pursue the MEngTech Sustainable Infrastructure Engineering (Building Services). You may also obtain professional certifications in Fire Services Safety Management and Workplace Safety and Health. You can independently pursue certification in Green Mark with the knowledge gained from the programme.

Curriculum Highlights

- Building Information Modelling (BIM)
- Sustainable Building Engineering
- Heating, Ventilation and Air-Conditioning (HVAC)
- Fire Engineering and Management
- Building Energy Simulation
- Eight-month Integrated Work Study Programme (IWSP)

Electrical and Electronic Engineering

The Electrical Power Engineering programme offered by SIT is practical and relevant to the demands in the industry.

The programme reinforces the fundamentals of engineering and instils strong power engineering knowledge and skill sets among its students.

It also offers students with excellent IWSP opportunities with leading players in the industry. More importantly, students are able to select industry electives from relevant specialisation tracks based on their interests.

MR SIAH KENG BOON
Head
Advanced Engineering & Technology
Sembcorp Industries Ltd

The four-year joint degree programme in Electronics and Data Engineering offered by SIT and Technical University of Munich is exciting and well-balanced.

It encompasses a good spectrum from circuit design to robotics and automation to data analytics to smart manufacturing.

These competencies are immediately relevant to the semiconductor industry in Singapore and worldwide. Equipped with the fundamentals, up-to-date applied knowledge, specialised skill sets, and more importantly, connections with the host company through the eight-month IWSP, graduates will be clearly well-positioned on a launch-pad ahead of their peers in the industry.

MR LEE TACHYANG
Senior Director
Technology Development & Introduction
STMicroelectronics Pte Ltd

Click here to find out more.

Electrical Power Engineering

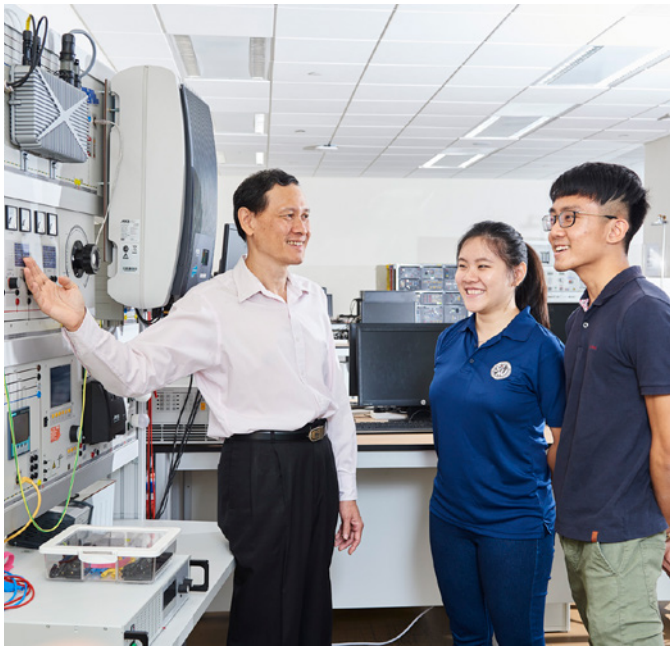
Campus Location

SIT@NYP Building

Career Opportunities

You can look forward to careers in these areas:

- Power Generation and Utilities
- Energy Market Management
- Transportation and Mobility
- Marine and Aerospace
- Sustainable and Renewable Energy
- Electronic Systems Design
- Electrical Services and Consultancy
- Research and Development



As the first dedicated Electrical Power Engineering programme with honours in Singapore, this joint degree offered by SIT and Newcastle University aims to produce a special breed of engineers who will be able to provide a substantial and lasting contribution to their profession.

The curriculum is customised to meet local industry demand that is aligned with Singapore's Smart Nation initiative. This degree will equip you with the necessary technical competence, tools, and personal skills, as well as develop your understanding, expertise, and professionalism as you progress through your career.

Graduates of this programme who have good academic results and relevant working experience may also pursue the MSc Electrical and Electronic Engineering, with Electrical Power Engineering specialisation. This provides further learning needed for Chartered Engineers or Professional Engineers registration.

Curriculum Highlights

- Individual Industry or Research Capstone Project
- Critical Thinking and Innovative Design
- Digital Transformation Skills
- Power & Energy Specialisation Track
- Transportation Electrification Specialisation Track
- Social and Community Grounding Modules
- Eight-month Integrated Work Study Programme (IWSP)
- Overseas Immersion Programme (OIP)

Click here to find out more.

