

SP ENGINEERING



Aeronautical Engineering
Aerospace Electronics
Common Engineering Programme
Computer Engineering
Electrical & Electronic Engineering
Engineering with Business
Mechanical Engineering
Mechatronics & Robotics

SP Singapore Polytechnic



FIRST POLY
FUTURE INSPIRED
EST 1954

AEROSPACE ELECTRONICS

DASE – S90

Designing the Marvels of Aerospace



At DASE, you'll gain skills such as flight management, instrumentation, navigation and more, placing you at the forefront of advancements in the aerospace industry. With a comprehensive curriculum approved by the Civil Aviation Authority of Singapore (CAAS), you'll gain future-ready skills to align with industry advancements.

Dive into the exciting world of **Aerospace Engineering (Avionics)** and **ICT in Emerging Technologies** through hands-on experiences and industry partnerships. Internship opportunities await at prestigious companies such as:

- Airbus
- Rolls-Royce
- SIA Engineering Company

Pursue your aviation dreams here! Obtain a **Private Pilot License (PPL)** at the Singapore Youth Flying Club (SYFC) and dive into the complexities of Commercial Pilot Theory to gain a competitive edge. If you're captivated by drones, add a **CAAS Unmanned Aircraft Pilot License (UAPL)** to your repertoire.

Our 4,660-square-metre Aerohub is a training playground for aviation enthusiasts. This state-of-the-art facility boasts four aircrafts and **two full-motion simulators**, providing a hyper-realistic experience that is as close as it gets to the real deal.

As the official training partner for ST Engineering Aerospace, we equip you with the most in-demand skills in the aerospace industry, providing you with a multitude of exciting career prospects.

Come aboard the world of aerospace with the Diploma in Aerospace Electronics (DASE) and discover the cutting-edge technology powering modern planes such as the Airbus A350, Boeing 787 and fighter jets.

WHAT YOU CAN EXPECT

- Gain expertise in specialised areas with a Certificate in Aviation Management or choose from electives focused on **commercial pilot theory, unmanned aerial vehicle (UAV) flying**, and drone technologies to enhance your career prospects.
- Gain valuable industry experience through the 22-week overseas or local internship at reputable aerospace companies such as Airbus, Rolls-Royce, SIAEC, ST Engineering Aerospace, Thales, CAAS and Changi Airport Group.
- Join the **SP-NUS Accelerated Pathway Programme** and **SP-SUTD Accelerated Pathway Programme** to get a head start in university life.

SCHOLARSHIPS

- A*STAR Science Award
- DSO Diploma Scholarship
- DSTA Polytechnic Engineering Scholarship
- DSTA Polytechnic Digital Scholarship
- Home Team Diploma Sponsorship
- SAF Polytechnic Sponsorship (RSAF)
- SP Engineering Scholarship

FURTHER STUDIES

You can **gain an advanced standing of up to two years** of exemption in Aerospace Engineering, Electrical & Electronic Engineering or Computer Engineering degree courses in local and overseas universities such as NUS, NTU, SUTD, SIT, SUSS, Embry-Riddle Aeronautical University (USA), Imperial College (UK) and University of New South Wales (Australia).

ENTRY REQUIREMENTS

Range of Net 2023 JAE ELR2B2: 5 – 14

Aggregate Type: ELR2B2-C

SUBJECT	GRADE
English Language	1 – 7
Mathematics (Elementary/Additional)	1 – 6
Any one of the following subjects:	1 – 6
<ul style="list-style-type: none"> • Biology • Biotechnology • Chemistry • Computing/Computer Studies • Design & Technology • Electronics/Fundamentals of Electronics • Physics • Science (Chemistry, Biology) • Science (Physics, Biology) • Science (Physics, Chemistry) 	

Applicants should not be suffering from severe vision deficiency (including colour vision), acute hearing impairment or uncontrolled epilepsy. Interested applicants with any of these conditions are advised to contact Singapore Polytechnic for more information.

CAREER OPTIONS

- Air Force Engineer (Maintenance)
- Assistant Electrical Engineer
- Assistant Electronics Engineer
- Assistant Engineering Service Engineer
- Assistant Aerospace Sales and Marketing Engineer
- Assistant Technical Service Engineer
- Flight Operations Officer
- Licensed Aircraft Maintenance Engineer



At DSTA, my primary responsibility involves enhancing the training experience for Air Force Engineers through the design and development of a Mixed Reality Application using the Microsoft HoloLens 2. Having acquired C++ programming skills during my first year at SP, I found it immensely valuable in streamlining the development process for the Mixed Reality Application.

Hansen Wee

DSTA Polytechnic Engineering Scholar
Internship at Defence Science and Technology Agency (DSTA)

Diploma in Aerospace Electronics

Aligned to CAAS Singapore Airworthiness Requirements Part 66 & Aerospace Skills Framework
Aerospace Engineering (Avionics) + ICT in Emerging Technologies (Aerospace)

Aerospace Electronics (Avionics)

- Aircraft Communication & Navigation
- Aircraft Electrical System
- Aircraft Maintenance Practices
- Aircraft Instrument Systems
- Aircraft Servo & Electronics
- Human Factors & Quality Systems

ICT in Emerging Technologies (Aerospace)

- Artificial Intelligence
- Automation
- Cybersecurity
- Data Analytics
- Internet of Things
- Robotics



WHAT YOU'LL STUDY

The Diploma in Aerospace Electronics is a three-year full-time programme.



FIRST YEAR

- Basic Mathematics
- Common Core Modules
- Computer-Aided Design & Drafting
- Digital Electronics 1
- Digital Electronics 2
- Engineering Mathematics I
- Introduction to Engineering & Design
- Introduction to Engineering Programming
- Network Fundamentals
- Principles of Electrical and Electronic Engineering I
- Principles of Electrical & Electronic Engineering II

SECOND YEAR

- Aircraft Electrical Systems
- Aircraft Maintenance Practices
- Aircraft Servomechanisms and Electronics
- Circuit Theory and Analysis
- Common Core Modules
- Elective 1
- Elective 2
- Engineering Mathematics II
- Human Factors & Quality Systems
- Internet of Things & Cybersecurity for Aerospace
- Robotics & Automation in Aerospace
- Statistics & Analytics for Engineers

THIRD YEAR

- Aircraft Communication & Navigation Systems
- Aircraft Instrument Systems
- Artificial Intelligence & Data Analytics in Aerospace
- Aeronautical Engineering Science
- Elective 3
- Elective 4 (Option)
- Elective 5 (Option)
- 22-Week Internship Programme/ Internship Equivalent

ELECTIVES

The SP elective framework offers students options to pursue their passion and / or meet different career needs, and is an integral part of the holistic education we seek to provide to our students. The learning experiences of this elective framework help students in their development as self-directed, versatile, life-long learners, which are essential in today's volatile and changing societal as well as occupational landscape.

