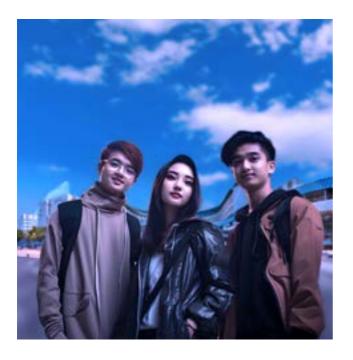
## © Cimagine CREATING TOMORROW

TEMASEK POLYTECHNIC Course Brochure 2024

Imagining tomorrow with GenAl-powered images

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## CREATE YOUR TOMORROW AT TEMASEK POLYTECHNIC

Care. Courage. Passion. These are the qualities hardwired into the Temasek Polytechnic (TP) DNA – the foundations behind our promise to provide you with a unique educational experience.

Learning in TP focuses on a holistic approach. In addition to your diploma's subject-matter related lectures, tutorials and hands-on training, you'll also undergo lessons that impart crucial life skills. These include communication, leadership, problem-solving, career planning, and more.

As a TP student, you'll be transformed into a self-directed learner who is confident in facing new challenges and rapid changes. You'll be encouraged to become future-oriented creators in possession of a fearless entrepreneurial spirit. As a values-centred leader, you'll also be ready to contribute generously and become a positive influence to our society and the global community.

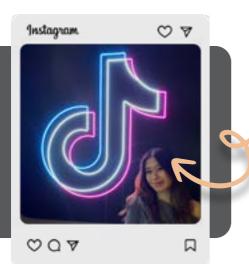
Agile, flexible and responsive to the demands of the future economy, TP graduates are poised to succeed in their shared goal of creating brighter and better tomorrows not just for themselves but everyone else around them too!

#### **Publication date: November 2023**

The information provided in this brochure is correct at the time of printing and may be subject to change. For the latest updates on course information and entry requirements, please visit **www.tp.edu.sg** 

# "/imagine Creating Tomorrow

## Your TP Experience will be filled with fantastic opportunities,



## **Shannon Ong**

Diploma in Communication Design



**SCAN** FOR STORY

My time as a branding and design intern at **TikTok** has opened doors to many opportunities, allowing me to unleash my creative flair and further refine my branding skills.

**Darryl Ho** 

**Diploma in Psychology Studies** 



The best part of my internship at **REACH** was gaining ground sentiments on issues that Singaporeans are concerned about to aid in improving the lives of our citizens.





QOA

## **Godfrey Loh Diploma in Mechatronics**



SCAN FOR STORY

My eye-opening **SMRT** internship saw me supporting my colleagues in the planning and maintaining of SMRT's trains and tracks, and improving my knowledge about supply chain documentation too.

## ... like these illuminating internships,

Instage

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## **Arasyulhaq Bin Ahmad**

**Diploma in Pharmaceutical Science** 



Working at Gleneagles Hospital's pharmacy allowed me to understand how different hospital departments collaborate to provide high-quality patient care and how essential

teamwork is in healthcare.



SCAN FOR STORY



OOV

## **Joey Liaw**

## **Diploma in Business**



My internship at **BNY Mellon** has been an incredible journey, and helped me develop essential skills such as time and task management, and honed my presentation and networking abilities.

O O Ø



SCAN FOR STORY

## Ammar Aufa

Diploma in Big Data & Analytics



The best part of my Oracle **Corporation Singapore** internship was experiencing the Oracle Red Bull Racing F1 Simulator to learn how real-time metrics were recorded and processed in the Oracle Cloud for analysis.



D

SCAN FOR STORY

## ... these amazing overseas adventures,



## **Beyond Temasek**

From Vietnam to Australia, TP students always have a blast expanding their horizons and discovering new traditions, food, and perspectives!

Instagram

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SCAN

FOR STORY

#### SCAN TO VIEW VIDEOS



Instagram

OOV

## Shell Eco-Marathon 2023

Our students raced TP's sleek ecocar in Indonesia! Discover how they fared against their competitors from Asia Pacific and the Middle East.



OB

Instagram

#### SCAN FOR STORY



Find out what these Diplomas in Aerospace Electronics and Aerospace Engineering students were up to during their learning journey, over in Germany.

**Geared up for Germany** 



OOV

## ... and ultimately prepares you for career success!

## Wang YaJing

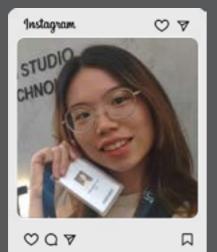
**Diploma in Logistics & Operations** Management graduate (now Diploma in International Trade & Logistics)

### As the Managing Director of **Global Alliance Logistics**,

she builds trust and forms effective relationships with clients to provide them with the best service in all logistics-related matters.



Instagram



**Elizabeth** Cai

SCAN

Diploma in Interior Architecture & Design graduate

As a Junior BIM Specialist at the Meinhardt Group, her key responsibilities include ensuring the quality of building models and coordinating its various elements to guarantee smooth project operations. SCAN FOR STORY

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## **Anderson Goh**

**Diploma in Business Process** & Systems Engineering graduate

As an Analytics Lead at the Kraft Heinz Company, he translates complex data and technical insights into actionable strategies that help steer the company's growth and future.









**Quek Xin Hui** Diploma in Psychology Studies

## Temasek Polytechnic (TP) Scholarships

- Q. How can Year 1 students clinch a coveted, bond-free TP Scholarship?
- A. By acing their first semester with good grades and solid CCA achievements, just like Xin Hui!

The TP Scholarship is more than a financial reward. It's also your golden ticket to unlocking a world of unique opportunities, unleashing your talents and confidence, and shaping your extraordinary future.



It's a great honour and privilege to receive the TP Scholarship as a recognition of my efforts, accomplishments and potential contributions.

The process isn't as daunting as it may seem. TP simplifies it by requiring only one submission form, but do prepare your scholarship application early by organising the documents needed to ease your application process. Most importantly, believe in yourself!



As a TP scholar, Xin Hui was provided with many opportunities, such as taking part in the Polytechnic Forum 2023 ...



... and travelling to the United Kingdom for TP's Global Experience Programme study trip!

Check out our full range of scholarships at www.tp.edu.sg/scholarships or scan



## Temasek LEADership Programme (Temasek LEAD)

## Temasek LEAD is TP's talent development programme designed to stretch our students' potential and transform them into tomorrow's leaders with vision, character and heart.

Like Azfar, all Temasek LEAD students can look forward to developing their capabilities in the four key areas of Personal Leadership, Team Leadership, Community Leadership and Global Perspectives. An enlightening journey of self-discovery and eye-opening learning experiences await!



Mohamed Azfar S/O Abdul Raheem

Diploma in Big Data & Analytics Being a Temasek LEAD student is truly transformative! My learning experiences, which include visiting the Singapore Rail Discovery Centre and participating in forums, have improved my self-awareness, honed my decision-making skills, and instilled a sense of social responsibility.

Temasek LEAD has given me a well-rounded foundation in my lifelong journey to become a responsible and effective leader.



Azfar with his peers during a learning journey at the Singapore Rail Discovery Centre ...



... and participating in a leadership forum, Varsity Voices Dialogue: Al in Learning and Work.

For more information on Temasek LEAD, visit www.tp.edu.sg/tplead or scan



## Match your qualification to the TP application



## **O-Level Students:**

Early Admissions Exercise (EAE): Held in June\* of your O-Level exam year, apply via EAE if you're sure of your passion and TP course choice.

Joint Admissions Exercise (JAE) You can apply for your TP course choices in January\*, after the release of your O-Level results.





## **ITE Students:**

**Early Admissions Exercise (EAE[ITE])** If you're a final-year Nitec or Higher Nitec student who's clear about your passion and TP course choice, you may apply in **June**\*.

Joint Polytechnic Admissions Exercise (JPAE)

If you hold a relevant ITE certificate or you're a final semester, graduating full-time ITE student – including those from the Direct-Entry-Scheme to Polytechnic Programme (DPP) – you may apply to join TP in **February**\*.







## N(A) Level Students:

#### Polytechnic Foundation Programme Admissions Exercise (PFPAE)

The Polytechnic Foundation Programme (PFP) is an alternative to Secondary 5 studies. If you excel in your N(A) Level exams, you could receive a PFPAE invitation to apply to join TP in **January**\*. SCAN FOR DETAILS





spearheading next-gen innovations



school of applied science

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Imagining tomorrow with GenAI-powered images

#### SCHOOL OF APPLIED SCIENCE

Be future-ready today! Join the School of Applied Science (ASC) to gear up for a rewarding career in the vibrant healthcare, food, chemical and life sciences industries.

To foster interdisciplinary learning and ensure a strong foundation, all firstyear students take on a common curriculum, which helps extend their learning across different technical domains of science.

Here, we nurture future-ready talent through exposure to work-based learning, internships, project collaborations, as well as research work. You'll also get to hone your skills working in our Learning Enterprises, which are facilities simulating real-world work environments. These include the TP Animal Clinic & Wellness and the Bistro Lab Cafeteria & Bakery. There's also ASC's latest facility, the Aquaponics Learning Enterprise, which trains students on modern aquaponics technology.

Elective Clusters are offered in Year 3. You can select your specialisation area or cross-train in other disciplines to enhance your multi-domain exposure and learning experience. You may also participate in the Differential eXperiential Programme (DXP), which offers opportunities to deepen or broaden your skills across domains.

Be among future technologists and aspiring scientists who'll collectively make the world a healthier, greener and better place!

#### Common entry programme

• [T70] Common Science Programme

#### Full-time diploma courses

- [T33] Chemical Engineering
- [T26] Food, Nutrition & Culinary Science
- [T64] Medical Biotechnology
- [T25] Pharmaceutical Science
- [T45] Veterinary Technology

#### General and admissions enquiries

Tel : 6788 2000

Email : admissions@tp.edu.sg

#### **Course enquiries**

| Tel     | : 6780 5322            |
|---------|------------------------|
| Email   | : aschotline@tp.edu.sg |
| Website | : www.tp.edu.sg/asc    |

#### For the latest tuition fees, visit:

www.tp.edu.sg/coursefees

#### MINIMUM ENTRY REQUIREMENTS

To be eligible for any of these diploma courses:

English Language Grades 1 - 7

Mathematics (Elementary/Additional) Grades 1 - 6

Any one of the following subjects: Grades 1 - 6

Biology, Biotechnology, Chemistry, Food & Nutrition / Nutrition & Food Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry)

Best two other subjects, excluding CCA

For details on ELR2B2 computation, visit: www.tp.edu.sg/elr2b2



## T70 COMMON SCIENCE PROGRAMME



Scan for full details, or visit: **www.tp.edu.sg/t70** 

#### The Course

Are you passionate about science but need more time and opportunities to dip your toes into the various science disciplines before making your choice? The Common Science Programme allows you to explore your interests and aptitude through a broad-based curriculum. Over two semesters, you'll gain a better understanding of the different disciplines offered here, in the School of Applied Science!

To help you make an informed decision, you'll participate in education and career guidance (ECG) activities. These include course sharing by lecturers, students and alumni, industry talks and visits, structured reflections, and course counselling sessions.

By the end of this one-year programme, you'll be well-equipped to pursue one of the following School of Applied Science diploma courses for the next two years of your study:

- [T33] Chemical Engineering
- [T26] Food, Nutrition & Culinary Science
- [T64] Medical Biotechnology
- [T25] Pharmaceutical Science
- [T45] Veterinary Technology

The Common Science Programme is your ticket to securing a firm foundation in various science disciplines through subjects that deliver fundamental multidisciplinary skills and concepts, as well as subjects that help to enhance digital literacy and build competencies in laboratory risk assessments.

## Year 1 Subjects

- Basic Microbiology
- Cell Biology & Biochemistry
- Digitalisation in Applied Science
- Laboratory & Workplace Safety
- Mathematics for Applied Science
- Nutrition & Health
- Principles of Inorganic & Physical Chemistry 1
- Statistics for Applied Science

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Current Issues & Critical Thinking
- Effective Communication
- Leadership Fundamentals
- Career Readiness
- Innovation & Entrepreneurship
- Sports & Wellness
- Global Studies
- Sustainability & Climate Action

**Note:** Any special health requirements for a specific diploma course will also apply if you choose to stream into that course.







#### The Course

Chemical engineers play a crucial role in making clean energy, reducing waste, creating eco-friendly chemicals, ensuring clean water, as well as developing formulation and processing of drugs and medicines. Their diverse contributions safeguard our environment and make significant strides in addressing global challenges such as poverty and disease.

In this multidisciplinary field of mathematics, chemistry, physics, biology and engineering, you'll discover how raw materials are processed to create the products used in our daily lives. These include fuels, paints, biodegradable plastics, medicines, cosmetics, personal care products, food, water, and many others. Your education goes beyond classrooms and laboratories. You'll also undergo work-based learning in our state-of-the-art facilities to acquire a range of scientific and engineering skills and a six-month internship to apply your knowledge and skills in the industry.

In Year 3, choose your specialisation in Applied Chemistry, Sustainable Energy & Chemical Production, Pharmaceuticals & Biologics Manufacturing, Semiconductor Technology or Technical Sales & Marketing. In addition, you have the option to join the University Pathway Programme (SUTD), which allows you to take university modules during your final year and gain conditional admission into Singapore University of Technology and Design, shortening the time needed to get your degree. The holistic training in this course will enable you to embark on a rewarding career in many growing sectors, including petrochemical, speciality chemical, pharmaceutical, energy, semiconductor, environment and water industries.

#### Year 1 Subjects

- Basic Microbiology
- Cell Biology & Biochemistry
- Digitalisation in Applied Science
- Laboratory & Workplace Safety
- Mathematics for Applied Science
- Nutrition & Health
- Principles of Inorganic & Physical Chemistry 1
- Statistics for Applied Science

#### Year 2 Subjects

- Chemical Reaction Engineering
- Chemical Thermodynamics
- Engineering Mathematics
- Mass & Energy Balance
- Organic Chemistry
- Process Control & Instrumentation
- Plant Processes & Renewable Energy
- Unit Operations

#### Year 3 Subjects

Major Project

#### ASC Elective Clusters:

- Applied Chemistry
- Pharmaceuticals & Biologics Manufacturing
- Semiconductor Technology (jointly offered by School of Applied Science and School of Engineering)

- Sustainable Energy & Chemical Production
- Technical Sales & Marketing

#### University Pathway Programme (SUTD)^

- Computational Thinking for Design
- Modelling & Analysis
- Physical World
- Social Science: Understanding Behaviour, Culture & Society

^ For selected students

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

Upon graduation, you can take up several SkillsFuture Work-Study Programmes. These include the Specialist Diploma in Environment & Water Technology, Specialist Diploma in Energy Technology & Energy Sustainability, Advanced Diploma in Chemical Engineering, Advanced Diploma in Specialty Chemicals and Specialist Diploma in Biopharmaceutical Technology or similar programmes.

In addition, you can pursue a degree in Chemical Engineering, Chemistry, Environmental Engineering, Material Science & Engineering or similar disciplines in any local or overseas university and receive advanced standing at many of these institutions.

#### **Career Opportunities**

- Assistant Engineer or Process Technician
- Chemist, Laboratory or Research Technologist
- Health, Safety and Environment (HSE) Specialist
- Production or Operation Supervisor
- Quality Assurance Engineer
- Technical Services Engineer

Note: Applicants with severe visual impairment or severe colour vision deficiency may have difficulties meeting the course requirements and expectations. Please contact the School for more information.

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## T26 SCIENCE



Scan for full details, or visit: **www.tp.edu.sg/t26** 

#### The Course

Have you ever wanted to experiment with local favourites, such as chicken rice or roti prata, and give them a healthier makeover? Are you curious about the science behind meatless meat and what to look for on a food label?

Learn the science behind the food we consume and integrate food science, nutrition, and culinary disciplines. As you get handson in our on-campus central kitchen, you'll learn to prepare healthy, delicious, market-ready and safe meals. You'll also better understand how to plan and conduct community health and nutrition programmes.

Our strong network of industry ties provides you with opportunities for real-world learning through local or overseas internships and industry projects. With a curriculum designed to meet the skills and competencies needed by the different industries, you'll be ready to pursue a career you can be passionate about.

Join us in our food revolution to create nutritious, sustainable, safe recipes!