Electronics and Data Engineering

Campus Locations

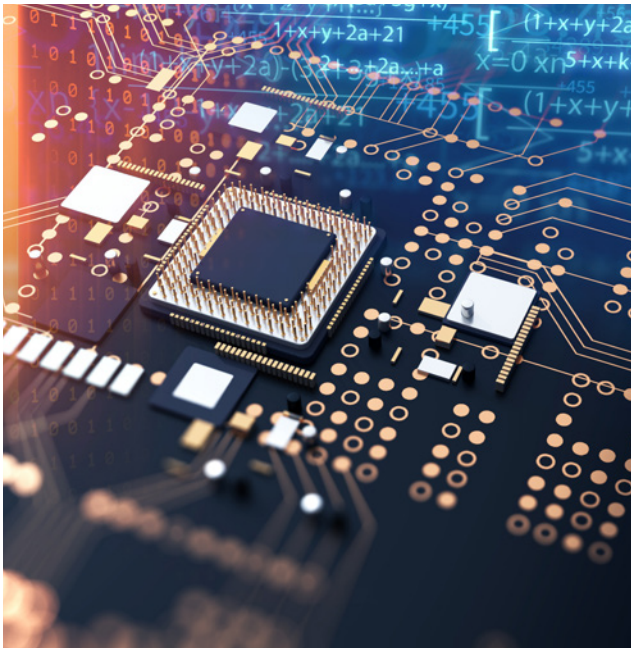
- SIT@Dover
- SIT@SP Building

Career Opportunities

- Electrical and Electronics Engineer
- Application Engineer
- Data Engineer
- Data Analyst
- Process Engineer
- Production and Test Engineer

The Electronics and Data Engineering programme is a four-year honours degree programme, jointly offered by SIT and Technical University of Munich. Combining electronics and data engineering, this unique programme will equip you with the necessary skills and competencies for the emerging digital workforce.

This programme encompasses a broad-based curriculum, which focuses on essential knowledge in semiconductor technology, sensors, and related electronics, as well as practical applications of data science, including aspects of data collection and analytics. You will learn the fundamentals necessary for the electronics industry, as well as the foundations of data engineering – both built over a structured and rigorous curriculum that includes mathematics, physics, electronics, circuits, programming, databases and algorithms, internet of things (IoT), automation and control, machine learning, data mining, and more.



Curriculum Highlights

- Bioelectronics
- Industrial Electronics
- Semiconductor Fabrication
- Internet of Things
- Data Analytics
- Machine Learning
- Automation and Robotics
- Eight-month Integrated Work Study Programme (IWSP)
- Overseas Immersion Programme (OIP)

Maritime

The IWSP is a very good programme that gives students an early exposure to the marine industry,

enabling them to anchor themselves in various specialties on real projects. This is desirable for the company and helpful for the students' learning. They have been able to apply what they have learnt from the classroom directly to the industry.

MS AUDREY KOH
Zone HR Business Partner
(Marine & Offshore, South Asia Zone)
Bureau Veritas Marine (Singapore) Pte Ltd

SIT students have gained good exposure,

working with different nationalities at the shipyard, interacting with co-workers, supervisors, and even clients in the different projects they are participating in.

MR TEO SOON HENG
Project Manager
Keppel Offshore & Marine

Dedicated to a job well done, the students have proven themselves to be industrious, with the right focus on their jobs. With an exuberant outlook, they have integrated well into our organisation and contributed in ways, big and small.

Their learning ability to excel at the workplace is evident in their diverse skills and we are proud to have them on our team!

MS JOYCELIN ANG
HR Manager
Eastern Hemisphere
American Bureau of Shipping (ABS)

Click here to find out more.

Naval Architecture and Marine Engineering

Campus Locations

- SIT@Dover
- SIT@NP Building
- SIT@SP Building

Career Opportunities

You can look forward to careers in:

- Shipbuilding and Rigbuilding Yards
- Classification Societies
- Republic of Singapore Navy
- Oil and Gas Companies
- Maritime Port Authority
- Shipping and Ship Management Companies

Engineers and naval architects in the marine and offshore industry need the right set of skills to perform effectively in a fast-changing environment. The ability to address development proactively and utilise a comprehensive knowledge of the industry is needed to retain a competitive edge.

The joint degree programme with honours in Naval Architecture and Marine Engineering, offered by SIT and Newcastle University, will equip you with the expertise and skills necessary for the highly competitive global maritime industry.

Curriculum Highlights

- Naval Architecture
- Marine Engineering
- Marine Structures
- Ship Resistance and Propulsion
- Marine Transport Business
- Advanced Ship and Offshore Hydrodynamics
- Offshore Renewables
- Internal Combustion Engines
- Capstone Project
- Eight-month Integrated Work Study Programme (IWSP)
- Overseas Immersion Programme (OIP)

Mechanical

Sesto Robotics have found students from SIT to have a sound understanding of engineering fundamentals. They have been able to quickly apply themselves to tasks and have a methodical approach to problem-solving. They were able to quickly assemble proof of concepts to determine the feasibility of ideas and understand the variables involved in the system.

Participants from the IWSP readily absorbed new ideas and methods introduced to them and adapted to best practices.

Students were also exposed to a variety of interdisciplinary skills and knowledge during their course, which proved useful for their IWSP projects.

MR MAZHER NAJEEB ANWAR
Chief Technical Officer
Sesto Robotics

I am very pleased to see how SIT's Mechanical Engineering programme is continually forward-thinking in its curriculum development.