Students who are interested to explore additional new skills and abilities will have the opportunity to take up to five electives. Certificates and minors will be awarded when students complete a suite of related elective modules. Please visit <https://www.sp.edu.sg/sp/education/elective-modules> for details of this elective scheme and the full list of electives.

COMMON CORE CURRICULUM

The Common Core Curriculum is designed to prepare students for a disruptive world that is ever-changing. Comprising critical human and emerging digital skills, the common core modules offer students an integral and inter-disciplinary learning experience to address the wicked problems of the world (framed by the United Nations' Sustainable Development Goals).

Through the Common Core modules, students will think critically about real-world problems, empathise with local and global communities and be challenged to effect change. For more information on the Common Core Curriculum, please visit <https://www.sp.edu.sg/sp/education/common-core-curriculum>.

All full-time diploma students are required to take a compulsory Education and Career Guidance module in SP. Students will take Education and Career Guidance – Personal Development (30 hours) in their first year.

All students are required to take one compulsory Wellness for Life (WFL) module for one semester in their first year in SP. In their second and third year, students may sign up for WFL module as an optional module.



COMPUTER ENGINEERING

DCPE – S53

Creating Intelligent Systems for Modern Cities

Enter the thrilling world of computers, where intelligent systems shape our future. In a rapidly changing world, the Diploma in Computer Engineering (DCPE) offers a comprehensive and flexible curriculum so that you can keep your career and study options wide open.

As we propel towards a future where autonomous vehicles, drones, and intelligent city management systems play a vital role, it's crucial to stay ahead in areas like Artificial Intelligence of Things (AIoT), data analytics, 5G, networking, and cybersecurity. DCPE allows you to harness these cutting-edge capabilities, empowering you to shape the future and create innovative solutions for a "Smart Nation" like Singapore.

SCHOLARSHIPS

- Centre for Strategic Infocomm Technologies (CSIT) Diploma Scholarship
- DSO National Laboratories (DSO) Diploma Scholarship
- Defence Science and Technology Agency (DSTA) Digital/Engineering Scholarship
- Singtel SHINE Cadet Programme
- Singapore Polytechnic Engineering Scholarship



WHAT YOU CAN EXPECT

- Immerse in a **comprehensive curriculum** and master future-forward skills in Embedded Systems, Software, 5G Technology, Artificial Intelligence, Internet of Things, Cloud Computing, Networking and Cyber Security.
- Pursue your passion through electives that can lead to a **certificate or minor**.
- Gain exposure through a 6-week Overseas Immersion Programme to Japan.
- Join the **SP-NUS Accelerated Pathway Programme** or **SP-SUTD Accelerated Pathway Programme** to get a head start in university life.

FURTHER STUDIES

There are more than 14 degree programmes from local universities in Computer Science/Engineering, Information Systems, Data Science, Artificial Intelligence, and Electrical & Electronic Engineering that you can apply for. You will also be eligible for advanced placements in computer-related degree programmes of universities in Australia, New Zealand and United Kingdom.

CAREER OPTIONS

- Assistant Computer Engineer
- Associate Security Engineer
- Cloud Engineer
- Embedded System Engineer
- IT Support Engineer
- Network Engineer/Administrator
- Software/Mobile Applications Developer

ENTRY REQUIREMENTS

Range of Net 2023 JAE ELR2B2: 3 – 12

Aggregate Type: ELR2B2-C

SUBJECT	GRADE
English Language	1 – 7
Mathematics (Elementary/Additional)	1 – 6
Any one of the following subjects:	1 – 6
• Biology	
• Biotechnology	
• Chemistry	
• Computing/Computer Studies	
• Design & Technology	
• Electronics/Fundamentals of Electronics	
• Physics	
• Science (Chemistry, Biology)	
• Science (Physics, Biology)	
• Science (Physics, Chemistry)	

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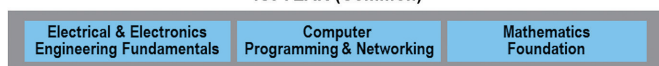
I completed my internship locally at Centre for Strategic Infocomm Technologies (CSIT). As an intern in the Software Engineering department, I worked on a fullstack development project and explored various technology stacks. It was a fulfilling and memorable experience as I could learn new, modern technology stacks that enabled me to build on the foundations of my existing knowledge in software development. I also had the opportunity to interact with my mentors and staff at CSIT, who were knowledgeable and helpful, giving me an insight into the working environment at CSIT. This experience has helped to shape my current aspirations and solidified my interests in software engineering.

Tan Wee Joe

DCPE Gold Medallist
The Institution of Engineers Gold Medal Award Recipient
Internship at Centre for Strategic Infocomm Technologies

Diploma in Computer Engineering

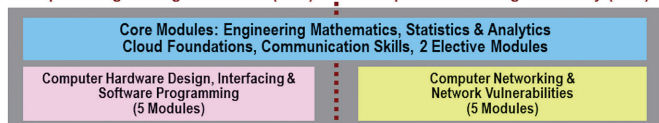
1st YEAR (Common)



2nd YEAR

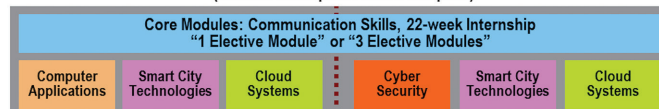
(choose one path: CES or CNS)

Computer Engineering & Software (CES) Computer Networking & Security (CNS)



3rd YEAR

(choose one option under the path)





WHAT YOU'LL STUDY

The Diploma in Computer Engineering is a three-year full-time programme.



FIRST YEAR

- Basic Mathematics
- Common Core Modules
- Computer-Aided Design & Drafting
- Digital Electronics 1
- Digital Electronics 2
- Engineering Mathematics I
- Education and Career Guidance 1
- Introduction to Engineering & Design
- Introduction to Engineering Programming
- Network Fundamentals
- Principles of Electrical and Electronic Engineering I
- Principles of Electrical & Electronic Engineering II

SECOND YEAR

- Cloud Foundations
- Common Core Modules
- Elective 1
- Elective 2
- Engineering Mathematics II
- Statistics & Analytics for Engineers

From Year 2, students are allowed to specialise in the area of their particular interest. They can choose from the following paths:

+ Computer Engineering & Software (CES) Path

- Computer Architecture
- DevOps for AIoT
- Full Stack Development (**NEW!**)
- Microcontroller Applications
- Mobile Applications Development

+ Computer Networking & Security (CNS) Path

- Computer Networking
- LAN Switching and Wireless
- Network Hacking
- Server Management
- Wide Area Networks

THIRD YEAR

- Common Core Modules
- Elective 3
- Year-3 Option Modules 1 to 4 (CES or CNS)
- 22-Week Internship Programme/Internship Equivalent

From Year 3, students can choose one option from the following, based on their Year 2 technical path:

+ Computer Applications (For CES Path Only)

- Embedded Computer Systems
- Machine Learning & Artificial Intelligence
- Object Oriented Programming & Data Structures
- 5G & AIoT Applications

+ Smart City Technologies (For CES and CNS Paths)

- Data Analytics
- Internet of Things Security
- Smart City Systems Design
- 5G & AIoT Applications

+ Cloud Systems (For CES and CNS Paths)

- Cloud Architecting
- Cloud Native Application Development (**NEW!**)
- DevOps for Networking
- Operating Systems

+ Cyber Security (For CNS Path Only)

- AI for Cybersecurity (**NEW!**)
- Cyber Security Operations
- Firewall Technologies
- Network Analysis & Forensics

ELECTIVES

The SP elective framework offers students options to pursue their passion and / or meet different career needs, and is an integral part of the holistic education we seek to provide to our students. The learning experiences of this elective framework help students in their development as self-directed, versatile, life-long learners, which are essential in today's volatile and changing societal as well as occupational landscape.