#### Year 1 Subjects

- Basic Microbiology
- Cell Biology & Biochemistry
- Digitalisation in Applied Science
- Laboratory & Workplace Safety
- Mathematics for Applied Science
- Nutrition & Health
- Principles of Inorganic
   & Physical Chemistry 1
- Statistics for Applied Science

#### Year 2 Subjects

- Baking & Culinary Technology
- Chemistry of Food
- Food Safety & Quality Assurance
- Human Anatomy & Physiology
- Lifespan & Community Nutrition
- Metabolism & Medical Nutrition
   Therapy
- Product Development & Marketing
- Science of Food Ingredients

#### Year 3 Subjects

Major Project

#### ASC Elective Clusters:

- Applied Nutrition
- Food Technology
- Future Food Technology
- Technical Sales & Marketing

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

As a graduate of this course, you can skill up via various SkillsFuture Work-Study Programmes, such as the Advanced Diploma in Applied Food Science, Specialist Diploma in Culinary Management, Specialist Diploma in Microbiology, Specialist Diploma in Nutrition & Exercise Science, or Specialist Diploma in Nutrition Science.

In addition, you can also further your studies in Food Science, Food Technology, Nutrition, Dietetics or Culinary Science / Management in local or overseas universities and can expect to receive advanced standing at many of these institutions.

#### **Career Opportunities**

- Assistant Food Technologist
- Food & Beverage Coordinator
- Junior R&D Chef
- Laboratory Technician
- Nutrition/ Dietetic Technologist
- Nutrition/ Health Educator
- Quality Assurance (QA)/ Quality Control (QC) Executive







#### The Course

Your journey towards healthcare begins with us! Do you dream of a career that blends compassion with cutting-edge advancements? Have you wondered about the science behind COVID-19 PCR tests and vaccines? These diagnostic tests are developed by research technologists, and used by medical technologists, which are among the many exciting roles and careers this course prepares you for.

Medical biotechnology uses living cells and cell materials for research to develop more efficient ways of maintaining and improving human health. This course combines theory with hands-on experience to equip you with the skills to become a versatile professional in clinical laboratory and cardiac diagnosis. This diploma is also unique in Singapore as it trains you to work in BOTH biomedical science and biotechnology research industries. In Year 3, you can opt for one of the following industry-relevant Elective Clusters: Cardiology Technology, Clinical Laboratory Practice, Pharmaceuticals & Biologics Manufacturing, Translational Biological Research, and Technical Sales & Marketing. During your local or overseas six-month internship programme, you'll undergo work-based training to continue honing your skills and knowledge in related industries.

Upon graduation, you can embark on a rewarding career as a laboratory technologist or associate clinical research coordinator in the biomedical sciences industry, such as research and tertiary institutions, hospitals, speciality centres, pharmaceutical and biotechnology companies. You can also become a medical laboratory technologist and cardiac technologist to meet the growing demand for laboratory support in hospitals, diagnostic laboratories, heart centres and cardiology clinics.

#### Year 1 Subjects

- Basic Microbiology
- Cell Biology & Biochemistry
- Digitalisation in Applied Science
- Laboratory & Workplace Safety
- Mathematics for Applied Science
- Nutrition & Health
- Principles of Inorganic & Physical Chemistry 1
- Statistics for Applied Science

#### Year 2 Subjects

- BioAnalytical Technology
- Cell Technology
- Haematology & Blood Banking
- Human Anatomy & Physiology
- Immunochemistry
- Molecular Biology
- Systems & Synthetic Biology
- Tissue Engineering & Regenerative Medicine

#### Year 3 Subjects

Major Project

#### ASC Elective Clusters:

- Cardiology Technology
- Clinical Laboratory Practice
- Pharmaceuticals & Biologics Manufacturing

- Translational Biological Research
- Technical Sales & Marketing

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

This diploma is recognised by all local universities, such as the National University of Singapore (Life Sciences, Medicine, Nursing, Environmental Studies), Nanyang Technological University (Biological Sciences, Biomedical Sciences and BioBusiness, Biomedical Sciences and Chinese Medicine, Business, Chemistry and Biological Chemistry), Singapore Institute of Technology (Physiotherapy, Diagnostic Radiography, Occupational Therapy, Speech and Language Therapy), as well as over 200 universities overseas. You could also be granted between one to two years of credit and exemption towards your Bachelor degree programmes.

There are also available certification courses, such as Certificate in Phlebotomy, as well as SkillsFuture Work-Study Programmes, such as Specialist Diploma in Biopharmaceutical Technology, and Specialist Diploma in Laboratory Management & Instrumentation.

#### **Career Opportunities**

- Assistant Clinical Research Coordinator
- Cardiac / Echo Technologist
- Laboratory Assistant or Technical Support
  - Medical Laboratory Technologist
  - Medical/ Scientific Sales and Marketing Executive or Product Specialist
  - Science Instructor







#### The Course

Medicines affect our quality of life. We take aspirin for headaches or apply topical antibiotics on wounds. With the continual expansion of the healthcare industry and more multinational pharmaceutical companies making Singapore their global manufacturing base, exciting career opportunities abound in this sector!

Be equipped with knowledge and skills related to drug action on diseases, medicine legislation, and patient counselling to be a pharmacy technician in hospitals and retail pharmacies. You'll also acquire skills in pharmaceutical analysis and current good manufacturing practices to work in the pharmaceutical manufacturing industry.

In Year 3, choose your specialisation in Pharmacy Practice, Pharmaceuticals & Biologics Manufacturing or Technical Sales & Marketing to undergo work-based training in these areas and apply your skills in the related fields during the six-month internship programme. Our broad-based training will equip you with in-demand and transferable skills for careers in various allied health professions, including opportunities beyond the pharmaceutical science industries.

Embark on a meaningful and rewarding career where you can play a part in safeguarding health by making quality drugs and imparting knowledge on the safe use of medicines.

#### Year 1 Subjects

- Basic Microbiology
- Cell Biology & Biochemistry
- Digitalisation in Applied Science
- Laboratory & Workplace Safety
- Mathematics for Applied Science
- Nutrition & Health
- Principles of Inorganic & Physical Chemistry 1
- Statistics for Applied Science

#### Year 2 Subjects

- Current Good Manufacturing Practice & Process Improvement
- Fundamentals of Pharmacy Practice & Pharmacology
- Human Systems & Pharmacotherapy 1
- Human Systems & Pharmacotherapy 2
- Pharmaceutical Analysis 1
- Pharmaceutical Analysis 2
- Pharmaceutics & Compounding

#### Year 3 Subjects

Major Project

#### ASC Elective Clusters:

- Pharmacy Practice
   Pharmaceuticals & Biologics Manufacturing
- Technical Sales & Marketing

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

Upon graduation, you can take up SkillsFuture Work-Study Programmes such as the Advanced Diploma in Pharmaceutical Science, Specialist Diploma in Laboratory Management & Instrumentation, as well as upskilling courses in biologics manufacturing to support the growing pharmaceuticals and biopharmaceutical industry. For local and overseas degree options, you can pursue the following disciplines: Pharmacy, Pharmaceutical Science; Pharmaceutical Engineering; Pharmacology; and Health Science programmes such as Nursing, Physiotherapy, Diagnostic Radiography, Occupational Therapy, Life Sciences, Chemistry, and Medicine and Dentistry, where advanced standing is offered in many of these institutions.

#### **Career Opportunities**

- Laboratory Technician
- Pharmaceutical Sales and Marketing Executive
- Pharmacy Technician
- Production Technician/ Assistant Biotechnologist
- Quality Assurance (QA) Assistant
- Quality Control (QC) Laboratory Analyst







#### The Course

Transform your passion for animals into a fulfilling and meaningful career path! This comprehensive course integrates theoretical knowledge with hands-on practice, empowering you to become a skilled veterinary technician. If you're harbouring aspirations in marine science or aquaculture, rest assured this programme will also lay a solid foundation for your future endeavours in these fields.

Under the guidance of our expert team, you'll receive specialised training in veterinary care, mastering essential techniques such as animal husbandry, anaesthesia monitoring, and diagnostic testing at our fully equipped and licensed TP Animal Clinic & Wellness facility. The broad-based and well-structured curriculum goes beyond to cultivate your expertise in caring for aquatic animals and pets.

With growing awareness about animal welfare issues and our pursuit of advancing medical solutions for various ailments, you'll gain a scientific grasp of the applications of laboratory animal science, with an emphasis on responsible and humane animal care practices. Further enhancing your technical proficiency, a structured 5-month internship awaits you, either within local institutions or abroad. This immersive experience can take you to veterinary research institutions, aquaculture and marine animal facilities, veterinary clinics and hospitals.

Upon completing this comprehensive training, you'll be poised to tap into a wide array of career prospects spanning the aquaculture, veterinary care, and biomedical research sectors.

#### Year 1 Subjects

- Basic Microbiology
- Cell Biology & Biochemistry
- Digitalisation in Applied Science
- Laboratory & Workplace Safety
- Mathematics for Applied Science
- Nutrition & Health
- Principles of Inorganic & Physical Chemistry 1
- Statistics for Applied Science

#### Year 2 Subjects

- Animal Anatomy & Physiology
- Animal Welfare & Conservation
- Aquatic Care, Health & Nutrition
- Clinical Diagnostic Techniques
- Clinical Practicum
- Professional Veterinary Practice
- Principles of Animal Healthcare & Disease
- Veterinary Anaesthesia & Pharmacology
- Veterinary Nursing Practice
- Year 3 Subjects
- Animal Genetics & Breeding
- Major Project

#### ASC Elective Clusters:

- Aquaculture
- Technical Sales & Marketing
- Veterinary

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

After you graduate, you can take up SkillsFuture Work-Study Programmes such as our Specialist Diploma in Veterinary Wellness Care or other Specialist Diploma courses related to Veterinary and Life Sciences. This diploma is recognised by local universities, such as the National University of Singapore, Nanyang Technological University, Singapore Institute of Technology, Singapore Management University and Singapore University of Social Sciences, as well as overseas universities.

You can also pursue a degree in veterinaryrelated programmes such as Veterinary Technology, Marine Science or Zoology overseas. For local or foreign university degrees, you can pursue Life Sciences, Health Sciences or other Science-related disciplines.

#### **Career Opportunities**

- Animal Health Inspection Officer
- Animal Management Officer
- Aquaculture Technologist/ Technician
- Aquarist
- Laboratory Technologist/Technician
- Pet Care Consultant
- Veterinary Technician/ Nurse



## SUMMARY OF APPLIED SCIENCE ELECTIVE CLUSTERS

| COURSE                                      | ELECTIVE CLUSTERS   |
|---|---|
| ALL SCHOOL OF APPLIED SCIENCE (ASC) COURSES | Technical Sales & Marketing<br>• Marketing Account Management<br>• Marketing of Science Products & Services   |
| [T33] CHEMICAL ENGINEERING                  | <ul> <li>Applied Chemistry         <ul> <li>Laboratory Analysis &amp; Materials Testing</li> </ul> </li> <li>Sustainable Energy &amp; Chemical Production         <ul> <li>Sustainable Energy &amp; Chemical Processing</li> </ul> </li> <li>Pharmaceuticals &amp; Biologics Manufacturing         <ul> <li>Pharmaceuticals &amp; Biologics Process Technology</li> </ul> </li> <li>Semiconductor Technology (jointly offered by ASC and ENG)         <ul> <li>Cleanroom Equipment &amp; Technology</li> <li>Good Manufacturing Practices Implementation</li> <li>Integrated Circuit Process Integration</li> </ul> </li> </ul> |
| [T26] FOOD, NUTRITION & CULINARY SCIENCE    | Applied Nutrition<br>• Clinical Nutrition & Food Service Management<br>Food Technology<br>• Food Process & Production Technology<br>Future Food Technology<br>• Food Biotechnology  |
| [T64] MEDICAL BIOTECHNOLOGY                 | Cardiology Technology<br>• Clinical Cardiology<br>Clinical Laboratory Practice<br>• Medical Laboratory Technology<br>Translational Biological Research<br>• Innovations in Biotechnology<br>Pharmaceuticals & Biologics Manufacturing<br>• Pharmaceuticals & Biologics Process Technology   |
| [T25] PHARMACEUTICAL SCIENCE                | <ul> <li>Pharmacy Practice</li> <li>Pharmacotherapy &amp; Advanced Pharmacy Practice</li> <li>Pharmaceuticals &amp; Biologics Manufacturing</li> <li>Pharmaceuticals &amp; Biologics Process Technology</li> </ul>  |
| [T45] VETERINARY TECHNOLOGY                 | Aquaculture<br>• Aquaculture Science & Technology<br>Veterinary<br>• Animal Science & Technology  |

\* Note: Year 3 students may select only one Elective Cluster, either from their diploma or another ASC diploma. For the latter, please refer to their corresponding career options. Not all elective clusters are offered in an academic year.

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redefining business frontiers



school of business

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#### SCHOOL OF BUSINESS

Are you intrigued by the buzz around artificial intelligence, metaverse, sustainability and the digital transformation of businesses? Ever wondered how homegrown and international brands like Apple, Singapore Airlines and Grab are propelled to unprecedented success and continue to stay ahead through their business practices and innovative marketing ideas, creative products and services? As society becomes more aware of its carbon footprint through the consumption of products and services, how do businesses keep up with sustainable business practices and remain profitable? Your journey to learn about these business strategies and innovation begins here at the School of Business (BUS).

BUS empowers you to create your future and fulfil your aspirations. With an array of eight dynamic full-time diploma courses spanning Accountancy & Finance, Media, Culinary Management, Hospitality, Law and Logistics, and Marketing, you'll find one that matches your passion. Our curriculum equips you with practical skills complemented by a strong foundation in core business management subjects, giving you a head start in the rapidly evolving business landscape.

Our multi-disciplinary curriculum transcends the classroom, offering immersive experiential learning journeys that dive deep into business innovation and digitalisation. From ideation to solution, you'll collaborate with industry leaders to create business value, all while staying agile in the face of disruptive changes. It's a real-world education that prepares you for the challenges of the modern business world.

Enjoy a rich tapestry of co-curricular activities, enrichment programmes, and engaging opportunities to participate in campus and overseas activities. These experiences mould you into a well-rounded professional poised to thrive in the digital-first economy.

Your three-year journey will cultivate resourcefulness, innovation, and entrepreneurial acumen within you. In BUS, we develop the next generation of movers and shakers who are digitally savvy with a green mindset in the globalised business environment. It's time to begin your career success story with us!

#### Common entry programme

• [T01] Common Business Programme

#### Full-time diploma courses

- [T02] Accountancy & Finance
- [T10] Business
- [T40] Communications & Media Management
- [T18] Culinary & Catering Management
- [T08] Hospitality & Tourism Management
- [T07] International Trade & Logistics
- [T09] Law & Management
- [T67] Marketing

#### General and admissions enquiries

Tel : 6788 2000 Email : admissions@tp.edu.sg

#### **Course enquiries**

| Tel     | : 6780 5127            |
|---------|------------------------|
| Email   | : bushotline@tp.edu.sg |
| Website | : www.tp.edu.sg/bus    |

#### For the latest tuition fees, visit:

www.tp.edu.sg/coursefees

#### MINIMUM ENTRY REQUIREMENTS

To be eligible for: [T40] Communications & Media Management [T09] Law & Management

English Language Grades 1 - 4

Mathematics (Elementary/Additional) Grades 1 - 7

Any one of the 1st group of Relevant Subjects for the ELR2B2-A Aggregate Type Grades 1 - 6

Best two other subjects, excluding CCA

#### To be eligible for:

[T01] Common Business Programme
[T02] Accountancy & Finance
[T10] Business
[T18] Culinary & Catering Management
[T08] Hospitality & Tourism Management
[T07] International Trade & Logistics
[T67] Marketing

English Language Grades 1 - 6

Mathematics (Elementary/Additional) Grades 1 - 6

Any one of the 2nd group of Relevant Subjects for the ELR2B2-B Aggregate Type Grades 1 - 6

Best two other subjects, excluding CCA

For details on ELR2B2-A and ELR2B2-B, visit: www.tp.edu.sg/elr2b2



## T01 COMMON BUSINESS PROGRAMME



Scan for full details, or visit: www.tp.edu.sg/t01

#### The Course

Are you excited about the business world but need more time, information and experiences before deciding which field to pursue? Then join the Common Business Programme (CBP) – your gateway to many possibilities, shaping the bedrock of your journey toward your dream career.