This programme will help learners acquire the necessary skill sets across multiple facets of a largely new medium – Immersive Media. The programme positioning provides a holistic curriculum, allowing students to gain a competitive edge from its alignment with skill competencies in demand and nurturing a capable, future-ready workforce. I strongly believe that the university is taking the right step forward to play hosts in our VUCA world. This course will be especially effective in the grooming of much-needed talent.

MR KEE CHENG HENG
Managing Director
HelloHolo Pte Ltd

Click here to find out more.

Mechanical Design and Manufacturing Engineering

Campus Location

SIT@NYP Building

Career Opportunities

- Engineer in a diverse range of industries
- Consultant in commercial and public sectors
- Project manager in engineering fields

The SIT and Newcastle University joint degree with honours in Mechanical Design and Manufacturing Engineering (MDME) will provide you with a multidisciplinary mix of core and specialised engineering skills sought after by the industry.

The curriculum covers the foundational discipline of mechanical engineering that is enriched with the integration of innovative design, mechatronics, digitalisation, robotics, and automation technologies for smart manufacturing.

At the end of the programme, you will be well-equipped to perform in-depth analysis and solve engineering problems, as well as to develop practical solutions for the manufacturing economy.

Curriculum Highlights

- Materials and Manufacturing
- Lean Manufacturing and Six Sigma
- Robotics and Industrial Automation
- Design of Mechanical Systems
- Applications of Thermofluids
- Eight-month Integrated Work Study Programme (IWSP)
- Overseas Immersion Programme (OIP)

Click here to find out more.

Mechanical Engineering

Campus Location

SIT@NP Building

Career Opportunities

- R&D Engineer
- Development Engineer
- Automation Engineer (CAD/Automation/AI)
- Project Engineer
- Software Engineer
- Mechatronics Engineer
- Mechanical Design Engineer

The SIT and University of Glasgow joint degree in Mechanical Engineering is a three-year honours degree programme that provides a solid foundation in mechanical engineering and digital skill sets. You will have a choice of specialisation in either Design or Mechatronics.

With the need to keep up with the industrial challenges of today, you will be equipped with the knowledge, understanding, and skills for mechanical engineering. You will acquire advanced knowledge in Industrial Internet of Things (IIoT), data analytics, and digital designs through project-based multidisciplinary learning and direct industrial immersion.

The degree aims to train graduates to meet the growing manpower demands in key industry sectors in Singapore, including healthcare engineering, automation/robotics, smart designs using 3D printing, and digital design tools for manufacturing and maritime.

Curriculum Highlights

- Smart Designs
- Industrial Internet of Things (IIoT)
- Healthcare Systems Engineering
- Automation and Robotics
- Co-bot Design and Build
- Data Analytics
- Eight-month Integrated Work Study Programme (IWSP)
- Overseas Immersion Programme (OIP)

Multidisciplinary

The Mechatronics Systems programme integrates theory and practice, equipping students with knowledge and skills of digitally connected physical systems. Undertaking a rigorous curriculum that encompasses model-based systems engineering approach, SIT students are trained to think of products and processes as inter-related systems and apply their expertise in complex scenarios.

Graduates will be equipped with the necessary know-how and soft skills to thrive in the Industry 4.0 world and contribute to developing their respective domains.

As a member of the programme's Industry Advisory Committee, I am heartened and privileged to witness the transformational journey of our graduates from students to working adults.

MR SIMON KUIK SOW HONG
Vice President & Head
Research & Development
Sembcorp Marine Ltd

The IWSP provides an authentic experience and timely exposure for students to prepare them for the demands of today's workforce.

We have received students from SIT since 2019 who have worked with our IT team on several projects while providing essential daily support to other business functions. The students possessed strong abilities, demonstrating initiative and drive during their internship. We are pleased with their contributions and will certainly welcome suitable candidates to return for permanent employment at Go-Ahead Singapore.

MR ANDREW THOMPSON
Managing Director
Go-Ahead Singapore

In recognising the role that technology, robotics and automation play in delivering the demand for more efficient and effective logistics, SIT has proven to showcase their students with ready knowledge and in-demand skill sets into the industry.

These future-ready young talents will continue to embark on new challenges, boosting Singapore's digitalisation culture.

YCH is glad and will continue to provide SIT students with opportunities to gain relevant experiences in the work environment.

MS ANNIE LAM
Head
Group Human Resources
YCH Group

Click here to find out more.