Students who are interested to explore additional new skills and abilities will have the opportunity to take up to five electives. Certificates and minors will be awarded when students complete a suite of related elective modules. Please visit <https://www.sp.edu.sg/sp/education/elective-modules> for details of this elective scheme and the full list of electives.

COMMON CORE CURRICULUM

The Common Core Curriculum is designed to prepare students for a disruptive world that is ever-changing. Comprising critical human and emerging digital skills, the common core modules offer students an integral and inter-disciplinary learning experience to address the wicked problems of the world (framed by the United Nations' Sustainable Development Goals).

Through the Common Core modules, students will think critically about real-world problems, empathise with local and global communities and be challenged to effect change. For more information on the Common Core Curriculum, please visit <https://www.sp.edu.sg/sp/education/common-core-curriculum>.

All full-time diploma students are required to take a compulsory Education and Career Guidance module in SP. Students will take Education and Career Guidance – Personal Development (30 hours) in their first year.

All students are required to take one compulsory Wellness for Life (WFL) module for one semester in their first year in SP. In their second and third year, students may sign up for WFL module as an optional module.

ELECTRICAL & ELECTRONIC ENGINEERING

DEEE – S99

The Power to Fuel the Future

Dive into a diverse range of engineering subjects with the Diploma in Electrical & Electronic Engineering (DEEE) and develop versatile, industry-ready skillsets. With a prestigious history of over 65 years and over 20,000 successful graduates, we have a track record of producing successful engineers that are highly sought-after in the field.

WHAT YOU CAN EXPECT

- Choose one of seven specialisations:
 - Biomedical
 - Communication
 - Microelectronics
 - Power
 - Rapid Transit Technology
 - Robotics & Control
 - Sustainable Energy **(NEW!)**
- Join the **SP-NUS** Accelerated Pathway Programme or **SP-SUTD** Accelerated Pathway Programme to get a head start in university life.
- Pursue your passion through electives that can lead to a **Minor** or **Certificate**, such as Minor in **5G** & Artificial Intelligence of Things (**AIoT**), and Certificate in **IoT**.
- Experience an augmented learning environment in rail engineering with our latest integrated Rail System Simulator, a first among the polytechnics.
- Gain exposure through **Overseas Immersion Programmes** in various countries, such as Japan.
- Immerse in a **22-week internship** with opportunities at reputable companies such as SP Group, SMRT, A*STAR, PSA, Siemens, ST Electronics and CleanTech Solar.



SCHOLARSHIPS

- A*STAR Science Award (Polytechnic)
- DSO Diploma Scholarship
- DSTA Polytechnic Digital/Engineering Scholarship
- Micron Scholarship
- PSA Scholarship
- PSC Scholarship
- SG-Rail Scholarship
- Singtel SHINE Cadet Programme
- SP Engineering Scholarship

CAREER OPTIONS

- Assistant Electrical/Electronics Engineer
- Assistant Quality/Process/Project/Test Engineer
- Assistant Facilities Management Engineer
- Assistant Field Service Engineer
- Assistant Instrumentation Engineer
- Assistant Maintenance Engineer
- Biomedical Equipment Service Engineer
- Solar (PV) Technologist
- Technical Officer

FURTHER STUDIES

You can gain **direct entry into the second year or equivalent** to pursue an EEE-related degree in local universities, such as NUS, NTU, SUTD, and SIT. You can gain an **advanced standing of up to two years** in overseas universities, such as University of New South Wales (Australia), Imperial College London (UK), and University of Auckland (New Zealand).

ENTRY REQUIREMENTS

Range of Net 2023 JAE ELR2B2: 5 – 17

Aggregate Type: ELR2B2-C

SUBJECT	GRADE
English Language	1 – 7
Mathematics (Elementary/Additional)	1 – 6
Any one of the following subjects:	1 – 6
<ul style="list-style-type: none"> • Biology • Biotechnology • Chemistry • Computing/Computer Studies • Design & Technology • Electronics/Fundamentals of Electronics • Physics • Science (Chemistry, Biology) • Science (Physics, Biology) • Science (Physics, Chemistry) 	



As a DSO Diploma Scholar, I interned for four and a half months at DSO National Laboratories. I was assigned to work on wireless communication projects although I had no background in that field. With the guidance of my supervisor, I was able to learn the necessary concepts quickly and successfully delivered two new capabilities to my DSO team. I enjoyed the research work there because it was full of challenges and surprises, and every day was different. I also enjoyed the friendly and collaborative working environment at DSO, where each individual's contributions are valued. This internship was an eye opener to the world of defence research, and the experience has affirmed my desire to pursue a career in defence technology.

Lee Jing Yang Gabriel

DEEE Gold Medallist
 Lee Kuan Yew Award Recipient
 SP Excellence Award Recipient
 Internship at DSO National Laboratories

Applicants who have colour vision deficiency, and wish to pursue a career in electrical power engineering or as a Licensed Electrical Worker (LEW), may encounter difficulties meeting the course requirements and expectations. This condition is required by the Energy Market Authority (EMA) of Singapore. In addition, applicants should not be suffering from severe vision deficiency, acute hearing impairment or uncontrolled epilepsy. Interested applicants with any of these conditions are advised to contact Singapore Polytechnic for more information.

Diploma in Electrical & Electronic Engineering	
1 ST YEAR	Common First-Year Modules (Domain, Math, and Common Core)
2 ND YEAR	DEEE Core Modules + Electives
3 RD YEAR	DEEE 3rd Year Specialisations (Choose 1 specialisation)
	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Biomedical</p> </div> <div style="text-align: center;"> <p>Communication</p> </div> <div style="text-align: center;"> <p>Microelectronics</p> </div> <div style="text-align: center;"> <p>Power</p> </div> <div style="text-align: center;"> <p>Rapid Transit Technology</p> </div> <div style="text-align: center;"> <p>Robotics & Control</p> </div> <div style="text-align: center;"> <p>Sustainable Energy (NEW!)</p> </div> </div> <p style="text-align: center;">+</p> <p style="text-align: center;">22-week Internship & Electives</p>



WHAT YOU'LL STUDY

The Diploma in Electrical & Electronic Engineering is a three-year full-time programme.