The one-year CBP helps you navigate the diverse functions of the vast business landscape through the newly curated ENhanced learning modules (EN modules) from seven diplomas offered by the School of Business. The EN modules allow you to explore topics across disciplines before narrowing down your focus on one diploma to pursue.

The CBP is designed to:

- Equip you with strong business foundation knowledge spanning diverse business domains, arming you with the essential toolkit required to thrive in an ever-evolving business landscape.
- **Experience** subjects from different disciplines like accounting, business management, marketing, and other essential aspects of business to help you make a well-informed decision when choosing a diploma tailored to your passions and aspirations.
- **Explore** your strengths, interests, and passion through education and career guidance to equip you with self-awareness and a clear sense of direction before deciding on a diploma to pursue.
- **Empower** you with the unique opportunity to select from seven diploma courses offered by the School of Business, giving you the autonomy to tailor your academic journey according to your interests and professional goals. These diploma courses include:
  - [T02] Accountancy & Finance
  - [T10] Business
  - [T18] Culinary & Catering Management
  - [T08] Hospitality & Tourism Management
  - [T07] International Trade & Logistics
  - [T09] Law & Management
  - [T67] Marketing

#### Notes:

- 1. CBP students who opt for the Diploma in Culinary & Catering Management will stream into the course in Year 1 Semester 2.
- 2. CBP students who opt for the other six courses will make their diploma selections at the end of Year 1 Semester 2, and progress to their selected diploma courses in Year 2.
- 3. CBP students who opt for Diploma in Law & Management must meet a minimum B4 grade for English Language (EL1).
- 4. Please see the sections on these diploma courses for more information.

#### **Programme Subjects**

#### **Business Core Subjects**

- Business Accounting
- Business Economics
- Business Psychology & Management
- Business Technology & Analytics
- Marketing Fundamentals
- Statistics for Business

#### Elective Subjects (Choose 2)

- Business Law
- Finance & Accounting for Decision Making
- Global Economics
- Introduction to Hospitality & Tourism
- Legal Methods
- Legal Systems
- Tourism Geography
- Visual Communication







#### The Course

Accountancy and finance are essential functions of an organisation that empower it to thrive in the present and strategically plan for the future. With the growing awareness of climate change, interest in sustainable finance and sustainability reporting rises as well. As Singapore continues to be the global hub for finance and accountancy, the demand for skilled professionals in accounting, finance, fintech and sustainable finance is poised to increase.

This course provides a holistic education with a strong focus on accounting, finance, and sustainability. You will develop critical industry-relevant skills that are instrumental in the digital economy's accounting, finance, and sustainability sectors while nurturing sound business acumen. Furthermore, there are two elective tracks – Accountancy or Investment & Banking – that you can choose in your third year of study to deepen your learning in the area which interests you.

Real-world client projects, competitions, and immersive internships with industry partners, which include the Big Four accounting firms and reputable multinational corporations, await you. This ensures that your learning experience is holistic and relevant. Robust, practical, and industry-relevant, the course is designed to instil confidence and equip you with relevant knowledge and multi-disciplinary skills to be future-ready to thrive in diverse industries.

#### Year 1 Subjects

- Business Accounting
- Business Economics
- Business Psychology & Management
- Business Technology & Analytics
- Marketing Fundamentals
- Statistics for Business

#### Elective Subjects (Choose 2)

- Business Law
- Finance & Accounting for Decision Making
- Global Economics
- Introduction to Hospitality & Tourism
- Legal Methods
- Legal Systems
- Supply Chain Management & Technology
- Tourism Geography
- Visual Communication

#### Year 2 Subjects

- Auditing
- Business Finance
- Corporate & Sustainability Reporting
- Digital Accounting Technologies
- & ApplicationsFinancial Accounting
- Fundamentals of Investment
- Information Systems & Financial Analytics
- International Finance
- Management Accounting

#### Year 3 Subjects

A&F Capstone Project
Sustainable Finance

## Students will choose one of the following sets of electives in Year 3 of their studies:

- Accounting: Taxation, Advanced Financial Accounting
- Investment & Banking: Financial Technology, Security Analysis & Portfolio Management

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

There are boundless local and overseas opportunities for graduates who want to pursue further university studies or professional certificates. Fresh polytechnic graduates can also get a career head start with the SkillsFuture Work-Study Programmes related to their discipline of studies or pursue post-diploma courses under the Continuing Education & Training (CET) programme.

Exemptions of up to one year have been granted to our graduates who applied for further studies in universities based in Commonwealth countries such as Australia and the United Kingdom. In addition, our diploma holders also receive numerous exemptions from the following professional associations: Association of Chartered Certified Accountants (ACCA); Chartered Institute of Management Accountants (CIMA); and Institute of Chartered Accountants in England and Wales (ICAEW).

#### **Career Opportunities**

Executive positions in:

- Auditing
- Banking
- Financial Accounting
- Financial Analytics
- Financial Planning
- Financial Product Innovation
- Fintech
- Investment Management
- Management AccountingProject Management
- Securities Trading
- Securities frading
- Sustainability Reporting
- Sustainable Finance
- Tax Management
- Trade Finance







#### The Course

In today's dynamic, digitalised and interconnected world, having digital business and entrepreneurial knowledge and skills is key to elevating your competitiveness in the industry. Through this course, you'll build a firm foundation in business with skills, competencies, and knowledge aligned across various sectorial Skills Frameworks. International business outlook and industryrelevant digital skills aside, you will also develop an entrepreneurial mindset and grow business innovation capabilities upon successfully completing the course.

You'll deepen your knowledge and skills in one of these areas: Banking & Finance, Digital Business Innovation, Human Resource (HR) Management with Psychology and International Business & Entrepreneurship. The HR elective cluster is also accredited by the Society for Human Resource Management, the largest globally recognised professional HR membership association. You'll engage in real-life industry projects that foster collaboration and internships that immerse you in real-world scenarios, including a Guided Work-based Learning where students have the option to spend a year in the internship companies. Whether you aspire to start your own business or step into the corporate arena, our course equips you with multi-disciplinary and transferable skillsets to succeed in diverse roles and industries.

#### Year 1 Subjects

- Business Accounting
- **Business Economics**
- Business Psychology & Management
- Business Technology & Analytics
- Marketing Fundamentals
- Statistics for Business

#### Year 2 Subjects

- Business & Social Media Analytics
- **Business Finance**
- Customer Experience Design
- E-Commerce & Digital Marketing
- Enterprise Resource Management
- People Management

#### Year 3 Subjects

- Innovation Project Synthesis
- Sustainability & Business Agility

#### Students will take subjects in their Year 2 and 3 of studies based on one of the following four elective clusters: **Banking & Finance**

- Banking Products & Services
- Financial Technology
- Fundamentals of Investment
- International Finance
- Security Analysis & Portfolio Management

#### **Digital Business Innovation**

- Business Information Systems Security & Audit
- **Business Transformation & Innovation**
- **Digital Business Development & Strategies**
- E-Customer Relationship Management
- Start-up Launchpad

#### Human Resource Management with Psychology

- Counselling Psychology in the Workplace
- Employment Laws
- Learning & Talent Development
- Talent Acquisition & Management
- Total Rewards Management

#### International Business & Entrepreneurship

- Business in Asia
- Global Trade & Singapore Logistics
- International Finance
- Product & Service Innovation
- Start-up Launchpad

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forwardthinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

There are boundless local and overseas opportunities for graduates who want to pursue further university studies or professional certificates. As a graduate, you could also consider the SkillsFuture Work-Study Programmes, which are designed to give fresh polytechnic graduates a head start in careers related to their discipline of studies. In addition, our graduates can ride on the SkillsFuture initiative to pursue post-diploma courses under the Continuing Education & Training (CET) programme.

#### **Career Opportunities**

Executive positions in:

- Accounting
- Banking & Finance
- Business Analytics
- **Business Development**
- **Business Operations**
- . Data Analytics
- Digital Marketing
- Human Capital Development
- Procurement
- Product Innovation
- Project Management
- Sales Management

- - •

  - Enterprise Resource Management







#### The Course

Imagine a world where your words, images, and stories hold the power to captivate audiences and shape narratives. Step into the vibrant world of media and communications, where every story has the power to captivate, inspire, and influence.

This course exposes you to an array of highly sought-after skills in journalistic writing, digital content creation and media production. Collaborate with like-minded peers to create exciting editorial and edutainment content for our campus news portal, Stories & Co., and our on-campus radio station, RadioActive.

You'll learn to incorporate storytelling with digital communication skills to create strong business narratives with a green mindset. Through our industry partnerships, you'll get opportunities to work on collaborative client projects where you'll create engaging content to connect communities and forge lasting impressions.

#### Year 1 Subjects

- Business Accounting
- Business Economics
- Business Psychology & Management
- Business Technology & Analytics
- Digital Media Fundamentals
- Journalism Fundamentals
- Marketing Fundamentals
- Media Writing
- Visual Communication

#### Year 2 Subjects

- Audio Production
- Digital & Social Media Marketing
- Digital Content Management
- Media Research & Analysis
- Mobile Journalism
- Video Production

#### Students will take subjects in their Year 2 of studies based on the following two elective clusters:

#### Integrated Media

- Integrated Media Management
- Integrated Media Production

#### <u>Journalism</u>

- Digital Journalism
- News Centre Management

#### Year 3 Subjects

- Major Project
- Media Business & Management
- Media Law

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

There are boundless local and overseas opportunities for graduates who want to pursue further university studies or professional certificates. As a graduate, you could also consider the SkillsFuture Work-Study Programmes, which are designed to give fresh polytechnic graduates a head start in careers related to their discipline of studies. In addition, our graduates can ride on the SkillsFuture initiative to pursue post-diploma courses under the Continuing Education & Training (CET) programme.

#### **Career Opportunities**

- Communications Specialist
- Content Producer
- Content Strategist
- Digital Marketing Executive
- Journalist
- Mediapreneur
- Public Relations Specialist
- Radio/TV Producer
- Social Media Executive







#### The Course

The food services industry plays a vital role in Singapore's economy. Food businesses are constantly looking at innovative concepts and strategies to seize new growth opportunities in areas such as sustainable food. Established in 2006, this course is the pioneer polytechnic culinary diploma that combines Baking & Pastry, Culinary Arts and Restaurant Service with business knowledge to prepare you to be career-ready for the food business industry as tomorrow's tastemakers. Through our strong industry partnerships, you'll venture beyond the classrooms to participate in various local and overseas activities encompassing diverse culinary and cultural experiences.

You'll gain strong foundational business skills before immersing in intensive, hands-on training sessions at our state-of-the-art facility, the Temasek Culinary Academy\*, where you'll learn to curate gastronomic experiences. In your final year, you'll embark on an invaluable 20-week internship with some of the world's most renowned food businesses. If you aspire to own and manage a restaurant or are passionate about the food and beverage business, this course will equip you with skills in food business innovation and revenue management. We prepare you to take on the culinary world with a business-oriented approach, enabling you to thrive in the competitive food industry.

\*The Temasek Culinary Academy (TCA) has been a Centre of Excellence for Food Service skills training since 2007. TP is also a six-time Hospitality Institution of the Year winner and received our latest honour at the World Gourmet Summit Awards 2022.

#### Year 1 Subjects

- Business Accounting
- Business Economics
- Business Psychology & Management
- Business Technology & Analytics
- Food Safety & Hygiene
- Introduction to Gastronomy
- Statistics for Business
- Sustainable Food Systems

#### Year 2 Subjects

- Baking & Pastry Practicum
- Culinary Practicum
- Food & Beverage Cost Management
- Food & Beverage Operations
- Service Practicum
- Wine & Beverage

#### Year 3 Subjects

- Food & Beverage Productivity & Revenue Management
- Food Business Innovation
- Marketing for Restaurant & Catering
- Start-up Launchpad

## Students will take subjects in their Year 2 of studies based on the following two elective options:

- Baking & Pastry Practicum
- Culinary Practicum

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

There are boundless local and overseas opportunities for graduates who want to pursue further university studies or professional certificates. Our diploma is wellrecognised by many renowned universities and institutions such as the Singapore Institute of Technology (SIT) and the Culinary Institute of America (CIA). As a graduate, you could also consider the SkillsFuture Work-Study Programmes, which are designed to give fresh polytechnic graduates a head start in careers related to their discipline of studies. In addition, our graduates can ride on the SkillsFuture initiative to pursue post-diploma courses under the Continuing Education & Training (CET) programme.

#### **Career Opportunities**

Frontline supervisory and executive positions at:

- Caterers and production kitchens
- Food and lifestyle marketing agencies and publications
- Food supply, purchasing and companies
- Hotels and integrated resorts
- Independent or chain restaurants

Note: Students will be exposed to a wide variety of products including alcohol, meats (e.g. beef and pork) and their by-products. Our kitchens and restaurants are not Kosher or Halal certified. Although tasting is optional, students are required to handle and serve these products, as well as wash non-Kosher / Halal equipment, Applicants with medical conditions and/or physical disabilities which affect safety and sanitation practices, or the wearing of prescribed uniforms should declare them, and submit a qualified doctor's certification of fitness for enrolment. Students will also need to purchase cookbooks, uniforms, knife set etc., which are not included in the tuition fee.







#### The Course

The demand for hospitality and tourism talents is poised for strong growth as the world embraces the strong rebound of leisure adventures and global business travel. As the pioneer polytechnic diploma in hospitality and tourism, this course ensures that you're employable from the moment you graduate.

Transform your passion for travel into a thriving career in the hospitality and tourism industry and contribute to the future of sustainable tourism. Exceptional people skills are critical in the hospitality sector. Service professionals who are able to build rapport, establish positive relationships, and effectively interact with people from diverse backgrounds are highly valued in an increasingly digitalised world. Through our practice-based teaching approaches, students will learn to anticipate customer needs, overcome challenges, and ensure that every moment is remarkable.

Immerse yourself in work-based learning, embark on eye-opening overseas study trips, and gain invaluable international exposure through overseas internships to popular tourism destinations like New Zealand, Maldives, and Mauritius. You get to engage in community projects and co-curricular activities that round out your development, equipping you with the future-ready capabilities sought after in the world of hospitality and tourism within and beyond the Singapore shores.

#### Year 1 Subjects

- Business Accounting
- Business Economics
- Business Psychology & Management
- Business Technology & Analytics
- Introduction to Hospitality & Tourism
- Marketing Fundamentals
- Statistics for Business
- Tourism Geography
- Work-Based Learning 1

#### Year 2 Subjects

- Airline Business
- Business & Leisure Events
- Customer Experience Innovation
- Digital & Social Media Marketing
- Lodging Operations
- Personal Branding
- Sales & Negotiation
- Service DNA
- Work-Based Learning 2

#### Year 3 Subjects

- Destination Planning
- Major Project
- Sustainable Gastro-Tourism
- Viral Marketing

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

There are boundless local and overseas opportunities for graduates who want to pursue further university studies or professional certificates. As a graduate, you could also consider the SkillsFuture Work-Study Programmes, which are designed to give fresh polytechnic graduates a head start in careers related to their discipline of studies. In addition, our graduates can ride on the SkillsFuture initiative to pursue post-diploma courses under the Continuing Education & Training (CET) programme. Career Opportunities

Frontline and executive positions at:

- Airlines and Airports
- Cruise Companies
- Food & Beverage Businesses
- Hotels, Resorts and Serviced Residences
- Leisure Attractions
- Meetings, Incentives, Conferences, Exhibitions (MICE) & Events Management Companies
- National Tourism Organisations
- Tour and Travel Businesses

You'll also be equipped with transferrable knowledge and skill sets for emerging job roles such as:

- Business Development
- Customer Experience
- Customer Service
- Digital Marketing
- Sales & Marketing
- Social Media Marketing and Content Creation
- Wellness and Sustainability







#### The Course

International trade's growth relies heavily on the seamlessly functioning global supply chains bridging businesses and nations. The strong growth in e-commerce in recent years has further highlighted the importance of international trade and logistics. Freight and logistics companies, from shipping companies and airlines to door-to-door delivery services, play a vital role in bringing online purchases to our doorstep. As the backbone of this thriving ecosystem, a logistics professional must possess up-to-date knowledge and skills in international trade and supply chain management.