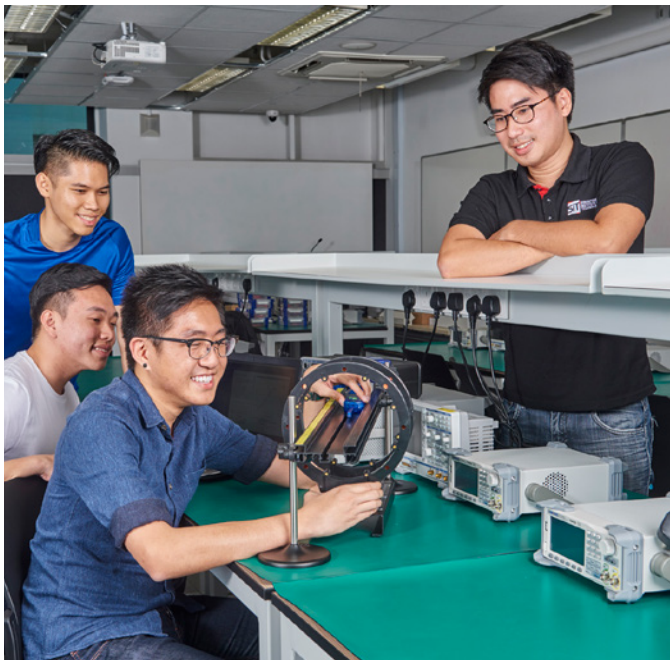
Computer Engineering

Campus Location

SIT@Dover

Career Opportunities

- Engineer (Design/Application/Network/ Telematics/Technology Integration)
- Software Engineer
- Engineer (Intelligent Transportation Systems)
- Project Manager/Officer/Engineer
- Technology Consultant



A first-of-its-kind direct honours degree offered in Singapore, the Computer Engineering programme was developed in partnership with various organisations in the land transport industry, including LTA, Singapore Technologies, National Computer Systems, and other companies in the automotive industry, such as Continental Automotive Singapore Pte Ltd.

You will be equipped with electrical engineering and computer science core skills, as well as intelligent transportation systems (ITS) knowledge, through rigorous academic training by highly qualified professors, while having work-study stints with established organisations. In line with Singapore's efforts to become a Smart Nation, you will train to become deep specialists in the relevant areas that are much needed in the industry to support this vision.

Curriculum Highlights

- Sensors and Control
- Embedded System Design
- Wireless Communication
- Transport Management
- Design Project
- Eight-month Integrated Work Study Programme (IWSP)

Click here to find out more.

Digital Supply Chain

Campus Location

SIT@NYP Building

Career Opportunities

You can look forward to careers in these areas:

- Supply Chain Solutions Engineer
- Supply Chain Analyst
- Data Scientist
- Software Engineer
- Business Process Analyst

The Digital Supply Chain (DSC) is a three-year direct honours, interdisciplinary supply chain degree programme that cuts across the domains of ICT, Engineering, and Supply Chain Management. Digital transformation, driven by Industry 4.0 and national digitalisation initiatives, has given rise to demand for DSC graduates. E-commerce and COVID-19 have disrupted traditional supply chains, accentuating the need for digital transformation.

Supply chain and logistics companies are increasingly adopting new technologies and developing new capabilities in artificial intelligence (AI), internet of things (IoT), and robotics as part of the transformation efforts. You will possess a competitive advantage given that supply chain and logistics business models and operations are fast evolving with emerging digital technologies[1]. You will acquire interdisciplinary knowledge in three focus areas:

- **Supply Chain Management** will equip you with knowledge and skill sets in designing digital supply chain solutions.
- **ICT** forms the bedrock of foundational computer science and software engineering is essential for mastery of digital skills.
- **System and Engineering** will equip you with knowledge and skill sets in conducting systems modelling, simulation, and managing the digital supply chain integration projects.

Upon graduation, you could take on technical roles in digital transformation, Industry 4.0, systems and solutions development, and systems and project management in the public or private sectors, or embark on further postgraduate study and join research institutions or academia.

Curriculum Highlights

- Supply Chain 4.0
- Supply Chain Solutions Design
- E-commerce Logistics
- Cyber-physical Digital Twins in Supply Chain
- Industrial Internet of Things and Data Analytics
- Introduction to Software Engineering
- Machine Learning
- Capstone Project
- Eight-month Integrated Work Study Programme (IWSP)

[1]Source: Singapore Logistics Association.

Click here to find out more.

Mechatronics Systems

Campus Locations

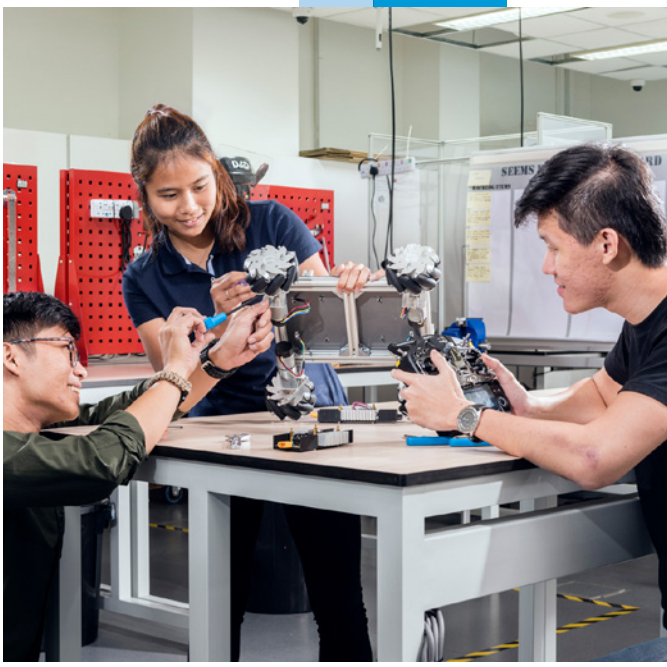
- SIT@Dover
- SIT@SP Building

Career Opportunities

- Embedded Systems Engineer
- Systems Engineer
- Project Engineer
- Mechatronics Engineer
- Software Engineer

The Mechatronics Systems programme with honours, jointly offered by SIT and DigiPen Institute of Technology Singapore, encompasses two complementary fields of study, i.e. Mechatronics and Systems Engineering. Mechatronics is a multidisciplinary branch of engineering that focuses on mechanical engineering, electronics, control and automation, and software technology, in order to design, develop, put into operation, and optimise systems.