FIRST YEAR

- Basic Mathematics
- Common Core Modules
- Computer Aided-Design & Drafting
- Digital Electronics 1
- Digital Electronics 2
- Engineering Mathematics I
- Introduction to Engineering & Design
- Introduction to Engineering Programming
- Network Fundamentals
- Principles of Electrical and Electronic Engineering I
- Principles of Electrical and Electronic Engineering II

SECOND YEAR

- Common Core Modules
- Circuit Theory & Analysis
- Digital System Design
- Elective 1
- Elective 2
- Electrical Installation Design
- Engineering Mathematics II
- Microcontroller Applications
- Physics for Engineers
- PLC Applications
- Statistics and Analytics for Engineers
- Wafer Fabrication Fundamentals

THIRD YEAR

- Common Core Modules
- Elective 3
- Elective 4 (Option)
- Elective 5 (Option)
- 22-Week Internship Programme/ Internship Equivalent

From Year 3, students are allowed to specialise in the area of their particular interest. They can choose from the following specialisations:

+ Biomedical

- Anatomy & Physiology
- Biomedical Equipment & Practices
- Biomedical Instrumentation Design & Applications
- Robotics Technology

+ Rapid Transit Technology

- Principles of Communication
- Rapid Transit Signalling System
- Rapid Transit System
- Smart Sensors & Actuators

+ Power

- Power Electronics & Drives
- Power System Analysis
- Power Transmission & Distribution
- Smart Grid & Energy Storage

+ Microelectronics

- Advanced Wafer Fabrication Technology
- IC Design
- IC Testing
- Quality & Reliability

+ Communication

- Digital Signal Processing
- Principles of Communication
- Satellite & Optical Communication
- Wireless Technology Applications

+ Robotics & Control

- Digital Manufacturing Technology
- Robotics Technology
- Smart Sensors & Actuators
- Systems & Control

+ Sustainable Energy (NEW!)

- Electric Vehicle Technology
- Hydrogen, Fuel Cell Technology & Energy Storage
- Photovoltaic System Design
- Smart Grid & Building Energy Management

ELECTIVES

The SP elective framework offers students options to pursue their passion and / or meet different career needs, and is an integral part of the holistic education we seek to provide to our students. The learning experiences of this elective framework help students in their development as self-directed, versatile, life-long learners, which are essential in today's volatile and changing societal as well as occupational landscape.

Students who are interested to explore additional new skills and abilities will have the opportunity to take up to five electives. Certificates and minors will be awarded when students complete a suite of related elective modules. Please visit <https://www.sp.edu.sg/sp/education/elective-modules> for details of this elective scheme and the full list of electives.

COMMON CORE CURRICULUM

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Through the Common Core modules, students will think critically about real-world problems, empathise with local and global communities and be challenged to effect change. For more information on the Common Core Curriculum, please visit <https://www.sp.edu.sg/sp/education/common-core-curriculum>.

All full-time diploma students are required to take a compulsory Education and Career Guidance module in SP. Students will take Education and Career Guidance – Personal Development (30 hours) in their first year.

All students are required to take one compulsory Wellness for Life (WFL) module for one semester in their first year in SP. In their second and third year, students may sign up for WFL module as an optional module.



ENGINEERING WITH BUSINESS

DEB – S42

Synergising Engineering Innovations with Business Solutions

Are you looking to fuel your passion for engineering and technology while honing your business acumen? The Diploma in Engineering with Business (DEB) is your ticket to the best of both worlds, by combining engineering principles with essential business knowledge.

WHAT YOU CAN EXPECT

- Gain multi-faceted perspectives with **modules from three SP schools:** Electrical & Electronic Engineering, Mechanical and Aeronautical Engineering, and Business.
- Immerse in diverse cultures through enriching and exciting **overseas technopreneurship immersion programmes** in Japan or China.
- Gain exposure through an exciting two-week overseas exchange programme Learning Express, where you will use your skills and knowledge to improve lives in the real world.
- (NEW!)** Delve into your interests through electives that can lead to a **certificate or minor:**
 - + Digitalisation (e.g. Minor in 5G & AIoT, Minor in Data & Artificial Intelligence)
 - + Sustainability (e.g. Minor in Green Energy)
 - + Innovation & Entrepreneurship (e.g. Minor in Entrepreneurship)
 - + Internationalisation
- Immerse in a 22-week internship with opportunities at reputable companies such as OCBC, Mapletree, ST Electronics, Panasonic, SSMC and A*STAR.
- Join the **SP-NUS Accelerated Pathway Programme** and **SP-SUTD Accelerated Pathway Programme** to get a head start in university life.



Acquire skills in engineering design, programming and electrical and electronic engineering while mastering the art of marketing cutting-edge technological solutions. You'll also learn about artificial intelligence, develop mobile applications and be fluent in data to be well-equipped to navigate the digital revolution. Dive deeper into the areas that ignite your curiosity through a selection of electives and earn certificates or minors along the way.

FURTHER STUDIES

You have the flexibility to further your studies in engineering, business or similar interdisciplinary programmes in both local and overseas universities. You can **get advanced standing of up to two years** when you take up engineering or business degree programmes.

At NTU, you may get **up to one year of exemption** for engineering-related courses.

At NUS, you may get **advanced placement credits (APCs)** in relevant modules for up to a maximum of 40 modular credits (equivalent to a year's worth of study).

CAREER OPTIONS

- Assistant Engineer (Product Design/Development)
- Assistant Engineer (Project)
- Business Development Executive
- Customer Relationship Management Executive
- Entrepreneur
- Procurement Executive
- Sales and Marketing Executive

ENTRY REQUIREMENTS

Range of Net 2023 JAE ELR2B2: 6 – 11

Aggregate Type: ELR2B2-C

SUBJECT	GRADE
English Language	1 – 7
Mathematics (Elementary/Additional)	1 – 6
Any one of the following subjects:	1 – 6
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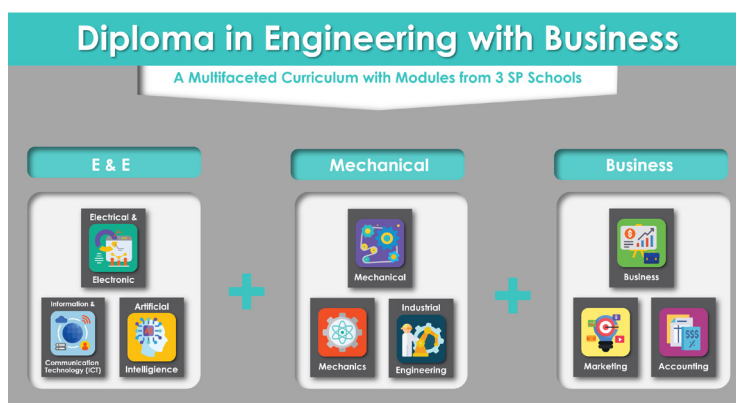
SCHOLARSHIPS

- SP Engineering Scholarship
- A*STAR Science Award
- DSO Diploma Scholarship
- DSTA Polytechnic Engineering Scholarship
- DSTA Polytechnic Digital Scholarship
- Singtel SHINE Cadet Scholarship
- Home Team Diploma Sponsorship
- SAF Polytechnic Sponsorship (RSAF)



During my internship at DSO, I had the opportunity to create a battery-operated underwater data logger that captured kinematic data from underwater systems. I applied the CDIO framework to my projects and put into practice the technical skills I acquired at SP. These skills encompassed C++ programming, prototyping using breadboards, and 3D design.

