

# 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
<ul style="list-style-type: none"> <li>• Biology</li> <li>• Biotechnology</li> <li>• Chemistry</li> <li>• Computing/Computer Studies</li> <li>• Design &amp; Technology</li> <li>• Electronics/Fundamentals of Electronics</li> <li>• Physics</li> <li>• Science (Chemistry, Biology)</li> <li>• Science (Physics, Biology)</li> <li>• Science (Physics, Chemistry)</li> </ul>	

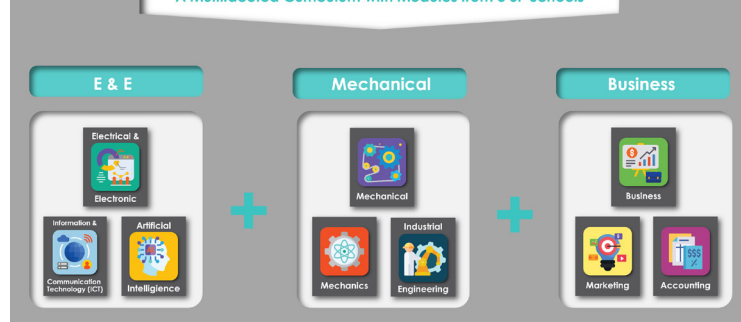
*Applicants should not be suffering from severe vision deficiency, acute hearing impairment or uncontrolled epilepsy. Interested applicants with any of these conditions are advised to contact Singapore Polytechnic for more information*

### 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)

## Diploma in Engineering with Business

A Multifaceted Curriculum with Modules from 3 SP Schools



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

- |  |  |  |
|--|--|--|
| <ul style="list-style-type: none"><li>• Basic Mathematics I</li><li>• Common Core Modules</li><li>• Computer-Aided Design &amp; Drafting</li><li>• Digital Electronics 1</li></ul> | <ul style="list-style-type: none"><li>• Engineering Materials</li><li>• Fundamentals of Economics</li><li>• Introduction to Engineering &amp; Design</li><li>• Introduction to Engineering Programming</li></ul> | <ul style="list-style-type: none"><li>• Principles of Marketing</li><li>• Principles of Electrical and Electronic Engineering 1</li><li>• Thermofluids I</li></ul> |
|--|--|--|

## SECOND YEAR

- |   |   |  |
|---|---|--|
| <ul style="list-style-type: none"><li>• Common Core Modules</li><li>• Consumer Psychology</li><li>• Elective 1</li><li>• Elective 2</li></ul> | <ul style="list-style-type: none"><li>• Engineering Mathematics II</li><li>• Introduction to Digital Marketing</li><li>• Mobile Applications Development</li><li>• Microcontroller Applications</li></ul> | <ul style="list-style-type: none"><li>• Principles of Electrical &amp; Electronic Engineering II</li><li>• Technology to Business</li><li>• Mechanics I</li><li>• Statistics &amp; Analytics for Engineers</li></ul> |
|---|---|--|

## THIRD YEAR

- |  |  |  |
|--|--|--|
| <ul style="list-style-type: none"><li>• Accounting</li><li>• Artificial Intelligence in Engineering Business Analytics</li><li>• Circuit Theory and Analysis</li></ul> | <ul style="list-style-type: none"><li>• Common Core Modules</li><li>• Elective 3</li><li>• Elective 4 (Option)</li></ul> | <ul style="list-style-type: none"><li>• Elective 5 (Option)</li><li>• Industrial Engineering</li><li>• 22-Week Internship Programme/ Internship Equivalent</li></ul> |
|--|--|--|

## 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.*