Systems engineering is an interdisciplinary field of engineering and engineering management that focuses on how to design, integrate, and manage complex systems over their life cycles. You will acquire multidisciplinary engineering knowledge while grounded with systems-level engineering management know-how, giving you a competitive advantage and the flexibility to move across industries upon graduation.



Curriculum Highlights

- Foundation Studies in Physics, Mathematics, and Computer Science Skills
- Mechatronics and Software Engineering
- Systems Engineering and Project Management
- Exposure to Real-world Engineering Scenarios
- Hands-on Projects
- 12-month Integrated Work Study Programme (IWSP)
- Overseas Immersion Programme (OIP)

Click here to find out more.

Robotics Systems

Campus Location

SIT@Dover

Career Opportunities

- Robotics Engineer
- Systems Engineer
- Software Engineer
- AI Engineer
- Mechatronics Engineer
- System Integrator

Robotics Systems is a specialised engineering programme that focuses on the design and development of service or field robotic systems as well as the enterprise where these systems operate. The direct honours degree programme aims to fulfil the demand for robotics engineers, as automation moves out from the factory shop floor to service their human counterparts in various field applications.

The integration of multiple engineering disciplines, via systems engineering through its project-based pedagogy, is a unique feature of the programme. Software and artificial intelligence (AI) are used as integrative elements that connect multiple mechatronics elements together to form a complete system.

A significant amount of project-based learning that connects academic knowledge and skills with real-world applications has been incorporated into the programme. These projects will allow you to simultaneously experience systems and software engineering, project management, as well as systemic integration of knowledge from multiple disciplines. The 12-month Integrated Work Study Programme and the capstone project will serve as the culmination and integrative experience of the programme.

Curriculum Highlights

- Robotics Development
- Systems Engineering
- Software Engineering
- AI Robotics
- Artificial Intelligence and Machine Learning
- Project Management
- Mechatronics
- 12-month Integrated Work Study Programme (IWSP)

Transportation

The IWSP provides an opportunity for students to be exposed to a real industrial project with field activities and not just administrative tasks.

Students can learn to integrate theory into practice, which makes them real assets to the project team.

MR JULIEN JOUVE
Project Commissioning Manager
Alstom Transport (S) Pte Ltd

SIT students show a keen interest in understanding how the various aircraft systems operate.

They are enthusiastic in understanding the nuts and bolts of these systems and their inner workings.

I feel these are traits necessary to build a strong foundation and will put them in good stead for their future careers as Licensed Aircraft Engineers.

MR TEO TAIYONG
Maintenance Training Instructor
SIA Engineering Company

The IWSP provides a suitable platform for students to directly apply the attained academic knowledge into the industry.

This experiential exposure drives interaction, initiative, and innovation in the students, and these attributes will serve them well in their preparation to enter the workforce.

MR ALVIN ZHANG ZHICONG
Assistant Vice President
Permanent Way & Civil Structure
SBS Transit Limited, Singapore

Click here to find out more.

Aerospace Engineering

Campus Location

SIT@NP Building

Career Opportunities

You can look forward to careers in these areas:

- Unmanned Aerial Systems and Robotics
- Aircraft Engine Design and Servicing
- Production, Process and Test Engineer
- Engineering Design (Aerodynamic and Structural)
- Airworthiness and Quality Assurance
- Air Traffic Control

The Aerospace Engineering programme is jointly offered by SIT and University of Glasgow. This unique three-year direct honours degree will help you build a sound foundation in aerospace engineering through a curriculum that merges fundamental engineering knowledge with specialised topics in unmanned aerial systems (UAS).

Through this programme, you will be able to study and understand the behaviour of aerial vehicles, predict their performance, be familiar with their on-board avionics systems, and perform structural and aerodynamic analyses. Practical project work in the area of UAS will allow the application of the learnt material in the context of real engineering problems.

The programme has a strong industry focus, not only limited to UAS application, but also covers a wide range of other aerospace applications. You will develop relevant industry skills and experience during an eight-month Integrated Work Study Programme with our industry partners in the broad aerospace engineering sector.

The degree provides further opportunities for you to experience the aerospace sector in the UK during the three-week Overseas Immersion Programme. With valuable industrial experience, technical expertise and transferable skills – such as oral and written communication, teamwork, analytical abilities, and time management – you will have a sound background for employment in the industry.

Curriculum Highlights

- Aircraft Performance and Propulsion
- Aerodynamics and Computational Fluid Dynamics (CFD)
- Aircraft Structures and Composite Materials
- UAS Design and Build Projects
- Flight Systems and Avionics
- Eight-month Integrated Work Study Programme (IWSP)
- Overseas Immersion Programme (OIP)

Click here to find out more.