Bryan Chia
SP Engineering Scholar
Internship at DSO National Laboratories





WHAT YOU'LL STUDY

The Diploma in Engineering with Business is a three-year full-time programme.



FIRST YEAR

- Basic Mathematics I
- Common Core Modules
- Computer-Aided Design & Drafting
- Digital Electronics 1
- Engineering Materials
- Fundamentals of Economics
- Introduction to Engineering & Design
- Introduction to Engineering Programming
- Principles of Marketing
- Principles of Electrical and Electronic Engineering 1
- Thermofluids I

SECOND YEAR

- Common Core Modules
- Consumer Psychology
- Elective 1
- Elective 2
- Engineering Mathematics II
- Introduction to Digital Marketing
- Mobile Applications Development
- Microcontroller Applications
- Principles of Electrical & Electronic Engineering II
- Technology to Business
- Mechanics I
- Statistics & Analytics for Engineers

THIRD YEAR

- Accounting
- Artificial Intelligence in Engineering Business Analytics
- Circuit Theory and Analysis
- Common Core Modules
- Elective 3
- Elective 4 (Option)
- Elective 5 (Option)
- Industrial Engineering
- 22-Week Internship Programme/ Internship Equivalent

ELECTIVES

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AERONAUTICAL ENGINEERING

DARE – S88



Discover a thrilling runway to your dreams with our Diploma in Aeronautical Engineering (DARE). Since its launch in 2002, SP has remained a trailblazer in aeronautical engineering education, making DARE one of Singapore's most comprehensive and versatile aerospace course.

Accreditation by the skills framework for the Air Transport and Aerospace Sector, ensuring that you'll graduate with the most up-to-date skills. You'll receive hands-on training by ST Engineering Aerospace, our official training partner, with a focus on aircraft-related modules. Through a design thinking approach, you will foster problem-solving and creativity through hands-on learning. For those who aspire to be an aircraft pilot or a CAAS-certified drone pilot, there are opportunities to take extra courses to pursue your passion.

Picture yourself in our awe-inspiring Aerohub, the training playground for aspiring aviation professionals. Step into this state-of-the-art facility that spans a jaw-dropping 4,660 square metres and discover four aircrafts, along with two full-motion simulators. Brace yourself for a hyper-realistic experience that is as close as it gets to a real-world industry setting.

To truly excel in your field, you'll need industry connections and real-world experience. That's why we've partnered with aerospace organisations such as:

- Singapore Technologies Engineering Aerospace
- The Republic of Singapore Air Force
- SIA Engineering Company
- Pratt & Whitney
- JAMCO Aero Design & Engineering Pte Ltd

If you're ready to mount new heights, DARE is your gateway to an eye-opening adventure in the aerospace industry.

Take Your Passion to New Heights Where Sky is Not the Limits

WHAT YOU CAN EXPECT

- Pursue a Private Pilot License (PPL) at the Singapore Youth Flying Club (SYFC).
- Participate in local and overseas competitions such as the Singapore Amazing Flying Machine Competition (SAFMC) and World Skills Competition (WSC).
- Explore different cultures during the overseas exchange programme.
- Enjoy advanced standing in local and international universities.
- The DARE curriculum prepares you for the CAAS Airworthiness Requirements (SAR 66) exams.
- Look forward to attractive career opportunities in the aerospace industry.
- Complement your domain modules with emerging digital skills.

FURTHER STUDIES

You can gain an advanced standing of up to two years in mechanical engineering degree courses at local and international universities, such as:

- Nanyang Technological University (NTU)
- National University of Singapore (NUS)
- Singapore University of Technology & Design (SUTD)
- Singapore Institute of Technology (SIT) (University of Glasgow and Newcastle University)
- Singapore University of Social Sciences (SUSS)
- Imperial College London
- Embry-Riddle Aeronautical University, USA
- University of New South Wales (UNSW)
- University of South Australia

CAREER OPTIONS

- Aeronautical Engineering Technologist
- Assistant Aeronautical Design and System Engineer
- Assistant Aerospace Sales and Marketing Engineer
- Assistant Aerospace Systems Quality Assurance Engineer
- Assistant Engineering Service Engineer
- Assistant Mechanical Engineer
- Assistant Simulator Systems Engineer
- Assistant Technical Service Engineer
- Assistant Unmanned Vehicle System Design Engineer
- Flight Operations Officer
- Licensed Aircraft Maintenance Engineer
- Aircraft Maintenance Planning Executive

ENTRY REQUIREMENTS

Range of Net 2023 JAE ELR2B2: 4 – 16

Aggregate Type: ELR2B2-C

SUBJECT	GRADE
English Language	1 – 7
Mathematics (Elementary/Additional)	1 – 6
Any one of the following subjects:	1 – 6
<ul style="list-style-type: none"> • Biology • Biotechnology • Chemistry • Computing/Computer Studies • Design & Technology • Electronics/Fundamentals of Electronics • Physics • Science (Chemistry, Biology) • Science (Physics, Biology) • Science (Physics, Chemistry) 	

Applicants should not be suffering from severe vision deficiency (including colour vision), acute hearing impairment or uncontrolled epilepsy. Interested applicants with any of these conditions are advised to contact Singapore Polytechnic for more information.

DARE ELECTIVE TRACKS

Furthering
Aero Design and Manufacturing

Broadening
Aviation Management

Deepening
Aircraft Maintenance and Composite Repair



I serve as a Solutions Delivery Specialist at Satair, which is a fully owned subsidiary of Airbus. My primary responsibility involves ensuring the availability of materials and providing vital support to our customers during their maintenance operations. In addition to the classroom curriculum, SP maintains an ongoing and strong partnership with various industries to establish a holistic learning environment for students. My internship experience at Airbus Helicopters was the spark that ignited my passion for continuing my career in this industry.

Theresse Vanessa Pereira

Currently working at Satair Pte Ltd



WHAT YOU'LL STUDY

The Diploma in Aeronautical Engineering is a three-year full-time programme.