Our course equips you with the knowledge and skills to navigate this dynamic landscape. Be industry-ready in the logistics domain through a strong foundation in business studies and specialised training in essential supply chain functions. Dive deep into freight forwarding operations, supply management, and sustainability-driven logistics. Explore the nuances of international trade compliance and equip yourself with indispensable digitalisation skills to navigate this exciting global trade landscape.

In addition, our holistic learning environment will enhance your communication, teamwork, and collaboration skills as you engage in internships and interdisciplinary projects that immerse you in logistics and other domains. This real-world experience solidifies your readiness for the industry. Our graduates are highly employable, and many have gone on to carve their international trade and logistics careers in reputable companies. Join us as we prepare you to be movers and shakers to create businesses for tomorrow.

#### Year 1 Subjects

- Business Accounting
- Business Economics
- Business Psychology & Management
- Business Technology & Analytics
- Marketing Fundamentals
- Statistics for Business
- Supply Chain Management & Technology

#### Year 2 Subjects

- Business Process Improvement Methods
- Distribution Centre Management
- Enterprise Resource Management
- International Finance
- International Trade & Digitalisation
- International Trade & Transport
- Logistics Analytics
- Procurement & Materials Management

#### Year 3 Subjects

- Applied Project
- Chemical & Cold Chain Logistics
- International Freight & Trade Compliance

#### Students will take subjects in their Year 2 and 3 of studies based on following two elective clusters:

#### E-Commerce Logistics

- Digital Business Development & Strategies
- Urban Logistics & E-Commerce

#### Manufacturing Logistics

- Industrial IoT Analytics
- Manufacturing Logistics & Simulation

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

There are boundless local and overseas opportunities for graduates who want to pursue further university studies or professional certificates. As a graduate, you could also consider the SkillsFuture Work-Study Programmes, which are designed to give fresh polytechnic graduates a head start in careers related to their discipline of studies. In addition, our graduates can ride on the SkillsFuture initiative to pursue post-diploma courses under the Continuing Education & Training (CET) programme.

#### **Career Opportunities**

Executive and supervisory positions in:

- Account Management
- Business / Supply Chain / Trade Analysis
- Chemical and Cold-Chain Logistics
- Customer Service
- E-Commerce Fulfilment
- Import / Export Operations
- Inventory Planning
- Purchasing and Materials Management
- Shipping / Transport
- Warehousing







#### The Course

The only polytechnic law diploma in Singapore, this course equips you with relevant knowledge and hands-on skills for a career in the legal industry as an allied legal professional.

Theoretical and procedural law subjects are built upon a strong foundation in business – communication skills, management, accounting, economics, technology, and marketing. Lifelong skills such as innovation, entrepreneurship and a global mindset are part of the training you'll receive. You'll also be trained to use the latest Legal Technology applications, ensuring you're adept at the technology that is transforming legal practice.

Our multi-disciplinary approach equips you to manage issues comprehensively and add value to the legal profession. Our lecturers bring years of experience in the business and legal industry and will guide you every step of the way.

The course has strong support from key industry partners such as the Singapore Academy of Law and the Law Society of Singapore. A 16-week internship provides realistic on-the-job training with law firms and legal departments in public and private organisations, which enables you to sharpen your mind and deepen your understanding of the legal industry.

Upon graduating from this course, you'll be an intuitive communicator and well-placed to start a fulfilling career in the legal industry with a practical approach to the world.

#### Year 1 Subjects

- Business Accounting
- Business Economics
- Business Psychology & Management
- Business Technology & Analytics
- Legal Methods
- Legal Systems
- Marketing Fundamentals
- Statistics for Business

#### Year 2 Subjects

- Company Law
- Conveyancing Law & Procedure
- Criminal Law
- Family Law
- Law of Contract
- Law of Tort
- Legal Innovation & Technology
- Legal Skills

#### Year 3 Subjects

- Civil Procedure
- Corporate Secretarial Administration
- Criminal Procedure
- Intellectual Property
- Legal Operations & Sustainability Management

## Students will take two out of three elective subjects in their Year 3 of studies:

- Governance, Sustainability & Compliance
- Legal Innovation & Sustainability Project
- Trusts & Advance Personal Planning

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### Further Studies

There are boundless local and overseas opportunities for graduates who want to pursue further university studies or professional certificates.

As a graduate, you could also consider the SkillsFuture Work-Study Programmes, which are designed to give fresh polytechnic graduates a head start in careers related to their discipline of studies. In addition, our graduates can ride on the SkillsFuture initiative to pursue post-diploma courses under the Continuing Education & Training (CET) programme.

#### **Career Opportunities**

- Court Officers
- Intellectual Property Managers
- Law Office Managers
- Lay Prosecutors
- Legal Executives / Allied Legal Professionals
- Management Executives
- Legal Technologists







#### The Course

Ever wondered how brands like Apple and NIKE became global icons? In today's bustling and ever-crowded marketplace, the answer lies in the art of marketing – a pivotal force that distinguishes brands from the competition through the management of Product, Price, Place, and Promotion.

As the only polytechnic marketing diploma in Singapore, this course equips you with relevant knowledge and hands-on skills for a career as a digitally savvy, agile marketer with a green mindset, paving the way for your success in this dynamic domain within the digitally driven, AI-powered economy.

In addition to building core marketing knowledge and skills to develop agile and well-rounded marketers, the newly revamped course also aligns with the emerging industry and technology trends and marketing innovations to ensure that you're adept at the current and emerging happenings in the industry. Using consumer psychology insights and marketing analytics skills, you'll learn to understand your customers and the market landscape. You'll acquire sought-after skills in digital marketing and analytics, branding, content creation, marketing communications and sustainable marketing, and learn to harness the power of Marketing Technology (MarTech) tools like Generative AI.

Immerse in innovative and experiential learning experiences through client-based projects, industry engagements that connect you with the pulse of the field, certified courses by Google, HubSpot, LinkedIn, etc., and embark on eye-opening overseas study trips.

#### Year 1 Subjects

- Business Accounting
- Business Economics
- Business Psychology & Management
- Business Technology & Analytics
- Marketing Fundamentals
- Statistics for Business

#### Year 2 Subjects

- Building & Managing Brands
- Consumer Psychology & Insights
- Creativity & Marketing Innovations
- Digital Marketing & Analytics
- E-Commerce Management
- Marketing Analytics
- Marketing Communications & Public Relations
- Product Marketing
- Social Media & Content Marketing

#### Year 3 Subjects

- Major Project
- Sustainable Marketing

## Students will take one out of the following subjects in their Year 3 of studies:

- Brand Storytelling
- Contemporary Topics in Digital Marketing
- Experiential Marketing
- Relationship & Business Development

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

There are boundless local and overseas opportunities for graduates who want to pursue further university studies or professional certificates.

As a graduate, you could also consider the SkillsFuture Work-Study Programmes, which are designed to give fresh polytechnic graduates a head start in careers related to their discipline of studies. In addition, our graduates can ride on the SkillsFuture initiative to pursue post-diploma courses under the Continuing Education & Training (CET) programme.

#### **Career Opportunities**

Executive positions in:

- Brand management
- Business development
- Digital & social media marketing
- Digital content creation
- E-commerce
- Marketing communications
- Marketing research & analytics
- Merchandise buying
- Public relations



pioneering unconventional solutions



school of design

CREATING TOMORROW

Imagining tomorrow with GenAI-powered images

#### SCHOOL OF DESIGN

More than ever, design has proven to be a game-changer across all industries. Demand for design professionals remains high – in both design and non-design sectors. In fact, <sup>1</sup>by 2025, an estimated 85,000 design jobs will be in the non-design sector.

TP School of Design (DES) is the first design school established in a polytechnic. Winning the Crowbar Awards Institution of the Year six consecutive years since 2017, DES is widely recognised as Singapore's leading brand for design education.

With the rapid rise of Generative AI (GenAI), tomorrow's designers must be adept at leveraging GenAI's expanding and evolving capabilities to enhance their creative skills, efficiency and outcomes. At DES, you can expect to learn and actively harness the power of various GenAI tools, such as ChatGPT, Dall.e and Midjourney, in your lessons to elevate the quality of your thought processes, creations and project deliverables – and bring these coveted skills to your future workplaces.

All first-year DES students will undergo the Common Foundation subjects to nurture the fundamental skills and qualities all designers need. You'll work with peers from other design diplomas in mixed classes here. This experience will sharpen your aesthetic sense, critical thinking skills and awareness of design trends and movements in a collaborative environment.

DES' five full-time diploma courses provide the core design skills needed for your chosen discipline. DES also offers the unrivalled opportunity to work within and across our pure design disciplines – a mirror of today's working world. Also, if you're keen on a design education but need more time to learn about DES courses before choosing your specialisation, then the Common Design Programme is for you. You'll spend your first semester going through the Common Foundation subjects and exploring the various DES pathways. This experience will help you make an informed decision on your preferred design course.

Get ready for real-world industry exposure. Work with real clients on actual projects and briefs. Make pitches to investors. Go on industry internships. Get mentored by industry professionals. Participate in competitions. Travel to gain international exposure, and more!

We have a long track record of producing award-winning and accomplished alumni. So you can be sure DES will prepare you for a bright and exciting future as a 21st-century creative professional.

<sup>1</sup> From the Design Education Advisory Committee's "Beyond 2050: Reimagining Design Education in Singapore" report.

#### Common entry programme

• [T71] Common Design Programme

#### Full-time diploma courses

- [T20] Apparel Design & Merchandising
- [T59] Communication Design
- [T23] Digital Film & Television
- [T22] Interior Architecture & Design
- [T35] Product Experience & Design

#### Selection procedure

All applications meeting our minimum entry requirements will be considered. Candidates with good GCE O level results may apply via the Joint Admissions Exercise (JAE).

Candidates with good portfolios and strong inclination for creativity and design may apply through the Early Admissions Exercise (EAE). Shortlisted candidates are usually required to attend an aptitude test and an interview. You should bring to the interview, samples/ portfolios of your work in art and design or other media of expression that show evidence of creativity and imagination. Works outside of school assignments are strongly encouraged. You may also show certificates of completed courses and letters of recommendation from employers.

The interview process seeks to ascertain your aptitude, attitude, knowledge and interest for the design course of your choice. We look for qualities such as commitment, motivation and a passion for all aspects of the design scene.

#### General and admissions enquiries

| Tel   | : | 6788 2000            |
|-------|---|----------------------|
| Email | : | admissions@tp.edu.sg |

#### **Course enquiries**

| Tel     | : 6780 5133            |
|---------|------------------------|
| Email   | : deshotline@tp.edu.sg |
| Website | : www.tp.edu.sg/des    |

#### For the latest tuition fees, visit:

www.tp.edu.sg/coursefees

Note: In the course of their studies, students may need to acquire certain equipment and accessories e.g. laptops, photographic accessories etc., to fully benefit from their educational experience at TP School of Design.

#### MINIMUM ENTRY REQUIREMENTS

To be eligible for any of these diploma courses:

English Language Grades 1 - 7

Mathematics (Elementary/Additional) Grades 1 - 7

Any one of the 2nd group of Relevant Subjects for the ELR2B2-D Aggregate Type Grades 1 - 6

Best two other subjects, excluding CCA

For details on ELR2B2-D, visit: www.tp.edu.sg/elr2b2







#### The Course

Do you have a burning passion to shape the world, ignite change and captivate hearts through design? Prepare to embark on a transformative learning experience through the Common Design Programme (CDP), where you can explore your interests before diving into a specialised pathway!

In the revolutionary world of design, it's not just about colours, shapes, or pixels. As you immerse yourself in the Process, Craft, Context, and Mindset of being a designer, you'll unravel the secrets of problem-solving, discover the power of design tools and techniques, and develop an appreciation for the artistry that lies within design.

Form meaningful connections with fellow students who share your passion, and be part of a community of like-minded individuals who will inspire and challenge you throughout your journey. You'll also nurture your creative confidence as you prepare for a dynamic future through interdisciplinary learning.

Through a unique curation of exposure workshops, talks, and activities, CDP will empower you to make an informed decision about the pathway that resonates with your interests, strengths, and aspirations. After an engaging and eye-opening semester, you'll be able to forge your path forward by choosing one of our five diplomas:

- [T20] Apparel Design & Merchandising
- [T59] Communication Design
- [T23] Digital Film & Television
- [T22] Interior Architecture & Design
- [T35] Product Experience & Design

Unleash your creative spirit, embrace the thrill of exploration, and embark on your exciting journey towards becoming the designer of tomorrow right here with the Common Design Programme!

#### **Programme Subjects**

We believe that to become a well-rounded and successful designer, you need to understand the core principles and acquire the essential skills across various design domains. Through the Designerly Ways of Seeing, Knowing, Thinking, and Doing, you'll embrace the joy of experimenting with everyday materials and forms as you unlock their hidden potential.

Master the art of visual storytelling, weaving narratives through imagery, sound, and graphics that captivate and inspire. Dive deep into the realm of design trends and issues, understanding the contextual landscape in which design thrives through these Common Foundation subjects.

- Aesthetics for Design
- Design in Context
- Discovering Design
- Form & Materiality
- Visual Narratives: Photography
- Visual Narratives: Videography

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Career Readiness
- Current Issues & Critical Thinking
- Leadership Fundamentals

Note: Applicants with partial or complete colour appreciation deficiency should not apply for this course. Applicants who do not satisfy the pre-requisite may not be accepted into the course. Applicants must ensure that they do not suffer from medical conditions such as epilepsy or hearing deficiency for safety reasons.



## T20 APPAREL DESIGN & MERCHANDISING



Scan for full details, or visit: www.tp.edu.sg/t20

#### The Course

Are you passionate about the ever-evolving world of fashion? Do you dream of turning your love for style and creativity into a successful career? Then look no further because this fashion diploma is all the runway you'll need to kick-start your journey.

Here, we combine design and business skill sets to give you a strong understanding of the fashion lifecycle from concept, brand creation and design to marketing and distribution.

Deepen your skills in Year 2 as you specialise in either Fashion Design or Retail Merchandising. From the innovation of garment construction techniques to the creative exploration of a fashion brand, develop your entrepreneurial spirit to balance creativity and commercial sensibility. Create purposeful pieces that leverage themes like sustainability, inclusivity, and cultural influences, while experimenting with the latest 3D digital tools to turn your vision into reality.

Whether you aspire to launch your own brand, contribute to creative fashion content, or pursue a career as a buyer, the crossdisciplinary training we offer will enable you to stretch your boundaries and afford you unique opportunities to learn from live industry projects. Collaborate with local brands, create your fashion line, and gain the experience employers seek.

#### Year 1 Subjects

- Fashion Presentation Techniques
- Introduction to Fashion Production
- Studio Project 1
- Textiles Exploration

#### Common Foundation Subjects (Semester 1)

- Aesthetics for Design
- Design in Context
- Discovering Design
- Form & Materiality
- Visual Narratives: Photography
- Visual Narratives: Videography

#### Year 2 Subjects

#### Fashion Design Option

- Creative Pattern Making
- Creative Storytelling
- Design for Screen^
- Digital Creation in Fashion
- Drafting Techniques
- Draping Techniques
- Fashion Brand Development^
- Fashion Concepts & Strategies
- Fashion Construction
- Fashion Content Creation^
- Studio Project 2
- Sustainable Practices in Design

#### ^Students must choose ONE of these three electives

#### **Retail Merchandising Option**

- Brand Strategy
- Design for Screen<sup>#</sup>

- Digital Creation in Fashion
- Fashion Brand Development<sup>#</sup>
- Fashion Concepts & Strategies
- Fashion Content Creation#
- Fashion Supply Chain
- Retail Buying Management
- Retail Design Experiences
- Strategies in Fashion Marketing
- Studio Project 2
- Sustainable Practices in Design

#### "Students must choose ONE of these three electives

#### Year 3 Subjects

- Fashion Trends & Sustainability
- Industry Studio Project
- Major Project: ADM

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals

#### Leadership in Action

- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

Our graduates have found places in some of the best fashion schools in the world with advanced standing. Graduates can explore a diverse range of courses, including Fashion Styling, Fashion Design & Technology, Pattern Cutting, Textiles Design, Fashion Merchandising, Marketing and Fashion Business Management, both locally and overseas.

Graduates can also delve deeper into their current expertise or broaden their knowledge in sustainable fashion practises by enrolling in TP's Specialist Diploma in Sustainable Fashion.