Aircraft Systems Engineering

Campus Location

SIT@Dover

Career Opportunities

- Licensed Aircraft Engineer
- Process, Quality, and Product Engineer
- Maintenance Planner
- Fleet Manager
- Technical or Cabin Service Engineer
- Repair Development Engineer

The Aircraft Systems Engineering programme with honours is developed in collaboration with SIA Engineering Company (SIAEC), which provides extensive Maintenance, Repair, and Overhaul (MRO) services to more than 80 international airlines worldwide.

Built on an interdisciplinary curriculum with a practical hands-on approach that cuts across engineering and science, you will be trained to be theoretically-grounded and practice-oriented for the Aerospace and MRO industries. The curriculum incorporates an intensive eight-month Integrated Work Study Programme training at SIAEC's workshops and hangars.

In addition to a degree awarded by SIT, you are able to obtain a Certificate of Recognition (CoR) by SIAEC upon meeting their requirements.This CoR is recognised by the Civil Aviation Authority of Singapore (CAAS), and certifies that the holder has completed a SAR-147 Approved Basic Course.

Should you decide to embark on a career as a Licensed Aircraft Engineer (LAE) with an MRO organisation in Singapore, you will acquire your Aircraft Maintenance License (AML) in a shorter time, as compared to your peers. If you perform well in your second year, you may be awarded the SIAEC Trainee Aircraft Engineer (TAE) Scholarship, which includes a 28-month training programme (TAE Programme) upon graduation, to qualify as an LAE. TAE scholars will be required to serve a bond with the SIAEC Group.

Curriculum Highlights

- Aircraft Materials and Flight Mechanics
- Human Factors and Aviation Legislation
- Fixed Wing Systems
- Aircraft Electrical and Cabin Systems
- Capstone Project
- Eight-month Integrated Work Study Programme (IWSP) at SIAEC

Click here to find out more.

Sustainable Infrastructure Engineering (Land)

Campus Locations

- SIT@Dover
- SIT@SP Building

Career Opportunities

You can look forward to careers in various land transport organisations, such as:

- LTA
- SMRT
- SBS Transit
- Railway Original Equipment Manufacturers (OEMs) and Suppliers
- Singapore Technologies

The Sustainable Infrastructure Engineering (SIE) (Land) programme is multidisciplinary, comprising various fundamental engineering disciplines, such as railway, mechanical, electrical, and electronic engineering. This direct honours degree programme will enable participants to achieve excellence in the ever-changing world of the land transport industry.

You will undergo rigorous academic training provided by highly qualified professors, while immersing yourself in the land transport industry through work-study stints with established organisations, such as LTA, SMRT, SBS Transit, Singapore Technologies, Railway OEMs, and suppliers, etc.

If you perform well in the programme, you may pursue the MEngTech Sustainable Infrastructure Engineering (Land). With the MEngTech qualification, you will be eligible for future registration as a Professional Engineer (PE) (Singapore) or Chartered Engineer (UK and Commonwealth countries). This unique curriculum design also allows you to attain the professional NDT Level II or NDT Level III (Partial) certification.

Curriculum Highlights

- Railway Signalling and Communications
- Rolling Stock and Permanent Way Systems
- Total Preventive Maintenance
- Non-Destructive Testing (NDT)
- Lean Management in Engineering
- Capstone Project
- Eight-month Integrated Work Study Programme (IWSP)

MEET JEAN

Ng Jean Yin
Graduate (2021)
Mechanical Design and Manufacturing Engineering

One fictional character I wish to be
Olaf from "Frozen". He is very supportive and guides his friends through different challenges. It's a good trait everyone should learn from!

Pursuing Mechanical Design and Manufacturing Engineering
I enjoy doing component designs, and I am excited to be part of a sector that is evolving into a smart industry.

My IWSP experience
My IWSP was with SBS Transit Ltd. It was an insightful experience in maintenance workflow.

One myth about Mechanical Design and Manufacturing Engineering
Most people may assume that the course is mostly about robotics and mechanical components. But it covers so much more including building real-time systems using cloud computing and machine learning, etc.

Go-to beverage
Teh O Peng, the best!

Memorable moment
Being the class representative for my cohort. It is rewarding when I get to be part of giving students a better learning experience.

Click here to watch my video.

START YOUR NEXT STEP HERE

We adopt an aptitude-based approach in assessing applicants for admission. This means we look beyond your grades and see you as an individual with diverse qualities, talents, and life experiences. We are interested in who you are, and how you can contribute to the community and industry.

We look out for...

Academic Proficiency and Prior Learning

Relevant Work Experience

Related Exposure and Achievements

Passion and Aptitude

Performance During Interviews

Submit and check your application status via **Admission.SingaporeTech.edu.sg**.

For application dates and deadlines, visit **SingaporeTech.edu.sg**.