FIRST YEAR

- Basic Mathematics
- Common Core Modules
- Computer Programming
- Computer Aided Drafting
- Digital Electronics 1
- Engineering Materials 1
- Engineering Mathematics 1
- Introduction to Engineering
- Mechanics 1
- Principles of Electrical & Electronic Engineering 1
- Thermofluids 1

SECOND YEAR

- Air Legislation
- Aircraft Electrical & Instrument Systems
- Aircraft Maintenance Practices
- Aircraft Structures
- Common Core Modules
- Computer-Aided Design (Aeronautical)
- Elective 1
- Elective 2
- Engineering Materials 2
- Engineering Mathematics 2
- Fundamentals of Flight
- Mechanics 2
- Statistics and Analytics for Engineers
- Thermofluids 2

THIRD YEAR

- Aircraft Communication & Navigation Systems
- Aircraft Power Plants
- Aircraft Systems
- Elective 3
- Human Factors
- Mechanics 3
- Internship Programme/ Internship Equivalent-FYP

ELECTIVES

The SP elective framework offers students options to pursue their passion and / or meet different career needs, and is an integral part of the holistic education we seek to provide to our students. The learning experiences of this elective framework help students in their development as self-directed, versatile, life-long learners, which are essential in today's volatile and changing societal as well as occupational landscape.

Students who are interested to explore additional new skills and abilities will have the opportunity to take up to five electives. Certificates and minors will be awarded when students complete a suite of related elective modules. Please visit <https://www.sp.edu.sg/sp/education/elective-modules> for details of this elective scheme and the full list of electives.

COMMON CORE CURRICULUM

The Common Core Curriculum is designed to prepare students for a disruptive world that is ever-changing. Comprising critical human and emerging digital skills, the common core modules offer students an integral and inter-disciplinary learning experience to address the wicked problems of the world (framed by the United Nations' Sustainable Development Goals).

Through the Common Core modules, students will think critically about real-world problems, empathise with local and global communities and be challenged to effect change. For more information on the Common Core Curriculum, please visit <https://www.sp.edu.sg/sp/education/common-core-curriculum>.

All full-time diploma students are required to take a compulsory Education and Career Guidance module in SP. Students will take Education and Career Guidance – Personal Development (30 hours) in their first year.

All students are required to take one compulsory Wellness for Life (WFL) module for one semester in their first year in SP. In their second and third year, students may sign up for WFL module as an optional module.



COMMON ENGINEERING PROGRAMME

DCEP – S40



Build a Strong Foundation in Engineering, Discover your Strengths

Are you fascinated by engineering but unsure which discipline to specialise in? The Common Engineering Programme (DCEP) curriculum opens doors to an extraordinary blend of subjects, introducing you to various disciplines in the field.

In the first semester, you will be introduced to a wide range of engineering modules, where you get to dabble with mechanical equipment, electrical circuits and electronic gadgets. Through immersive experiences, you'll have the chance to discover your interests and strengths, paving the way for a future in engineering that resonates with you.

At the end of your first semester, you'll be able to make an informed decision to pursue one of seven engineering diplomas offered by SP:

- S88 Aeronautical Engineering¹**
- S90 Aerospace Electronics¹**
- S53 Computer Engineering²**
- S99 Electrical & Electronic Engineering³**
- S42 Engineering with Business²**
- S91 Mechanical Engineering²**
- S73 Mechatronics & Robotics²**

ENTRY REQUIREMENTS

Range of Net 2023 JAE ELR2B2: 4 – 19

Aggregate Type: ELR2B2-C

SUBJECT	GRADE
English Language	1 – 7
Mathematics (Elementary/Additional)	1 – 6
Any one of the following subjects:	1 – 6
<ul style="list-style-type: none"> • Biology • Biotechnology • Chemistry • Computing/Computer Studies • Design & Technology • Electronics/Fundamentals of Electronics • Physics • Science (Chemistry, Biology) • Science (Physics, Biology) • Science (Physics, Chemistry) 	

I had the opportunity to explore electrical and mechanical engineering modules within the DCEP, which played a crucial role in guiding my decision on the engineering specialisation for my diploma.

Teo Zhe Kai
Common Engineering Programme Alumnus

Note:

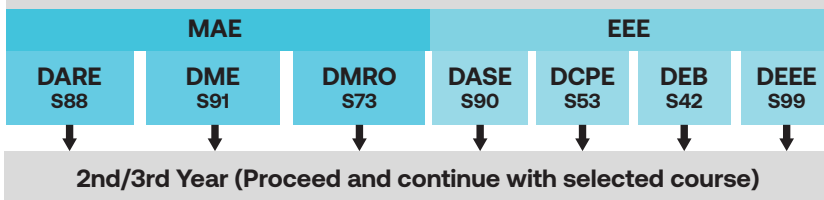
¹ Applicants should not be suffering from severe vision deficiency (including colour vision), acute hearing impairment or uncontrolled epilepsy. Interested applicants with any of these conditions are advised to contact Singapore Polytechnic for more information.

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³ Applicants who have colour vision deficiency, and wish to pursue a career in electrical power engineering or as a Licensed Electrical Worker (LEW), may encounter difficulties meeting the course requirements and expectations. This condition is required by the Energy Market Authority (EMA) of Singapore. In addition, applicants should not be suffering from severe vision deficiency, acute hearing impairment or uncontrolled epilepsy. Interested applicants with any of these conditions are advised to contact Singapore Polytechnic for more information.

1st Year, 1st Semester (Common)

Towards the end of 1st Year, 1st Semester (Select 1 out of 7 courses)*



* Course allocation of students are based on their first semester cGPA (with a focus on associated school/course modules), course choices and vacancies in courses.

WHAT YOU CAN EXPECT

- Discover a wide range of engineering disciplines.
- Get an overview of the skills, competencies, and equipment pertinent to various technologies.
- Ascertain your strengths and interests through exposure to various engineering disciplines, leading to a more informed career choice.

FURTHER STUDIES

Depending on your specialisation, you can pursue an engineering degree at a local or international university.



WHAT YOU'LL STUDY

The Common Engineering Programme is a full-time first semester programme and you will progress to one of seven full-time engineering courses.



FIRST YEAR

+ Semester 1

- Basic Mathematics
- Common Core Modules
- Computer Aided Drafting
- Digital Electronics 1
- Engineering Materials 1
- Introduction to Engineering Programming

- Principles of Electrical & Electronic Engineering 1

+ Semester 2

+ For DARE/DME/DMRO Option

- Common Core Modules
- Engineering Mathematics 1
- Introduction to Engineering
- Mechanics 1
- Thermofluids 1

+ For DASE/DCPE/DEEE Option

- Common Core Modules
- Digital Electronics 2
- Engineering Mathematics 1
- Introduction to Engineering & Design
- Principles of Electrical & Electronic Engineering 2

+ For DEB Option

- Common Core Modules
- Engineering Mathematics 1
- Fundamentals of Economics
- Introduction to Engineering & Design
- Principles of Marketing
- Thermofluids I

SECOND YEAR/ THIRD YEAR

Students will take the modules of the engineering course that they have opted in the first year, as well as common core modules.

ELECTIVES

The SP elective framework offers students options to pursue their passion and / or meet different career needs, and is an integral part of the holistic education we seek to provide to our students. The learning experiences of this elective framework help students in their development as self-directed, versatile, life-long learners, which are essential in today's volatile and changing societal as well as occupational landscape.