#### **Career Opportunities**

- Brand Managers
- Buyers for Retailers
- Designers
- Digital Marketing Executives
- Entrepreneurs
- Event Planners
- Fashion Content Creators
- Merchandisers for Apparel Manufacturers
   or Retailers
- Product Developers
- Stylists
- Visual Merchandisers

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#### The Course

The future demands creatives with a wide range of skills to drive innovation. This diploma is an excellent start if you want to make a difference in our rapidly changing society. Working at the intersection of graphic design, business and technology, communication designers craft delightful experiences. While aesthetic and design sensibilities underpin communication design, the broad exposure to content creation, psychology, branding, digital marketing and experience design will train you to be adaptable to the growing demands in healthcare, retail, financial services, infocomm technology and more.

Build a strong foundation in Year 1, acquiring the necessary creative skills to create human-centred solutions that are strategic, rational, meaningful, and beautiful. In Year 2, strengthen your critical thinking ability while pursuing multiple pathways. Electives such as Computational Thinking, Game Design, Principles of Psychology & Inclusivity, Sustainable Space Planning, and Design for Business Impact will add extra depth to your learning. When you reach Year 3, electives such as Expressive Illustration, Creative Coding, Experimental Printmaking, Machine Learning and Self-Publishing will cultivate your sense of exploration, encouraging you to think out of the box and experiment with new ideas.

Throughout your three years, you'll be exposed to live briefs and industry projects, enhancing your ability to dissect a brief and deliver a convincing pitch. The curious and intellectually inquisitive will emerge as versatile and dynamic designers with fresh perspectives in a constantly evolving environment. In addition, you'll also have the opportunity to attain the Google UX Design certification through your course of study!

#### Year 1 Subjects

#### rear 1 Subjects

- 3D Visualisation Applied Typography
- Art Direction
- Brand Strategy
- Creative Storytelling
- Design for Print

#### Common Foundation Subjects (Semester 1)

- Aesthetics for Design
- Design in Context
- Discovering Design
- Form & Materiality
- Visual Narratives: Photography
- Visual Narratives: Videography

#### Year 2 Subjects

- Brand Experience
- Computational Thinking<sup>#</sup>
- Design for Business Impact<sup>#</sup>
- Design for Screen
- Digital Innovation
- Game Design<sup>#</sup>
- Integrated Campaign
- Motion Graphics
- Principles of Psychology & Inclusivity
- Studio Project 1
- Studio Project 2
- Sustainable Practices in Design
- Sustainable Space Planning<sup>#</sup>
- Visual Identity

#### Year 3 Subjects

- Creative Coding Lab<sup>#</sup>
- Experimental Printmaking Lab<sup>#</sup>
- Expressive Illustration Lab<sup>#</sup>
- Industry Studio Project
- Machine Learning Lab<sup>#</sup>
- Major Project: Communication Design
- Self-Publishing Lab<sup>#</sup>

"Students must choose ONE of these four electives

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

As a course graduate, you can take up SkillsFuture Work-Study Programmes (WSP) leading to the Specialist Diploma in Design for Integrated Communication – delivered in partnership with General Assembly. Other WSP options under the design and media sector are also available. You can also pursue a degree in Communication Design or a Bachelor in Art, Design and Media degree in any local or overseas university, and can expect to receive advanced standing at many of these institutions.

#### **Career Opportunities**

- Art Director
- Branding Designer
- Content Strategist
- Creative Technologist
- Design Facilitator
- Digital Product Designer
- Experience Designer
- Graphic Designer
- Image Designer / Illustrator / Visual Artist
- Interactive Designer
- Motion Graphic Designer
- Product Manager
- Social Media Manager
- UX/UI Designer
  - Web Designer







#### The Course

The journey of a great film begins with a strong idea. From award-winning emotional dramas, to inspiring documentaries that illustrate a slice of life right down to punchy, engaging video content that goes viral on social media, we'll teach you the craft of storytelling through film and video production.

You'll learn what makes an idea stick with an audience, be taught the craft of writing compelling screenplays, and practical tools in directing and producing. Beyond a strong foundation in camerawork, lighting, sound and production design, you'll learn to work in a team, pitch stories to investors and collaborate to create films of varied genres and thought-provoking documentaries. Your films will also have a chance to compete in prestigious local and international film competitions. From the Crowbar Awards to the New York Festivals to the Cannes Film Festival, our films have travelled far and won major awards.

You'll be mentored by lecturers who are award-winning writers and producers with years of experience and use our industrystandard film studio and equipment. Our strong partnerships with the media industry will open opportunities for collaborative work, mentorship, and internship programmes. Your comprehensive skill training here will enable you to enjoy job opportunities in film and television and new media, advertising, and design sectors. If you want to learn how to craft emotional stories that engage young and old, and if you're keen on a career in media production, this is the course for you.

#### Year 1 Subjects

- Basic Video Production
- Creative Storytelling
- Directing
- Introduction to Directing
- Pitching for Social Media
- Production Planning & Management
- Video Editing

#### Common Foundation Subjects (Semester 1)

- Aesthetics for Design
- Design in Context
- Discovering Design
- Form & Materiality
- Visual Narratives: Photography
- Visual Narratives: Videography

#### Year 2 Subjects

- Broadcast Design<sup>#</sup>
- Design For Screen<sup>#</sup>
- Documentary Project
- Game Design<sup>#</sup>
- Overview of Non-Fiction
- Screen Writing
- Short Film Project 1
- Short Film Project 2
- Studio Production
- Sustainable Practices in Design

"Students must choose ONE of these three electives

#### Producing & Directing Option

- Advanced Directing
- Content Marketing
- Writing for Non-Fiction Film & Television

#### Production & Technical Option

- Advanced Editing
- Audio Post
- Cinematography

#### Year 3 Subjects

- Industry Film Project
- Major Project: DFT

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

Some of the best universities have accepted our graduates based on the strength of their course work in TP. Local universities offer related media and communication courses that our graduates can apply for.

Many overseas universities also provide exemptions to our graduates in the fields of filmmaking and creative media programmes, with some allowing our graduates to go direct into the final year of their degree programmes.

#### **Career Opportunities**

This course opens doors in the film, broadcast and social media industries for you as a:

- Cinematographer / Camera Operator
- Content Creator
- Director
- Filmmaker
- Media Producer
- Scriptwriter
- Sound Recordist / Sound Mixer
- Video Editor

Note: Applicants with mild or severe colour vision deficiency or suffering from severe visual impairment should not apply for this course.







#### The Course

More than ever, due to social trends, like shrinking land use, smaller family units, inter-generational living, and the new normal of working from home, designers play an important role in conceiving better lifestyle spaces and experiences. As the only course that covers interior and architectural design, this course will train you to become the kind of interior designer who doesn't just renovate spaces but transforms spatial experiences.

Learn to design interior spaces that adapt to people's needs while considering location, architecture, and culture. Explore contemporary social issues and constraints that affect the design of interior and architectural spaces. Study global trends in lifestyle, sustainability, and social change. Learn to see the big picture in design, which will help provide thoughtful, human-centric and balanced solutions to complex design problems.

The course offers plenty of exciting opportunities to work closely with the industry through "live" collaborative projects. You might even land mentorship and internship opportunities with industry leaders such as Ong & Ong, SCDA, FARM, DP Architects, Space Matrix, Kingsmen Design, DBS, Google Asia, and many others. The architecture component in the course allows you to move into architecture studies at the university level, as we are accredited by the Board of Architects, Singapore.

Study trips, competitions, exchange programmes and a rigorous project-led curriculum will shape your critical thinking and technical skillsets for good design work and prepare you for a successful career in the design field. The broad-based design training will let you enjoy job opportunities within the design sector and beyond in areas such as hospitality, real estate and emerging adjacent industries.

#### Year 1 Subjects

- Architectural Drawing
- Architecture Design Studies
- Digital Visualisation
- Form & Space Exploration
- Integrated Studio Project 1
- Sustainable Space Planning

#### Common Foundation Subjects (Semester 1)

- Aesthetics for Design
- Design in Context
- Discovering Design
- Form & Materiality
- Visual Narratives: Photography
- Visual Narratives: Videography

#### Year 2 Subjects

- Construction & Detailing
- Design for Customer Experience<sup>#</sup>
- Digital Integration
- Digital Modelling
- Digital Prototyping<sup>#</sup>
- Integrated Studio Project 2
- Integrated Studio Project 3
- Interior Building Systems
- Spatial Design Studies
- Sustainable Practices in Design
- Sustainable Urban Systems<sup>#</sup>

#### "Students must choose ONE of these three electives

#### Year 3 Subjects

- Industry Studio Project
- Major Project: IAD
- Professional Practice

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

Graduates will be able to further their education locally in the universities here in Singapore, as well as overseas. Some of the best design schools and universities in the world have accepted our graduates on the strength of their work here in the course. Many go on to pursue architecture or other areas of design.

The School also offers the Specialist Diploma in Lighting Design and Specialist Diploma in Interior Architecture & Design, which will further deepen the skill sets of our graduates, filling an existing gap in the industry for such trained professionals.

#### **Career Opportunities**

- Adjacent industries (developers, real estate, NFT, Visualiser, Animator etc.)
- Architectural Design Assistant
- Design/Event Management Consultant
- Interior Design Professionals (F&B, Retail, Exhibition, Office, Hospitality, Residential, etc.)
- Interior Product Designer
- Set Designer (Film and Theatre)

Note: Applicants with mild or severe colour vision deficiency or suffering from severe visual impairment should not apply for this course.



# PRODUCT **EXPERIENCE** & DESIGN



Scan for full details, or visit: www.tp.edu.sg/t35

#### The Course

Looking to pioneer the future of smart innovation that seamlessly fuses cutting-edge tech with artistic brilliance? Are you drawn to designing immersive user experiences spanning industries like banking, hospitality, and healthcare? Today's demand for design-savvy professionals goes beyond non-design areas, reaching industries worldwide. At the Diploma in Product Experience & Design, you'll learn to create ground-breaking solutions that blend functionality, purpose, and social consciousness.

You'll master interaction principles, refine product aesthetics, and bring concepts to life with cutting-edge prototyping. This is the place where you refine your craftsmanship, sharpen your critical thinking, and master your technical prowess. Craft compelling pitches for a myriad of clients, tackling real and live challenges from key industry players and government bodies.

Through deliberate, research-driven design and analytical processes, you'll learn to create offerings with not just aesthetic value, but tangible business impact, delighting users and consumers everywhere. Plus, the wide-ranging training ensures a world of opportunities across all domains.

Embrace the future by shaping captivating experiences at the crossroads of design, technology, and business. With a solid foundation, craft solutions that are strategic, meaningful, and visually striking. Dive deeper into diverse fields like psychology, branding, and digital marketing to push boundaries and embrace fresh ideas.

#### Year 1 Subjects

- Design Research Methodologies
- Human-Centred Design
- **Object Visualisation**
- Prototyping Essentials
- Studio Project 1

#### Common Foundation Subjects (Semester 1)

- Aesthetics for Design
- Design in Context
- **Discovering Design**
- Form & Materiality
- Visual Narratives: Photography
- Visual Narratives: Videography

#### Year 2 Subjects

- Design & Form Development^
- **Digital Prototyping** •
- Innovation & Technology •
- . **Rapid Prototyping**
- Service Design Principles
- Studio Project 2
- Studio Project 3
- Sustainable Practices in Design
- Sustainable Space Planning^
- User Experience Design User Interface Design •

^Students must choose one of these two electives

#### Year 3 Subjects

- Digital Visualisation Essentials
- Design Pitch & Communication
- Industry Studio Project
- Major Project: PED

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forwardthinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

Graduates will be able to further their education in product and industrial design locally in the universities here in Singapore, as well as overseas.

Our graduates have been accepted into many of the best design schools and universities in the world with advanced standing. Many pursue careers in product, service, transportation, furniture, and experience design. In the non-design sector, our students are in demand as innovation leaders in banking, healthcare and finance. Many have also started their own successful design studios and enterprises.

#### **Career Opportunities**

- 3D Modelling Specialist
- 3D Visualiser
- Conceptual Artist / Designer
- Design / Ethnographic Researcher
- Design Entrepreneur
- Digital Product Designer
- Furniture / Exhibition /
- Packaging Designer
- Interaction Designer
- Product / Industrial Designer
- Service Designer
- User Experience (UX) Designer
- User Interface (UI) Designer

Note: Applicants with mild or severe colour vision deficiency. or suffering from uncontrolled epilepsy, profound hearing loss or severe visual impairment should not apply for this course.

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Imagining tomorrow with GenAI-powered images

# CREATING TOMORROW

## SCHOOL OF ENGINEERING

Engineers revolutionise cities and communities, improve how we live, work and play, transform the future of healthcare with innovative biomedical inventions and develop disruptive digital technologies that make it all possible!

As today's Industry 4.0 revolution gathers pace, new emerging technologies such as artificial intelligence, automation, and the Internet of Things are being used in more and more applications, enhancing every aspect of our lives. The School of Engineering will prepare you to be at the forefront of this exciting change!

Push the boundaries of modern engineering with our offering of 10 exciting diploma courses and a Common Entry Programme. You'll receive broad-based training in core engineering areas before specialising in exciting fields such as advanced manufacturing, aerospace, aviation, sustainable energy, integrated facility management or biomedical engineering.

With quality lecturers, a robust technology innovation culture, prominent industry partners, a multi-disciplinary curriculum and many tie-ups with local and foreign universities, an engineering diploma from the School ensures that you'll be equipped with the versatility and the edge you need to thrive in today's digital-first economy.

Get ready to engineer your bright future here – one dedicated to improving the world we live in!

#### Common entry programme

• [T56] Common Engineering Programme

#### Full-time diploma courses

- [T50] Aerospace Electronics
- [T51] Aerospace Engineering
- [T29] Architectural Technology & Building Services
- [T04] Aviation Management
- [T38] Biomedical Engineering
- [T43] Business Process & Systems Engineering
- [T13] Computer Engineering
- [T65] Electronics
- [T28] Integrated Facility Management
- [T66] Mechatronics

#### General and admissions enquiries

| Tel   | : | 6788 2000            |
|-------|---|----------------------|
| Email | : | admissions@tp.edu.sg |

#### **Course enquiries**

| Tel     | : 6780 5144            |
|---------|------------------------|
| Email   | : enghotline@tp.edu.sg |
| Website | : www.tp.edu.sg/eng    |

#### For the latest tuition fees, visit:

www.tp.edu.sg/coursefees

## MINIMUM ENTRY REQUIREMENTS

To be eligible for any of these diploma courses, you must have 5 GCE O Level subjects comprising:

English Language Grades 1 - 7

Mathematics (Elementary/Additional) Grades 1 - 6

Any one of the following subjects Grades 1 - 6

Biology, Biotechnology, Chemistry, Computing / Computer Studies, Design & Technology, Electronics / Fundamentals of Electronics, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry)

Best two other subjects, excluding CCA

For details on ELR2B2 computation, visit: www.tp.edu.sg/elr2b2

### **FURTHER STUDIES**

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



# T56 COMMON ENGINEERING PROGRAMME



Scan for full details, or visit: www.tp.edu.sg/t56

#### The Course

This programme is a common entry point to seven different engineering diploma courses. If you're keen to pursue an engineering career but are still determining which of the many engineering disciplines would suit you best, then this is the programme for you. With seven diploma courses, this programme offers you ultimate flexibility.

Under this programme, you'll take the same foundation subjects as students who have enrolled directly in their respective diploma courses. The programme provides you with the time and opportunity to explore your strengths and interests further. With this experience, you'll then be ready to pick one of the following diploma courses at the end of your first year:

- [T50] Aerospace Electronics
- [T51] Aerospace Engineering
- [T38] Biomedical Engineering
- [T43] Business Process & Systems Engineering
- [T13] Computer Engineering
- [T65] Electronics
- [T66] Mechatronics

Upon successfully completing this programme, you'll graduate with the same diploma as students who have joined a particular diploma course right from the start.

## Foundation Subjects

## Circuit Analysis

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

#### Years 2 and 3 Subjects:

The core subjects that you take in your second and third year of studies will depend on which of the seven diploma courses you stream into.

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Career Opportunities**

This programme allows you to defer your decision on which course to take, so you can have more time to observe a particular industry's performance and the economic situation, before deciding on the course to pursue.

Depending on your specialisation, you'll be able to find jobs in any of the following engineering sectors: aerospace, biomedical sciences, computer and IT, clean energy, manufacturing and automation, as well as those outside the engineering sphere.