ADMISSIONS TIMELINE

MID-JAN – MID-MAR

- Application Opens
- SIT Scholarship Application Opens

FEB – MAY

- Shortlisted applicants will be assessed for Admissions and a Scholarship concurrently. For specific degree programmes, you may have to submit portfolios or essays, and/or be assessed through written or technical tests.

APR – MAY

- Check your Admissions Application Outcome. Students awarded Scholarships will receive their offers concurrently.

BY JOINT ACCEPTANCE DEADLINE

- If you are successful, accept our offer!

JUNE

FINANCIAL ASSISTANCE APPLICATION OPENS

- When you have accepted our offer, you will receive a pre-matriculation package.

- Admissions
- SIT Scholarship

Admission Requirements

GCE 'A' Level/IB Diploma/NUS High School Diploma

DEGREE PROGRAMME	GCE 'A' LEVEL	IB DIPLOMA
Aerospace Engineering	A pass in H1/H2 Mathematics A pass in H1/H2 Physics	A pass in SL/HL Mathematics A pass in SL/HL Physics
Mechanical Design and Manufacturing Engineering		
Mechanical Engineering		
Digital Supply Chain	A pass in two of the following H1/H2 subjects (Mathematics, Physics, Chemistry, or Computing)	A pass in two of the following SL/HL subjects (Mathematics, Physics, Chemistry, or Computer Science)
Electronics and Data Engineering#	A pass in H2 Mathematics A pass in one H2 Science subject (Biology, Chemistry, or Physics)	A pass in HL Mathematics A pass in one HL Science subject (Biology, Chemistry, or Physics)
Mechatronics Systems	A pass in one of the following H2 subjects (Mathematics, Physics, or Computing); or a pass in H1 Mathematics	A pass in one of the following HL subjects (Mathematics, Physics, or Computing); or a pass in SL Mathematics
Robotics Systems	A pass in two of the following H1/H2 subjects (Mathematics, Physics, Chemistry, or Computing)	A pass in two of the following SL/HL subjects (Mathematics, Physics, Chemistry, or Computer Science)

- GCE 'A' Level applicants should have obtained passes in at least two H2 Level subjects and offered General Paper (GP) or Knowledge & Inquiry (KI) in the same sitting.
- International Baccalaureate (IB) applicants should have obtained a minimum grade five for at least two HL and one SL subjects, and the IB Diploma.
- NUS High applicants should have obtained the NUS High School Diploma.

Applicants with the above qualifications are also required to fulfil the Mother Tongue Language (MTL) requirements stipulated by the Ministry of Education.

Note:

#GCE 'A' Level/IB applicants are required to fulfil additional requirements as stipulated by the German Higher Education System. Refer to details on the website. For further enquiries, please contact TUM Asia Admissions Office at admission@tum-asia.edu.sg.

For up-to-date information, please refer to **SingaporeTech.edu.sg**.

Admission Requirements

GCE 'A' Level/IB Diploma/NUS High School Diploma

DEGREE PROGRAMME	GCE 'A' LEVEL	IB DIPLOMA
Aircraft Systems Engineering	Meet minimum admission requirements as stated below.	
Civil Engineering[1]		
Computer Engineering		
Electrical Power Engineering[2]		
Naval Architecture and Marine Engineering		
Sustainable Infrastructure Engineering (Building Services)[3]		
Sustainable Infrastructure Engineering (Land)[4]		

- GCE 'A' Level applicants should have obtained passes in at least two H2 Level subjects and offered General Paper (GP) or Knowledge & Inquiry (KI) in the same sitting.
- International Baccalaureate (IB) applicants should have obtained a minimum grade five for at least two HL and one SL subjects, and the IB Diploma.
- NUS High applicants should have obtained the NUS High School Diploma.

Applicants with the above qualifications are also required to fulfil the Mother Tongue Language (MTL) requirements stipulated by the Ministry of Education.

Note:

[1]Graduates of the BEng Civil Engineering may choose to continue taking the MSc Civil Engineering.

[2]Graduates of the BEng Electrical Power Engineering may choose to continue taking the MSc Electrical and Electronic Engineering.

[3]Graduates of the BEng Sustainable Infrastructure Engineering (Building Services) may choose to continue taking the MEngTech Sustainable Infrastructure Engineering (Building Services).

[4]Graduates of the BEng Sustainable Infrastructure Engineering (Land) may choose to continue taking the MEngTech Sustainable Infrastructure Engineering (Land).

For up-to-date information, please refer to **SingaporeTech.edu.sg**.