Students who are interested to explore additional new skills and abilities will have the opportunity to take up to five electives. Certificates and minors will be awarded when students complete a suite of related elective modules. Please visit <https://www.sp.edu.sg/sp/education/elective-modules> for details of this elective scheme and the full list of electives.

COMMON CORE CURRICULUM

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All students are required to take one compulsory Wellness for Life (WFL) module for one semester in their first year in SP. In their second and third year, students may sign up for WFL module as an optional module.



MECHANICAL ENGINEERING

DME – S91

Empower your future with the most broad-based Engineering Course that remains Evergreen, always relevant, and consistently in demand across ALL sectors

Gear up for an exhilarating journey with the Diploma in Mechanical Engineering (DME) at SP! Since its inception in 1958, the DME has been the go-to choice for aspiring engineers like you.

Elevate your journey in Mechanical Engineering with our curriculum, seamlessly integrating AI advancements and sustainability principles. Beyond mastering the fundamentals, our program aligns with global trends, providing a robust foundation in mechanical engineering complemented by essential interdisciplinary skills in Business and Humanities. We champion a hands-on learning approach, immersing you in industry-focused opportunities that not only enhance your knowledge and competencies but also instill a strong sense of responsibility towards sustainability. Experience the transformative power of advancement of technology in shaping a better future through our partnerships with renowned organisations such as:

- A*STAR
- Dassault Systèmes
- Panasonic
- SBS Transit
- Siemens
- Sivantos
- SMRT

These industry partners provide opportunities for our students to build a network of connections while working on ground-breaking projects — opening doors to unparalleled career opportunities!

CAREER OPTIONS

- Assistant Automation Engineer
- Assistant Engineering Services Engineer
- Assistant Facility Engineer
- Assistant HVAC (Heating, Ventilation & Air-Conditioning) Engineer
- Assistant Machine & Product Design Engineer
- Assistant Medical Device/Equipment Application Engineer
- Assistant Medical Device Design Engineer



WHAT YOU CAN EXPECT

- Gain practical industry experience that will prepare you to be future-ready.
- Be exposed to the latest advanced manufacturing technologies at our high-tech learning space.
- Check out the multiple pathways to established local and overseas universities.
- Choose from diverse career options available in emerging fields such as advance manufacturing, automation, biomedical, composites, energy, materials, product design, robotics and more.
- Choose 1 of 6 specialisations in:
 - Automation & Robotics
 - Biomedical
 - Energy & Facilities Management
 - Engineering Design & Simulation
 - Precision Engineering
 - Rapid Transit Technology

FURTHER STUDIES

You can gain an advanced standing of up to two years in and relevant engineering degree courses at local and international universities, such as:

- Nanyang Technological University (NTU)
- National University of Singapore (NUS)
- Singapore University of Technology & Design (SUTD)
- Singapore Institute of Technology (SIT) (University of Glasgow and Newcastle University)
- Singapore University of Social Sciences (SUSS)
- Imperial College London
- University of Manchester
- University of Birmingham
- University of New South Wales
- Royal Melbourne Institute of Technology University

- Assistant Project Engineer
- Assistant Quality Control/Assurance Engineer
- Assistant Rapid Transit Engineer
- Assistant R&D (Research & Development) Engineer
- Assistant Tooling Engineer
- Bioengineering Technologist
- Medical Equipment Technologist
- Regulatory Affairs Specialist

ENTRY REQUIREMENTS

Range of Net 2023 JAE ELR2B2: 6 – 19

Aggregate Type: ELR2B2-C

SUBJECT	GRADE
English Language	1 – 7
Mathematics (Elementary/Additional)	1 – 6
Any one of the following subjects:	1 – 6
<ul style="list-style-type: none"> • Biology • Biotechnology • Chemistry • Computing/Computer Studies • Design & Technology • Electronics/Fundamentals of Electronics • Physics • Science (Chemistry, Biology) • Science (Physics, Biology) • Science (Physics, Chemistry) 	

Applicants should not be suffering from severe vision deficiency, acute hearing impairment or uncontrolled epilepsy. Interested applicants with any of these conditions are advised to contact Singapore Polytechnic for more information.



I interned at SIMTech (Singapore Institute of Manufacturing Technology), A*STAR, as part of my scholarship. I realised the significance of coding in Industry 4.0, despite it not being my favourite. The experience honed my skills in technical drawings, 3D modelling and 3D printing. I even got some of my designs fabricated by CNC machining! In research engineering and manufacturing, precision is vital, requiring many trial-and-error tests with 3D printed parts.

Kelly Tay Keli

DME Gold Medallist
Internship at Singapore Institute of Manufacturing Technology



WHAT YOU'LL STUDY

The Diploma in Mechanical Engineering is a three-year full-time programme.



FIRST YEAR

- Basic Mathematics
- Computer Aided Drafting
- Common Core Modules
- Computer Programming
- Digital Electronics 1
- Engineering Materials 1
- Engineering Mathematics 1
- Introduction to Engineering
- Mechanics 1
- Principles of Electrical & Electronic Engineering 1
- Thermofluids 1

SECOND YEAR

- Computer-Aided Machining
- Common Core Modules
- Design and Build
- Engineering Materials 2
- Engineering Mathematics 2
- Elective 1
- Elective 2
- Industrial Automation
- Mechanics 2
- Statistics and Analytics for Engineers
- Thermofluids 2
- + Specialisation Modules (Choose One)**
- + Automation & Robotics**
 - Smart Solution Development
- + Energy & Facilities Management**
 - Building Information Modelling for MEP Services
- + Biomedical**
 - Biomedical Equipment & Practices
- + Engineering Design & Simulation**
 - Manufacturing Processes with Design for Manufacturing
- + Rapid Transit Technology**
 - Railway Systems
- + Precision Engineering**
 - Digital Fabrication and Metrology

THIRD YEAR

- Elective 3
- Engineering Thermodynamics
- Internship Programme/ Internship Equivalent - FYP
- + Common To All Specialisations Except Biomedical Specialisation**
 - Fluid Mechanics
 - Mechanics 3
 - Workplace Safety & Health Management
- + Specialisation Modules (Choose One)**
- + Automation & Robotics**
 - Programmable Logic Controllers
 - Robotics for Advanced Manufacturing
- + Energy & Facilities Management**
 - Refrigeration & Air-conditioning
 - Renewable Energy & Applications
- + Biomedical**
 - Assistive Technology & Rehabilitation Engineering
 - Biofluids
 - Biomechanics
 - cGMP & Medical Device Validation
 - Contamination Controls & Clean Room
- + Engineering Design & Simulation**
 - Mechanical Assembly Design in CAD
 - Engineering Simulations
- + Rapid Transit Technology**
 - Rolling Stock Design & Maintenance
 - Railway Infrastructures Design & Maintenance
- + Precision Engineering**
 - Multi-Axis Machining Applications
 - Tooling Engineering

ELECTIVES

The SP elective framework offers students options to pursue their passion and / or meet different career needs, and is an integral part of the holistic education we seek to provide to our students. The learning experiences of this elective framework help students in their development as self-directed, versatile, life-long learners, which are essential in today's volatile and changing societal as well as occupational landscape.