Note: Any special health requirements for a specific diploma course will also apply if you choose to branch into that course.







#### The Course

This course equips you with fundamental and applied knowledge of aircraft electrical, communication, navigation and flight control systems. You'll undergo a rigorous aerospace training programme, including practical modules offered together with our partner and world-renowned aircraft maintenance training provider, Lufthansa Technical Training (LTT) of Germany.

As TP is the only polytechnic certified by the Civil Aviation Authority of Singapore (CAAS) as a SAR-147 Approved Maintenance Training Organisation (AMTO), your diploma will be more widely recognised by employers. Your Aircraft Maintenance Licence (AML) apprenticeship duration after graduating from TP will also be significantly shortened by up to 10 months.

If you aspire to be a pilot, you can also fulfil your dream by taking flying lessons as part of your Student Internship Programme in your final semester of study, to get that coveted Private Pilot Licence (PPL).

#### Year 1 Subjects

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

#### Year 2 Subjects

- Aerospace Maintenance Practices
- Aircraft Electrical Fundamentals
- Aircraft Electronics & Servomechanisms
- Data Visualisation & Analytics
- Engineering Mathematics 3
- Fundamentals of Aeronautical Science

#### Year 3 Subjects

- Aircraft Digital Systems
- Aviation Legislation & Human Factors
- Basic Aerodynamics

#### IoT & Automation Elective Cluster<sup>#</sup>

- Intelligent Automation
- Internet of Things Project

#### Aerospace Operations Elective Cluster<sup>#</sup>

- Lean Processes
- Unmanned Aircraft Operations

"Students to choose one of these elective clusters

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Career Opportunities**

Singapore has been Asia's most comprehensive aerospace maintenance, repair and overhaul (MRO) hub. At its peak, our aerospace industry accounted for a quarter of the region's MRO volume, when output reached about S\$9 billion annually, with about 21,000 workers spread across more than 100 local and international aerospace companies.

The aerospace sector has since regained its momentum after the inevitable slowdown during the COVID-19 pandemic, and the industry is now poised to continue its exponential growth as air travel and world trade look set to surpass the pre-pandemic levels.

This spells exciting job opportunities for you, some of which are:

- Avionics Test Engineers
- Licensed Aircraft Engineers (LAE)
- Process / Quality Engineers
- Technical Service Engineers

Note: Applicants should not be suffering from mild or severe colour vision deficiency, uncontrolled epilepsy, profound hearing loss, severe vision impairment or any physical impairment, or be physically dependent on mobility equipment.







#### The Course

This course equips you with a strong foundation specialising in aerodynamics, aircraft engines, structures, and systems. Your learning journey will include:

- a six-month practical training stint in our Lufthansa Technical Training (LTT) Centre on campus
- opportunities for overseas study trips to Germany and the USA
- attachment opportunities to top aerospace companies for your internship

As TP is the only polytechnic certified by the Civil Aviation Authority of Singapore (CAAS) as a SAR-147 Approved Maintenance Training Organisation (AMTO), prospective employers will widely recognise your diploma. Your Aircraft Maintenance Licence (AML) apprenticeship duration after graduating from TP will also be significantly shortened by up to 10 months.

Do you aspire to be a pilot? You can fulfil this dream by taking flying lessons as part of your Student Internship Programme in your final semester of study to get that coveted Private Pilot Licence (PPL).

#### Year 1 Subjects

- Circuit Analysis
- Computer Programming for Problem Solving
- Digital Fundamentals 1
- Electronic Devices & Circuits
- Engineering Drawing
- Engineering Mathematics 1 & 2
- Engineering Physics
- Statics & Strength of Materials
- Thermodynamics

#### Year 2 Subjects

- Aircraft Electrical Fundamentals
- Aircraft Electronics & Digital Systems
- Aviation Legislation & Human Factors
- Basic Aerodynamics
- Data Visualisation & Analytics
- Engineering Materials
- Engineering Mathematics 3
- Fluid Mechanics
- Gas Turbine Engine
- Principles of Dynamics

#### Year 3 Subjects

#### Aerospace System Design (ASD) Option#

- Aircraft Structures & Composites
- Engine Maintenance & Workshop Practices
- Major Project

#### Lufthansa Technical Training (LTT) Option<sup>^</sup>

Aerospace Maintenance Practices

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Career Opportunities**

Singapore has been Asia's most comprehensive aerospace maintenance, repair and overhaul (MRO) hub. At its peak, our aerospace industry accounted for a quarter of the region's MRO volume, when output reached about \$\$9 billion annually, with about 21,000 workers spread across more than 100 local and international aerospace companies.

The aerospace sector has since regained its momentum after the inevitable slowdown during the COVID-19 pandemic, and the industry is now poised to continue its exponential growth as air travel and world trade look set to surpass the pre-pandemic levels.

This spells exciting job opportunities for you, some of which are:

- Aero-mechanical Systems Specialists
- Aerospace Component Design Engineers
- Engine or Power-plant Technologists
- Licensed Aircraft Engineers (LAE)

Note: Applicants should not be suffering from mild or severe colour vision deficiency, uncontrolled epilepsy, profound hearing loss, severe vision impairment or any physical impairment, or be physically dependent on mobility equipment.



#### The Course

You would have heard about climate change, but did you know that a building's design can play a part in combating it?

This is the first multidisciplinary polytechnic course that focuses on using technology and digitalisation to design smart and sustainable buildings for the future. You'll learn, for example, how to use innovative Building Information Modelling (BIM) tools and design strategies to help reduce a building's energy consumption and carbon footprint, assess the economic viability of improving energy performance, and even select sustainable materials for green buildings. With this robust knowledge and skills, you can create a greener and more sustainable built environment to help combat climate change!

During your course, you can also attain the Fire Safety Manager certification from SCDF, and the Digital Delivery Management Certification – Tier 4 (Provisional) from Building Smart Singapore.

#### Year 1 Subjects

- Circuit Analysis
- Computer Programming for Problem Solving
- Digital Modelling for Architecture 1
- Eco-Architecture Design 1
- Electrical Design & Installation
- Engineering Mathematics 1 & 2
- Engineering Physics
- Introduction to Built Environment

#### Year 2 Subjects

- Air-Conditioning & Mechanical Ventilation
- Building Management Systems
- Building Performance Modelling
- Building Systems Modelling
- Digital Modelling for Architecture 2
- Eco-Architecture Design 2
- Energy Management & Audit
- Integrated Design Studio

#### Year 3 Subjects

- Data Visualisation & Analytics
- Fire & Life Safety Management
- Major Project

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Career Opportunities**

In line with the Singapore Green Plan 2030, which seeks to rally bold and collective action to tackle climate change, there will be a continued national focus on sustainable development. A major target is to make 80% of all buildings in the country "green" by developing eco-friendly districts, super-low energy buildings and carbon-neutral schools. Existing buildings must undergo retrofitting works, and new buildings must incorporate environment-friendly designs. This promises abundant job opportunities for professionals with skill sets in sustainable design and green building technologies.

You can make your mark in sustainable design- and engineering-based careers within the built environment sector, as:

- Architectural Assistants
- BIM Modellers (Architecture and M&E)
- Building Automation Technologists
- (Facility Management)
- Energy & Sustainability Consultants (Associate SCEM)
- Engineering Assistants (Mechanical & Electrical)
- Simulation Specialists (Building Performance)

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







#### The Course

This course is the first Aviation Management programme of its kind in Asia. You'll learn and combine a broad range of specialised aviation management skills with business knowledge. From learning how to manage a world-class airport to acquiring the skill sets to operate the best airlines in the world, you'll be fully equipped to take off on an exciting career in the aviation industry!

No aviation programme is complete without experiencing flight! In this course, you may take to the skies as a cabin crew member with a Singapore-based airline as part of your internship. Or, you could take the first step towards becoming a pilot via our Aeronautical Science Option, where you'll undergo the required flying and theoretical lessons to obtain a Private Pilot Licence (PPL). Selected foundational subjects in this option will also give you an advantage if you pursue the Commercial Pilot Licence (CPL) or Air Transport Pilot Licence (APTL) in the future. These special arrangements, not offered in any similar course by other local polytechnics, will give you a head start in the aviation industry.

#### Year 1 Subjects

- Airline Operations
- Business Fundamentals
- Computer Programming for Problem Solving
- Engineering Mathematics 1 & 2
- Introduction to Civil Aviation
- Principles of Aeronautical Science
- Quantitative Methods

#### Year 2 Subjects

- Airfield Systems
- Airline Management
- Airport Operations & Management
- Airport Systems
- Aviation Safety & Security
- Business Continuity Management
- Data Visualisation & Analytics
- Project Management
- Service Quality & Management

#### Year 3 Subjects

Major Project

#### Aeronautical Science Option#

- Air Navigation
- Flight Planning
- Meteorological Studies

#### Airport & Airline Option#

- Air Traffic Management
- Airport Administration
- Management of Air Cargo

"Students to choose one of these options

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Career Opportunities**

As the demand for air travel continues to grow, and countries worldwide ramp up their economic activities post-COVID-19, things are looking up for the aviation sector!

Be part of the global aviation business, which, at its peak, supported 63 million jobs and made up 3.5% of the global GDP. With the world's best airport and airline at your doorstep and many top airlines and aerospace firms operating in Singapore, this is the place to be for aviation training. Boosted by strong government support, our aviation sector will continue to require highly skilled professionals to operate and manage existing and upcoming aviation services and facilities. Your strong management skills will also give you an advantage in various business and hospitality-related domains.

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

- Air Traffic Controllers
- Airline Flight Controllers
- Airport Operations Centre Managers
- Airside Duty Managers
- Airside Officers
- Duty Terminal Managers
- Ground Services Officers

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







#### The Course

This interdisciplinary course provides you with integrated training in biological techniques and biomedical instrumentation, including BioMEMS (Biomedical Micro-Electro-Mechanical Systems), microfluidics, flexible hybrid electronics for healthcare wearables, smart healthcare devices using artificial intelligence, and intelligent wearable healthcare sensors. Alongside engineering and digital electronics principles, you'll learn the fundamentals of developing medical devices used in hospitals and research on human anatomy and physiology.

In your final year, you can choose one of these elective clusters for further specialisation: Biomedical Design & Devices, Clinical Equipment & Process, Healthcare Informatics, Sustainability in Engineering, or Work-Based Learning. Selected students can also embark on a one-year internship (compared to 4 months for most other diplomas) to gain more industry experience. You can also join the University Pathway Programme (SUTD), which allows you to take university modules during your final year and gain conditional admission into Singapore University of Technology and Design, shortening the time needed to get your degree.

#### Year 1 Subjects

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

#### Year 2 Subjects

- Chemistry
- Data Visualisation & Analytics
- Engineering Mathematics 3
- Human Anatomy & Physiology
- Medical Devices
- Medical Device Manufacturing Practices
- Medical Electronics
- Medical Imaging & Informatics
- Microcontroller Applications

#### Year 3 Subjects

Major Project

#### Advanced Engineering Skills Elective Cluster\*

• Advanced Skills Practices

#### **Biomedical Design & Devices Elective Cluster**<sup>#</sup>

- Audiometry & Hearing Devices
- CAD & Additive Manufacturing

#### <u>Clinical Equipment & Process Elective</u> Cluster<sup>#</sup>

- Clinical Laboratory Equipment
- Medical Biochemistry

#### Healthcare Informatics Elective Cluster#

- Healthcare Analytics
- Patient Monitoring Technology

#### Sustainability in Engineering Elective Cluster<sup>#</sup> (Choose any 2 subjects in this cluster)

- Green Urban Transportation & Energy Storage
- Life Cycle Analysis
- Renewable Energy Technologies
- Solar Photovoltaic Technology & Leasing

#### Structured Work-Based Learning Elective Cluster<sup>#</sup>

• Work-Based Learning

#### University Pathway Programme (SUTD)^

- Computational Thinking for Design
- Modelling & Analysis
- Physical World
- Social Science: Understanding Behaviour, Culture & Society

" Students to choose one of these elective clusters ^ For selected students

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness

#### Career Management

- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Career Opportunities**

The global market for medical devices is predicted to swell to US\$800 billion in value by 2030 (according to research by auditing firm KPMG in 2023). Singapore, which has established itself as a strategic hub for medical technology (MedTech) manufacturing and a global centre for advanced patient care, is poised to benefit immensely from this boom. Supported by greater health awareness worldwide, this diploma course will open the door to many lucrative job opportunities for you in the fields of manufacturing, regulatory sciences and clinical services.

Exciting careers await you as:

- Biomedical Assistant Engineers
- Biomedical Technical Officers
- Field Services Engineers
- Imaging Specialists
- Medical Devices Specialists
- Medical Product Specialists
- Medical Sales Representatives
- Medical Technologists
- Regulatory Affairs Executives

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

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# **BUSINESS PROCESS & SYSTEMS** ENGINEERING



Scan for full details, or visit: www.tp.edu.sq/t43

#### The Course

As Singapore strives to be a world-class service centre and logistics hub, there will be a demand for tech-savvy professionals with multi-disciplinary knowledge and skills who can offer solutions to business issues and problems and add value to their organisations.

Here, you'll receive training in business principles and operation concepts, as well as engineering fundamentals and data analytics for the digital economy. You'll be able to find your niche in a wide variety of industries, including the manufacturing, logistics and service sectors in Singapore.

The course features two main areas:

- (i) Business Analytics, which concerns the systematic investigation, prediction and prescription of business performance to provide insights for future planning, known as forward business management
- (ii) Systems Engineering, which deals with the management, improvement and optimisation of business processes using systems thinking approach to enhance business productivity and profits

#### Year 1 Subjects

- Business Fundamentals
- Circuit Analysis
- Computer Programming for Problem Solving
- Digital Fundamentals 1
- Engineering Mathematics 1
- Introduction to Processes & Systems
- Quantitative Methods

#### Year 2 Subjects

- Customer Relationship Management
- Data Visualisation & Analytics
- Decision Analysis
- Manufacturing Logistics & Simulation
- Process Management Systems
- Process Optimisation & Improvement
- Project Management
- Sustainable Supply Chain Management
- Systems Modelling & Simulation

#### **Cluster Elective Subjects**

- Intelligent Automation #2A
- Procurement & Materials Management #2B

#### Year 3 Subjects

Major Project

#### **Cluster Elective Subjects**

- IoT Security # 3A
- Data Management for Process Analytics # 3A
- Distribution Centre Management # 3B
- International Trade & Transport #3B
- Work-Based Learning # 3C .

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forwardthinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- **Guided Learning**
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### \*Year 2 and 3 students must choose one of these cluster elective subject combinations:

## (1) 2A and 3A

(2) 2B and 3B

#### (3) 2A and 3C

#### **Career Opportunities**

Armed with the knowledge of fundamental business principles, data analytics, business process improvement and systems engineering, you will be able to identify gaps in business or logistics operations through effective data analysis, automate processes to remove repetitive manual work, and use predictive analytics to effectively deploy operations. You will be empowered to navigate in any company regardless of its size or stage of digitalisation, in sectors such as manufacturing, logistics, healthcare, finance, retail, customer service, as well as sales and marketing.

Your highly transferrable skill sets will allow you to secure exciting jobs such as:

- Business Analysts
- Customer Relationship Executives
- Logistics & Supply Chain Executives
- Market Researchers
- Productivity & Management Systems Executives
- Quality Assurance & Control Specialists

With this diploma, you will also be wellequipped to pursue further studies in business, finance, accountancy, the arts and social sciences, and law, as well as engineering.

Note: Applicants should not be suffering from severe colour vision deficiency or severe vision impairment.







#### The Course

With more and more companies embarking on digitalising their processes and businesses and placing high importance on applying the latest digital solutions, there is a growing demand for talent in the field of computer engineering. This course covers the traditional computer engineering areas and the emerging fields of the Internet of Things (IoT), data analytics, artificial intelligence, cyber security and smart manufacturing, empowering you to drive Singapore's economic transformation.

The course will prepare you to take internationally recognised industry certification examinations such as those from National Instruments, UI Path, Microsoft and Unity3D. Selected students can also embark on a year-long internship with the Government Technology Agency of Singapore (GovTech) to gain robust industry experience. You can also join the University Pathway Programme (SUTD), which allows you to take university modules during your final year and gain conditional admission into Singapore University of Technology and Design, shortening the time needed to get your degree.