Admission Requirements

Diploma from any local Polytechnic

DEGREE PROGRAMME	DIPLOMA FROM ANY LOCAL POLYTECHNIC
Aircraft Systems Engineering	Completed a relevant^ local polytechnic diploma.
Computer Engineering	Open to all polytechnic diploma holders. Applicants with a relevant engineering background (i.e. Diploma in Electrical and Electronics Engineering, Computer Engineering and Information Technology), may apply for exemption from modules of up to a maximum of two trimesters. For applicants with non-relevant diplomas, exemption from modules will be considered on a case-by-case basis.
Digital Supply Chain	Open to all polytechnic diploma holders. Applicants with a strong proficiency and interest in Computing, Supply Chain, and Logistics are encouraged to apply. Subject to approval, diploma applicants may be granted module exemptions, based on the modules taken during their diploma.
Electronics and Data Engineering	Open to all polytechnic diploma holders. Applicants with a strong interest and proficiency in Mathematics and Physics are encouraged to apply.
Sustainable Infrastructure Engineering (Building Services)[1]	Open to all polytechnic diploma holders. Applicants with a relevant engineering background (i.e. Diploma in Aerospace, Mechanical, Mechatronics, Civil, Environmental and Electrical Engineering), may apply for exemption from modules of up to a maximum of two trimesters. For applicants with a non-relevant engineering background (i.e. Diploma from other engineering disciplines), exemption from modules will be considered on a case-by-case basis.
Sustainable Infrastructure Engineering (Land)[2]	Open to all polytechnic diploma holders. Applicants with a relevant engineering background (i.e. Diploma in Aerospace, Mechanical, Mechatronics or Electrical Engineering), may apply for exemption from modules of up to a maximum of two trimesters. For applicants with a non-relevant engineering background (i.e. Diploma from other engineering disciplines), exemption from modules will be considered on a case-by-case basis.

Note:

^Please refer to **SingaporeTech.edu.sg** for the detailed list of relevant diplomas.

[1]Graduates of the BEng Sustainable Infrastructure Engineering (Building Services) may choose to continue taking the MEngTech Sustainable Infrastructure Engineering (Building Services).

[2]Graduates of the BEng Sustainable Infrastructure Engineering (Land) may choose to continue taking the MEngTech Sustainable Infrastructure Engineering (Land).

For up-to-date information, please refer to **SingaporeTech.edu.sg**.

Admission Requirements

Diploma from any local Polytechnic

DEGREE PROGRAMME	DIPLOMA FROM ANY LOCAL POLYTECHNIC
Aerospace Engineering	Open to all polytechnic diploma holders. Subject to approval, diploma applicants may be granted module exemptions, based on the modules taken during their diploma.
Civil Engineering[1]	
Electrical Power Engineering[2]	
Mechanical Design and Manufacturing Engineering	
Mechanical Engineering	
Mechatronics Systems	
Naval Architecture and Marine Engineering	
Robotics Systems	

Note:

[1]Graduates of the BEng Civil Engineering may choose to continue taking the MSc Civil Engineering.

[2]Graduates of the BEng Electrical Power Engineering may choose to continue taking the MSc Electrical and Electronic Engineering.

For up-to-date information, please refer to **SingaporeTech.edu.sg**.

Admission Requirements

Diploma from other institutions

DEGREE PROGRAMME	DIPLOMA FROM OTHER INSTITUTIONS
Civil Engineering[1]	BCA diploma holders in Construction Engineering may apply.
Computer Engineering	BCA diploma holders in the following fields of study may apply: • Construction Engineering[2] • Construction Information Technology • Electrical Engineering and Clean Energy • Mechanical Engineering (Green Building Technology)[2]
Sustainable Infrastructure Engineering (Building Services)[3]	BCA diploma holders in the following fields of study may apply: • Architecture (Technology) • Construction Engineering • Construction Information Technology • Electrical Engineering and Clean Energy • Facilities Management • Mechanical Engineering (Green Building Technology)
Sustainable Infrastructure Engineering (Land)[4]	BCA diploma holders in the following fields of study may apply: • Electrical Engineering and Clean Energy • Mechanical Engineering (Green Building Technology)

Note:

[1]Graduates of the BEng Civil Engineering may choose to continue taking the MSc Civil Engineering.

[2]This diploma will not be accepted as a relevant diploma for the Computer Engineering programme with effect from AY2023 admissions.

[3]Graduates of the BEng Sustainable Infrastructure Engineering (Building Services) may choose to continue taking the MEngTech Sustainable Infrastructure Engineering (Building Services).

[4]Graduates of the BEng Sustainable Infrastructure Engineering (Land) may choose to continue taking the MEngTech Sustainable Infrastructure Engineering (Land).

Applicants with other qualifications should complete at least 12 years of formal education deemed as acceptable, equivalent qualifications to be considered for admission.

For up-to-date information, please refer to **SingaporeTech.edu.sg**.

Admission Requirements

Diploma from other institutions

DEGREE PROGRAMME	DIPLOMA FROM OTHER INSTITUTIONS
Aircraft Systems Engineering	Each application will be considered on a case-by-case basis.
Aerospace Engineering	
Digital Supply Chain	
Electrical Power Engineering[1]	
Electronics and Data Engineering	
Mechanical Design and Manufacturing Engineering	
Mechanical Engineering	
Mechatronics Systems	
Naval Architecture and Marine Engineering	
Robotics Systems	

Note:

[1]Graduates of the BEng Electrical Power Engineering may choose to continue taking the MSc Electrical and Electronic Engineering.

Applicants with other qualifications should complete at least 12 years of formal education deemed as acceptable, equivalent qualifications to be considered for admission.

For up-to-date information, please refer to **SingaporeTech.edu.sg**.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SO, WHO'S READY FOR AN ADVENTURE?

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