Students who are interested to explore additional new skills and abilities will have the opportunity to take up to five electives. Certificates and minors will be awarded when students complete a suite of related elective modules. Please visit <https://www.sp.edu.sg/sp/education/elective-modules> for details of this elective scheme and the full list of electives.

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All students are required to take one compulsory Wellness for Life (WFL) module for one semester in their first year in SP. In their second and third year, students may sign up for WFL module as an optional module.

COMMON CORE CURRICULUM

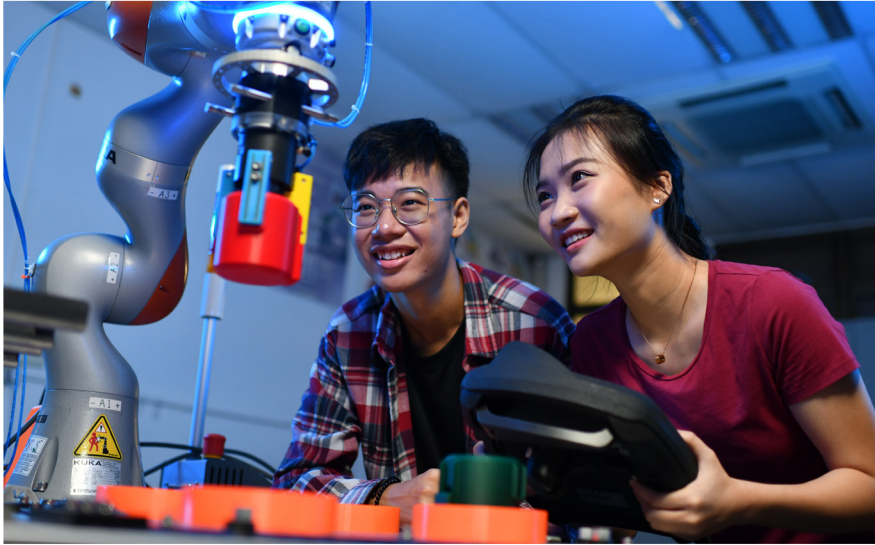
The Common Core Curriculum is designed to prepare students for a disruptive world that is ever-changing. Comprising critical human and emerging digital skills, the common core modules offer students an integral and inter-disciplinary learning experience to address the wicked problems of the world (framed by the United Nations' Sustainable Development Goals).

Through the Common Core modules, students will think critically about real-world problems, empathise with local and global communities and be challenged to effect change. For more information on the Common Core Curriculum, please visit <https://www.sp.edu.sg/sp/education/common-core-curriculum>.

MECHATRONICS & ROBOTICS

DMRO – S73

Blending Mechanical, Electronics and Programming, Robotising the Future



Dive into the realm of cutting-edge intelligent systems that can move, interact, and even think independently. At the Diploma in Mechatronics & Robotics (DMRO), you will be equipped with mechanical engineering, electronics, and programming knowledge to design and build intelligent systems.

At DMRO, we believe in inspiring minds, igniting passion, and innovating solutions. Our teaching methods emphasise active and collaborative learning experiences, incorporating the Conceive-Design-Implement-Operate (CDIO) framework that combines engineering fundamentals with real-world systems and products. Moreover, our curriculum infuses intrinsic motivation methods to inspire you to build skills that will take you further in life.

If you're captivated by engineering, electronics, and programming, join DMRO and discover a world of technological possibilities.

WHAT YOU CAN EXPECT

- Gain practical industry experience that will prepare you to be future-ready.
- Hone your engineering skills at the dedicated DMRO Learning Space.
- Discover your intrinsic motivation and unlock your potential.
- Check out the multiple pathways to established local and overseas universities.
- Choose from diverse career options in emerging fields such as robotics, automation, and advanced manufacturing.

FURTHER STUDIES

You can gain an advanced standing in Mechanical, Mechatronics, Robotics Systems, Electrical & Electronics, Computer Science or Computer Engineering degree courses in both local (NUS, NTU, SIT, SMU, SUSS, SUTD) and international universities. Selective module exemptions or direct entry to second year are based on merit and subjected to the approval of the respective faculties/universities.

CAREER OPTIONS

- Assistant Automation Engineer
- Assistant Design Engineer
- Assistant Electromechanical Engineer
- Assistant Mechanical Engineer
- Assistant Mechatronics Engineer
- Assistant Robotics Engineer
- Assistant System Development Engineer

ENTRY REQUIREMENTS

Range of Net 2023 JAE ELR2B2: 5 – 15

Aggregate Type: ELR2B2-C

SUBJECT	GRADE
English Language	1 – 7
Mathematics (Elementary/Additional)	1 – 6
Any one of the following subjects:	1 – 6
• Biology	
• Biotechnology	
• Chemistry	
• Computing/Computer Studies	
• Design & Technology	
• Electronics/Fundamentals of Electronics	
• Physics	
• Science (Chemistry, Biology)	
• Science (Physics, Biology)	
• Science (Physics, Chemistry)	

Applicants should not be suffering from severe vision deficiency, acute hearing impairment or uncontrolled epilepsy. Interested applicants with any of these conditions are advised to contact Singapore Polytechnic for more information.



During my internship at a local SME company called Pocket Technology Pte. Ltd., I primarily collaborated with my supervisor on tasks such as designing components using 3D software, assembling these components, and operating a variety of equipment. While I was able to apply the knowledge I had gained in school, the internship also exposed me to the realization that there is a wealth of additional essential knowledge and skills specific to the job that I had yet to acquire. This experience was a valuable opportunity for me to learn and grow in my field. ▶▶

Chanakyan Kannan
DMRO Gold Medallist
Internship at Pocket Technology



WHAT YOU'LL STUDY

The Diploma in Mechatronics & Robotics is a three-year full-time programme.



FIRST YEAR

- Basic Mathematics
- Common Core Modules
- Computer Programming
- Computer-Aided Drafting
- Digital Electronics 1
- Engineering Materials 1
- Engineering Mathematics 1
- Introduction to Engineering
- Mechanics 1
- Principles of Electrical & Electronic Engineering 1
- Thermofluids 1

SECOND YEAR

- Common Core Modules
- Computer-Aided Machining
- Design & Fabrication Project
- Digital Electronics 2
- Engineering Mathematics 2
- Elective 1
- Elective 2
- Industrial Automation
- Mechanics 2
- Principles of Electrical and Electronic Engineering 2
- Statistics and Analytics for Engineers
- Thermofluids 2

THIRD YEAR

- Common Core Modules
- Elective 3
- Mechanics 3
- Mobile Robot Application
- Internship Programme/ Internship Equivalent - FYP
- Programmable Logic Controllers
- Robotic Integration & Programming
- Systems & Control
- Workplace Safety & Health Management

ELECTIVES

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