#### Year 1 Subjects

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

#### Year 2 Subjects

- Artificial Intelligence & Machine Learning
- Data Visualisation & Analytics
- Engineering Mathematics 3
- Full Stack Development
- Intelligent Automation
- Internet of Things Project
- Microcontroller Applications
- Object-oriented Programming

#### **Cluster Elective Subjects**

- Advanced Skills Practices #
- IoT Security # 2B
- System & Network Integration # 2A
- 3D Modelling for Virtual Reality #2C

#### <u>Sustainability in Engineering Elective Cluster</u><sup>#</sup> (Choose 1 subject under this cluster)

- Green Urban Transportation
- & Energy Storage
- Life Cycle Analysis
- Renewable Energy Technologies
- Solar Photovoltaic Technology & Leasing

#### Year 3 Subjects

Major Project

#### **Cluster Elective Subjects**

- Distribution Centre Management #3B
- Interactive Programming for Virtual Reality <sup># 3C</sup>
- Mobile Device Applications
   Development #3A
- Work-Based Learning #

#### <u>Sustainability in Engineering Elective Cluster</u># (Choose 1 subject under this cluster)

- Green Urban Transportation & Energy Storage
- Life Cycle Analysis
- Renewable Energy Technologies
- Solar Photovoltaic Technology & Leasing

#### University Pathway Programme (SUTD)^

- Computational Thinking for Design
- Modelling & Analysis
- Physical World
- Social Science: Understanding Behaviour, Culture & Society
- ^ For selected students

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

• Student Internship Programme

## Career ReadinessCareer Management

- Global Studies
- Guided Learning
- Innovation & Entrepreneurship

Professional Communication

**Current Issues & Critical Thinking** 

- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Career Opportunities**

With your expertise and mastery in both hardware and software, you'll have a competitive edge over professionals who specialise in only one of these areas.

You can look forward to many exciting job opportunities and excellent career prospects as:

- Data Analysts
- Embedded Systems Engineers
- Hardware Engineers
- Integration Engineers
- Network / Servers / Database / Computer Systems Administrators
- Software / Web / Mobile Application Developers or Programmers
- Systems Analysts

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

Effective Communication

#### \*Year 2 and 3 students must choose one of these cluster elective subject combinations:

# (1) Advanced Skills Practices (2) 2A and 3A

(4) 2C and 3C

(3) 2B and 3B

(5) One subject from the Sustainability in Engineering elective cluster in each year(6) Work-Based Learning







#### The Course

From smartphones to electric cars, we live in a hyper-connected world driven by cutting-edge technologies, where electronic circuits and devices are found in almost every application or appliance. This course will equip you with future-ready skill sets in emerging technologies such as advanced manufacturing, artificial intelligence and the Internet of Things, as well as their applications in various fields like healthcare, assistive technology, and green innovations for the environment.

In your final year, you can choose one of these elective clusters for further specialisation: Aerospace Electronics (Avionics), Advanced Engineering Skills, Industrial Artificial Intelligence, Intralogistics & Cybersecurity, Robotics, Semiconductor Technology, Sustainability in Engineering, or Work-Based Learning. Selected students can also embark on a one-year internship (compared to 4 months for most other diplomas) to gain more industry experience. You can also join the University Pathway Programme (SUTD), which allows you to take university modules during your final year and gain conditional admission into Singapore University of Technology and Design, shortening the time needed to get your degree.

#### Year 1 Subjects

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

#### Year 2 Subjects

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

#### Year 3 Subjects

Major Project

## Advanced Engineering Skills Elective Cluster<sup>#</sup> Advanced Skills Practices

## Avionics Elective Cluster#

- Aircraft Digital Systems
- Avionic Systems

#### Industrial Artificial Intelligence Elective Cluster<sup>#</sup>

- Edge Computing & Machine Learning
- Industrial IoT Analytics

#### Intralogistics & Cybersecurity Elective Cluster<sup>#</sup>

- Distribution Centre Management
- IoT Security

#### **Robotics Elective Cluster**<sup>#</sup>

- Robotics & Automation
- Smart Manufacturing System

#### Semiconductor Technology Elective Cluster<sup>#</sup>

- Cleanroom Equipment & Technology
- IC Process Integration

#### <u>Sustainability in Engineering Elective Cluster</u># (Choose any 2 subjects under this cluster)

- Green Urban Transportation
   & Energy Storage
- Life Cycle Analysis
- Renewable Energy Technologies
- Solar Photovoltaic Technology & Leasing

#### Structured Work-Based Learning Elective Cluster<sup>#</sup>

Work-Based Learning

#### University Pathway Programme (SUTD)<sup>^</sup>

- Computational Thinking for Design
- Modelling & Analysis
- Physical World
- Social Science: Understanding Behaviour, Culture & Society

" Students to choose one of these elective clusters ^ For selected students

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate

the modern workplace as an agile, forwardthinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Career Opportunities**

Singapore is home to many of the world's leading electronics and semiconductor manufacturers. With this diploma, you'll have dynamic and exciting career prospects in the many diverse sectors that use consumer and industrial electronics today.

Potential jobs for you include:

- Electronics / Automation Engineers
- Field Service / Application Engineers
- IoT/System Integration Engineers
- Maintenance / Equipment Engineers
- Production / Manufacturing / Process Engineers
- Software / Firmware / Embedded Engineers
- Test / QA / QC Engineers

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







#### The Course

Buildings and facilities developed today must be beautiful, functional, as well as highly sustainable, energy-efficient, and integrated with smart technologies. This diploma course will equip you with the skill sets in emerging technologies needed to manage major physical establishments' amenities, aesthetics, and functionality. You'll gain exposure to Sustainability areas like Green Buildings, Life Cycle Analysis, Data Analytics and Data Visualisation, and smart technologies like Building Information Modelling (BIM), Internet of Things (IoT), Robotics & Automation and Asset Management.

Additionally, you can specialise in one of three areas: Aviation Facilities, Hospitality Facilities, or Smart Facilities. You can also join the University Pathway Programme (NUS), which allows you to take university modules during your final year and earn credits to enhance your admission chances for the Infrastructure & Project Management (IPM) degree course at the National University of Singapore. As the world's first diploma accredited by the International Facility Management Association (IFMA), this course aligns closely with IFMA's core competencies.

#### Year 1 Subjects

- Air-conditioning & Mechanical Ventilation
- Building Information Modelling
   Collaboration
- Electrical Design & Installation
- Engineering Mathematics 1 & 2
- Facilities Operations & Maintenance
- Security & Surveillance
- Virtual Design & Facility Planning
- Workplace Safety & Health for Facility Management

#### Year 2 Subjects

- Computer Programming for Problem Solving
- Contract Management
- Data Visualisation & Analytics
- Energy Management & Audit
- Fire & Life Safety Management
- Project Management
- Sustainable Facility Management

#### Aviation Facilities Elective Cluster

- Airport Administration #
- Airport Operations & Management #
- Airport Systems #

#### Hospitality Facilities Elective Cluster

- Business & Leisure Events #
- Customer Experience Innovation #
- Introduction to Hospitality & Tourism #

#### Smart Facilities Elective Cluster

- Building Management System #
- Smart FM & Asset Enhancement #
- Intelligent Automation #

#### Year 3 Subjects

- Major Project
- Building Performance Modelling
- Service Quality & Management

#### University Pathway Programme (NUS)<sup>^</sup>

- Infrastructure & Facilities Management
- Infrastructure & Project Management Law
- Introduction to Building Performance
- Project Feasibility

<sup>^</sup> For selected students

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Career Opportunities**

Armed with multidisciplinary skills, you'll find employment in the facilities management or development teams in the airport, hospitality and tourism, events and convention, leisure and entertainment, integrated resort, as well as business and finance sectors, as:

- BIM Assistant Specialists (Digital Delivery)
- Contract/Procurement Executives
- Event Managers
- Facilities Executives
- Fire Safety Managers
- Sustainability Managers

You'll also be able to pursue numerous certifications recognised by the industry, such as:

- BizSAFE Level 2 (Risk Management)
- BizSAFE Level 4 (Workplace Safety & Health Management)
- Fire Safety Manager certification from SCDF
- Digital Delivery Management Certification – Tier 4 (Provisional)
- ICDL Microsoft Office Certification (PowerPoint, Excel and Excel Advanced)
- Project Management Associate Certification (CAPM)

Note: Applicants should not be suffering from severe vision impairment.







#### The Course

Industry 4.0 is transforming the modern workplace. This course prepares you for the new era of advanced manufacturing, where humans, machines, and systems communicate and collaborate as one. You'll learn to master the application of robotics, automation, 3D printing and data analytics in technological areas such as cyber-physical systems, virtual manufacturing, machine vision and pattern recognition.

In your final year, you can choose one of these exciting elective clusters for further specialisation: 3D Printing, Advanced Engineering Skills, Advanced Manufacturing, Aerospace Systems, Intralogistics & Cybersecurity, Semiconductor Technology, Sustainability in Engineering, or Structured Work-based Learning. Selected students can also embark on a one-year internship (compared to 4 months for most other diplomas) to gain more industry experience. You can also join the University Pathway Programme (SUTD), which allows you to take university modules during your final year of this diploma and gain conditional admission into Singapore University of Technology and Design, shortening the time needed to get your degree.

#### Year 1 Subjects

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

#### Year 2 Subjects

- Data Visualisation & Analytics
- Engineering Drawing
- Engineering Mathematics 3
- Integrated Project
- Introduction to Smart Automation
- Machining Technology
- Principles of Dynamics
- Robotics & Automation
- Statics & Strength of Materials

#### Year 3 Subjects

Major Project

#### 3D Printing Elective Cluster#

- Advanced CAD & Simulation
- CAD & Additive Manufacturing

#### Advanced Engineering Skills Elective Cluster\*

• Advanced Skills Practices

#### Advanced Manufacturing Elective Cluster#

- Machine Vision & Pattern Recognition
- Smart Manufacturing System

#### Aerospace Systems Elective Cluster#

Gas Turbine Engine

#### • Thermodynamics

#### Intralogistics & Cybersecurity Elective Cluster<sup>#</sup>

- Distribution Centre Management
- IoT Security

#### Semiconductor Technology Elective Cluster#

- Cleanroom Equipment & Technology
- IC Process Integration

#### <u>Sustainability in Engineering Elective Cluster</u># (Choose any 2 subjects under this cluster)

- Green Urban Transportation
- & Energy Storage
- Life Cycle Analysis
- Renewable Energy Technologies
- Solar Photovoltaic Technology & Leasing

#### Structured Work-Based Learning Elective Cluster<sup>#</sup>

Work-Based Learning

#### University Pathway Programme (SUTD)^

- Computational Thinking for Design
- Modelling & Analysis
- Physical World
- Social Science: Understanding Behaviour, Culture & Society

"Students to choose one of these elective clusters ^ For selected students

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking

#### Career Readiness

- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Career Opportunities**

With increasing consumer demand for customised products and smart digital services in growth areas such as advanced manufacturing, aerospace, robotics, artificial intelligence, precision engineering and pharmaceutical manufacturing, you'll have excellent job prospects!

You can excel in diverse sectors, from precision engineering and integrated circuit manufacturing to semiconductor fabrication and pharmaceutical processing. Potential jobs include:

- Aerospace Technologists
- Associate Engineers / Application Engineers
- Automation Technologists
- Equipment / Maintenance / Service / Test Engineers
- Manufacturing / Mechanical / Product Engineers
- Process Control Engineers
- Research & Development Specialists
- Robot Coordinators
- Technical Sales Engineers

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



# SUMMARY OF ENGINEERING COURSES & SPECIALISATIONS

| DIPLOMA   | SPECIALISATION  |
|---|---|
| [T50] AEROSPACE ELECTRONICS                           | <ul> <li>Avionics Systems</li> <li>CAAS-approved SAR-147 Licensed Aircraft Engineer Training</li> <li>Flight Training</li> </ul>  |
| [T51] AEROSPACE ENGINEERING                           | <ul> <li>Airframe, Engines &amp; Composites</li> <li>CAAS-approved SAR-147 Licensed Aircraft Engineer Training</li> <li>Flight Training</li> </ul>  |
| [T29] ARCHITECTURAL TECHNOLOGY<br>& BUILDING SERVICES | <ul> <li>Building Information Modelling &amp; Management</li> <li>Digital Architecture</li> <li>Environmental Sustainable Design</li> <li>Green Energy Management</li> </ul>                |
| [T04] AVIATION MANAGEMENT                             | <ul> <li>Airline Business</li> <li>Airport Management</li> <li>Air Traffic Management</li> <li>Flight Training &amp; Operations</li> </ul>  |
| [T38] BIOMEDICAL ENGINEERING                          | <ul> <li>Audiometry &amp; Hearing Devices</li> <li>Clinical Practices</li> <li>Healthcare Analytics</li> <li>Medical Devices &amp; Imaging</li> <li>Medical Device Regulations</li> </ul>   |
| [T43] BUSINESS PROCESS & SYSTEMS ENGINEERING          | <ul> <li>Business Processes &amp; Analytics</li> <li>Systems Engineering &amp; Simulation</li> </ul>  |
| [T13] COMPUTER ENGINEERING                            | <ul> <li>Artificial Intelligence</li> <li>Intelligent Automation</li> <li>Internet of Things (IoT)</li> <li>Virtual Reality (VR)</li> </ul>   |
| [T65] ELECTRONICS                                     | <ul> <li>Aerospace Electronics</li> <li>Applied AI &amp; Smart Devices</li> <li>Green Electronics</li> <li>Robotics &amp; Control</li> <li>Semiconductor Technology</li> </ul>              |
| [T28] INTEGRATED FACILITY MANAGEMENT                  | <ul> <li>Project Management</li> <li>Smart Facilities Management Technologies</li> <li>Sustainable Facilities Management</li> <li>Workplace Safety &amp; Health Management</li> </ul>       |
| [T66] MECHATRONICS                                    | <ul> <li>3D Printing</li> <li>Advanced Manufacturing</li> <li>Machine Vision &amp; Pattern Recognition</li> <li>Robotics &amp; Automation</li> <li>Sustainability in Engineering</li> </ul> |

# <sup>•</sup>/imagine

steering societal advancement



school of humanities & social sciences

CREATING TOMORROW

## SCHOOL OF HUMANITIES & SOCIAL SCIENCES

How do young children make sense of the world? What happens to you socially, physically and mentally when you grow older? Why do you think and behave the way you do in different contexts and situations?

If you are curious about the answers to these questions, you are likely to find the diploma courses at the School of Humanities & Social Sciences (HSS) to be just your cup of tea. With highly experienced and qualified tutors and lecturers in the areas of early childhood development & education, sociology and gerontology, as well as psychology, HSS has more than 10 years' experience in delivering people-oriented courses and specialisations.

Better still, our courses prepare you for jobs in the Care Economy – the part of the economy that offers care and support services that contribute to the nurturing and development of our current and future generations. As recently as September 2023, the <sup>1</sup>International Labour Organisation noted that the Care Economy is growing, with demand for care services increasing in many regions across the world.

What this means is that you will be training in a sector that is likely to see increased demand for workers in the coming years. What better way to have a fulfilling life than to work at something you are passionate about?

Best of all is the fact that your training in HSS does not restrict your options. Your training will be broad-based and can qualify you for other job opportunities and roles beyond the humanities and social sciences.

<sup>1</sup> From https://www.ilo.org/global/topics/care-economy/lang--en/index.htm

#### Full-time diploma courses

- [T68] Early Childhood Development & Education
- [T48] Psychology Studies
- [T53] Social Sciences in Gerontology

#### General and admissions enquiries

Tel : 6788 2000 Email : admissions@tp.edu.sg

#### **Course enquiries**

| Tel     | : 6780 6565            |
|---------|------------------------|
| Email   | : hsshotline@tp.edu.sg |
| Website | : www.tp.edu.sg/hss    |

#### For the latest tuition fee amounts, visit:

www.tp.edu.sg/coursefees

## MINIMUM ENTRY REQUIREMENTS

#### To be eligible for:

[T68] Early Childhood Development & Education

English Language\* Grades 1 - 6

Any one of the 1st group of Relevant Subjects for the ELR2B2-A Aggregate Type Grades 1 - 6

Any one of the 2nd group of Relevant Subjects for the ELR2B2-A Aggregate Type Grades 1 - 6

To be eligible for selection, students must also have sat for Mathematics (Elementary/ Additional)

\*All applicants with a C5 or C6 in EL in the O-Level examination are given two years from the point of teacher registration to obtain at least a B4 or any of the English Language Acceptable Alternatives (ELAA). For more information on ELAA, go to **bit.ly/NIECelaa** 

The main medium of instruction for all these subjects must be in English, except for a language subject.

Note: Applicants would need to be certified medically fit for study by a certified medical doctor, in the context of working with young children. That is, the requirements will be aligned to ECDA's medical requirements for pre-school teachers. Applicants have to pass a pre-admission medical examination to enter the course. More details on the medical examination can be found at **bit.ly/NIECmedical** 

To be eligible for: [T48] Psychology Studies [T53] Social Sciences in Gerontology

English Language Grades 1 - 6

Mathematics (Elementary/Additional) Grades 1 - 7

Any one of the 1st group of Relevant Subjects for the ELR2B2-A Aggregate Type Grades 1 - 6

Best two other subjects, excluding CCA

For details on ELR2B2-A, visit: www.tp.edu.sg/elr2b2



# T68 EARLY CHILDHOOD DEVELOPMENT & EDUCATION



Scan for full details, or visit: **www.tp.edu.sg/t68** 

#### The Course

If you are interested in how children learn as they grow, you may want to be a part of Singapore's next generation of early childhood educators. Conducted by the National Institute of Early Childhood Development (NIEC), in collaboration with Temasek Polytechnic at the NIEC (TP) Campus, this course will equip you with the necessary skills and knowledge to excel as an early childhood educator.

In this diploma, you'll gain insights into the complexities of child development while mastering the art of curriculum planning. You'll also learn to implement your skills in early childhood settings such as preschools. A practice-oriented learning approach will allow you to pick up real-time industry experience as you conduct lessons alongside trained early childhood professionals. You can even choose to graduate with the Diploma in Early Childhood Development & Education (ECDE) in the Visual Arts track or Mother Tongue Language Teaching Malay track when you select relevant electives^ in your final year.

With your diploma recognised by the Early Childhood Development Agency (ECDA), you'll be all set to enter the workforce upon your graduation to nurture, inspire, educate and care for the little ones!

<sup>^</sup>Subject to prevailing terms and conditions.

#### Year 1 Subjects

- Aesthetics & Creative Expression
- Child Development 1
- Child Development 2
- InfoComm Technology Essentials
- Language & Literacy
- Motor Skills Development
- Practicum 1
- The Early Years: Theory to Practice

#### Year 2 Subjects

- Curriculum Planning & Implementation
- Discovery of the World
- Early Numeracy
- Infant & Toddler Learning Environment
- Practicum 2
- The Preschool Years: Theory to Practice
- Working with the Exceptional Child

#### Year 3 Subjects

- The Reflective Practitioner in Practice
- Student Internship Programme
- Student can choose any two general electives from the following, OR be part of the Visual Arts (VA) track or the new Mother Tongue Language Teaching-Malay (MTL-Malay) track.

#### Choose either the General Electives OR a specialised Track

#### General Electives (Choose two)

- 2D & 3D Art
- Assessment & Differentiated Instructions
- Book Illustration & Design for Children

- Children's Literature
- Drama in Preschool Education (Cross Campus Elective)

#### Visual Art Track (Compulsory three subjects)

- 2D & 3D Art
- Book Illustration & Design for Children
- Digital & New Media

#### Mother Tongue Language Teaching-Malay Track (Compulsory three subjects)

- Malay Grammar for Effective Communication
- Malay Language & Literacy
- Teaching Malay through the Arts

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

As a graduate with work experience, you can undertake NIEC's Post-Diploma Certificate, Specialist Diploma or Advanced Diploma training in early childhood-related areas. These courses will better equip you to take on roles as an Early Childhood Educator, Senior Infant Educator, or deepen your knowledge in Learning Support.

With sufficient relevant experience and additional training through the Advanced Diploma in Early Childhood Centre Leadership, you can also take on roles as a Lead Teacher and Centre Leader. You may also enjoy up to one year's worth of credit exemption for the full-time Bachelor of Early Childhood Education with a Minor at the Singapore University of Social Sciences.

#### **Career Opportunities**

As a graduate of this course, you can work as an early childhood educator or work in children-related industries. With further studies and training, a wide variety of options are available in the following areas:

- Child Support and Family Services
- Curriculum Development
- Play Therapy
- Special Needs Education
- Teacher Education

For more information on NIEC, please visit **www.niec.edu.sg**.







#### The Course

Why do people think and behave the way they do? How do some people seem to be able to understand others with ease? If you would like to gain insights into the range of behaviours and perspectives that you and those around you exhibit, and if you enjoy working with people, psychology may just be the right course for you.

This course provides you with a broad foundation in the study of human behaviour and mental processes. It prepares you for a career in the social service and special needs education sectors, where psychology is applied to improve the lives of many. Apart from studying core subjects in psychology and the social services, you're also given the flexibility to choose elective subjects according to your personal interest.

Through the course, you'll discover how psychology enriches lives, with many meaningful and practical applications.

#### Year 1 Subjects

- Cognitive Psychology
- Developmental Psychology
- Foundation Psychology
- Introduction to Research Methods & Statistics
- Introduction to Social Services
- Social Psychology
- Survey & Qualitative Research Methods

#### Year 2 Subjects

- Applied Psychology Project A (Survey Design)
- Applied Psychology Project B (Experimental Design)
- Contemporary Issues in Psychology
- Counselling Psychology
- Diploma Elective 1
- Diploma Elective 2
- Experimental Design & Statistics
- Group Work: Processes & Facilitation
- Introduction to Special Needs Education

#### Year 3 Subjects

- Community Psychology
- Diploma Elective 3
- Industrial & Organisational Psychology
- Major Project

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

Graduates who do well in this diploma will stand a higher chance to pursue university degrees in psychology or related disciplines such as the Arts, Social Sciences, Education, Economics, etc. Temasek Polytechnic continues to explore and obtain advanced standing arrangements with various local and overseas universities.

Advanced standing is normally granted based on good academic performance and the degree of relevance between the subjects taken in the diploma and the undergraduate course that a student wishes to pursue.

#### **Career Opportunities**

Depending on chosen electives and/or elective concentrations, graduates may consider entering careers in the following areas:

- Psychology
- Research
- Social Services
- Special Needs Education
- Other People-oriented Careers e.g. Education and Law Enforcement







#### The Course

Do you sometimes wonder what your life will be like 50 years later? What kind of lifestyle will you have? How healthy will you be? And how will you have the means to enjoy your life as you approach your later years? If you would like to know more about how you and your family members can live your best lives in your later years, this course would certainly be very interesting to you. Best of all, studies suggest that by 2050, one in two people will be above 65 years old in Singapore. After graduation, you will find rewarding jobs addressing the complex needs of the aged population, especially in the community care and social service sectors.

Our Diploma in Social Sciences in Gerontology (GEM) will equip you with holistic skills in areas such as:

- health promotion
- programme planning
- case management
- non-profit leadership

that will set you on a path to a rewarding career as Community Care Executive, Social Work Assistant, Assistant Care Coordinator and many more!

Our electives also provide you with the chance to deepen your skills in allied health support e.g., assistance in social work, physiotherapy, occupational therapy and nursing, offering flexibility to venture into different types of health and social sciences-related work and undergraduate programs. Join us today to uplift the lives of older adults and the community!

#### Year 1 Subjects

- Anatomy & Physiology of Ageing
- Applied Social Research
- Introduction to Gerontology
- Introduction to Health & Social Services
- Introduction to Sociology
- Managing Adult Life Transitions
- Psychology of Ageing
- Silver Leisure & Lifestyle

#### Year 2 Subjects

- Coaching & Case Management
- Gerontechnology & Behaviour Design
- Mental Health & Dementia Management
- Physical Activities & Wellness for Older Adults
- Population Health & Ageing
- Programme Planning
   for Health Promotion
- Social Policy in Ageing

# Elective Cluster Subject 1 (choose one elective cluster)

- Care & Therapy Subject 1: Community-Based Nursing Support
- Social Work Subject 1: Basic Gerontological Counselling

#### Year 3 Subjects

 Administration for Non-Profit Organisations

- Advance Care Planning & End-of-Life Issues
- Community Development with Older Adults
- Leadership Development in Non-Profit Organisations

#### Elective Cluster Subject 2 (choose one)

- Care & Therapy Subject 2:
   Community-Based Therapy Support
- Social Work Subject 2: Working with Older Adults & Their Families

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

What and where are our graduates studying? They are furthering their studies not just in Singapore but all over the world, including Australia, United Kingdom, Canada and Hong Kong.

With knowledge and skills relating to gerontology, psychology and allied health, you can follow the footsteps of our alumni and choose from a variety of disciplines, including Arts, Social Sciences, Social Work, and health-related degrees such as Occupational Therapy, Physiotherapy and Nursing.

#### **Career Opportunities**

The community needs you! Look forward to these exciting and meaningful careers that are high in demand now:

- Assistant Care Coordinator
- Assistant Health Coach
- Community Care Executive
- Programme Executive
- Social Work Assistant
- Therapy Assistant
- Volunteer Management Executive
- Wellbeing Coordinator



driving digital transformation



EFR

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school of informatics & IT CREATING TOMORROW

Imagining tomorrow with GenAI-powered images

## SCHOOL OF INFORMATICS & IT

Walk into any bank, airport, school, office, hospital, park, theatre, or train station, and you'll notice the amazing power and influence of Information Technology (IT). You see IT in our mobile apps, the security applications that protect our computers, the chatbots on our phones, the Generative AI tools we use, and the digital games we play.

Here at the School of Informatics & IT, you'll learn how to leverage IT to improve business processes, ensure efficiency and enrich lives. Through our courses, you'll receive a strong, practical and hands-on foundation and gain a better understanding of specialised areas like artificial intelligence, analytics, big data, cybersecurity, digital forensics, immersive media and software development. You'll learn to harness the power of IT to make a difference in the world around you.

As a leader in the field, we are recognised as a forward-looking and progressive School, providing a range of highly relevant courses. Our emphasis on developing problem-solving and thinking skills helps us to cultivate intelligent individuals who are independent, analytical and able to respond effectively to the needs of people and organisations. We have a strong culture of applied learning, innovation and enterprise to nurture industry-ready professionals. We also emphasise critical thinking, problem-solving, global awareness, communication and teamwork because these are key attributes for people working in a global economy.

Through our Student Internship Programme, you'll gain real-life work experience in local or overseas companies. You'll be attached to a company for six months or more as an intern in your final year. This rich experience will prepare you well as an IT professional and give you an edge when you seek employment.

#### Common entry programme

• [T63] Common ICT Programme

#### Full-time diploma courses

- [T69] Applied Artificial Intelligence
- [T60] Big Data & Analytics
- [T62] Cybersecurity & Digital Forensics
- [T58] Immersive Media & Game Development
- [T30] Information Technology

#### General and admissions enquiries

| Tel   | : 6788 2000            |
|-------|------------------------|
| Email | : admissions@tp.edu.sg |

#### **Course enquiries**

| Tel     | : 6780 5158         |
|---------|---------------------|
| Email   | :iit@tp.edu.sg      |
| Website | : www.tp.edu.sg/iit |

#### For the latest tuition fees, visit:

www.tp.edu.sg/coursefees

## MINIMUM ENTRY REQUIREMENTS

To be eligible for any of these diploma courses:

English Language Grades 1 - 7

Mathematics (Elementary/Additional) Grades 1 - 6

Any one of the 2nd group of Relevant Subjects for the ELR2B2-C Aggregate Type Grades 1 - 6

Best two other subjects, excluding CCA

For details on ELR2B2-C, visit: www.tp.edu.sg/elr2b2







#### The Course

Are you excited and curious about new technologies? Do you want to apply technology to enrich the lives of those in your community, businesses and organisations? Are you the type who wants to be the first to try out new technologies? Do you want a career where you work with emerging technologies in fields such as analytics, artificial intelligence, cybersecurity, financial technologies, immersive media or software development? If your answer to most of these questions is "YES", then the Common ICT Programme is one that you should consider.

In this one-year programme, you'll learn the fundamentals of information technology through a strong foundation in modules such as computational thinking, data analytics, cybersecurity, application development and user experience design. Before the programme's completion, you'll choose which of the following diploma courses you want to undertake for your next two years of study:

- [T69] Applied Artificial Intelligence
- [T60] Big Data & Analytics
- [T62] Cybersecurity & Digital Forensics
- [T58] Immersive Media & Game Development
- [T30] Information Technology

The Common ICT Programme gives you time to learn more about the School's diploma courses and make a more informed decision on the job role you want to pursue.

Programme Subjects

- Application Development Project
- Computational Thinking
- Cybersecurity Fundamentals
- Data Visualisation & Analytics
- Database Application Development
- Data Structures & Algorithms
- Logic & Mathematics
- Network & Cloud Technology
- User Experience & Interface Design

#### **TP Fundamentals (TPFun) Subjects**

- Career Readiness
- Current Issues & Critical Thinking
- Leadership Fundamentals
- Sports & Wellness







#### The Course

Artificial Intelligence (AI) is already transforming our daily lives. We see it in smartphone chatbots such as Siri or Google Assistant. AI uses data from our search patterns, favourite movie genres, shopping habits, and more to push information that may interest us when we surf the web. Indeed, AI is changing business processes, impacting how we do things in healthcare and transportation. In fact, it is quickly impacting most facets of life.

This course introduces you to fundamental AI concepts, the various applications of AI, and how smart applications can be created. You'll build essential foundations in IT in your first year and then proceed in your second year to learn core subjects of AI, such as machine learning and deep learning. Our broad-based and hands-on training will enable you to develop smart applications for any industry you join, such as commercial businesses, healthcare, education, transportation, manufacturing, etc. This course gives you an excellent head start to building a career in this exciting field.

#### Year 1 Subjects

- Application Development Project
- Computational Thinking
- Cybersecurity Fundamentals
- Data Visualisation & Analytics
- Database Application Development
- Data Structures & Algorithms
- Logic & Mathematics
- Network & Cloud Technology
- User Experience & Interface Design

#### Year 2 Subjects

- AI & Ethics
- Cloud Technologies for AI
- Deep Learning & Object Recognition
- IoT Application Development
- Machine Learning for Developers
- Mobile App Development
- Natural Language Processing
- Robotic Process Automation

#### Year 3 Subjects

- Elective subjects#
- Major Project

"Students will take two elective subjects (see page 64)

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

As a graduate of this course, you can take up the SkillsFuture Work-Study Programme (WSP), which leads to a Specialist Diploma in Business Analytics or other IT-related WSPs. You can choose to take up the Specialist Diploma in Al Solutions Development and similar programmes to deepen your skills

If you intend to pursue a Computer Science or Information Systems degree at a local or overseas university, you can expect to receive advanced standing at many of these institutions.

- Al Engineer
- Applications Developer
- Data Analyst
- Frontend Developer
- Machine Learning Engineer
- Mobile Applications Developer
- Robotics Process Automation Engineer
- Software Engineer







#### The Course

Content streaming companies, like Netflix and Disney+, recommend movies and shows based on subscribers' viewing history and preferences. Social media platforms such as Instagram showcase feeds based on users' interactions with posts. Online retail giant, Amazon, uses big data for shortening delivery times by predicting online purchasing habits. In fact, Amazon has so much confidence in their data and prediction algorithms that they start the delivery process even before the customer clicks on the 'proceed to checkout' button!

These organisations can gain a competitive edge over their rivals because they leverage the power of analytics. If data is the new oil, then analytics is the refinement process that helps organisations make sense of the large volumes of data they have.

Indeed, with big data driving decision-making in businesses, it is an exciting time for big data and analytics professionals! When you undertake this course, you'll work with data at your fingertips and use analytics tools to provide data-driven insights to companies. You'll receive broad-based training integrated with real workplace experience through internships, mentorships, and project collaborations. You'll graduate with industry-recognised certifications that will be an advantage when you seek to pursue further studies or job opportunities in the analytics field.

#### Year 1 Subjects

- Application Development Project
- Computational Thinking
- Cybersecurity Fundamentals
- Data Visualisation & Analytics
- Database Application Development
- Data Structures & Algorithms
- Logic & Mathematics
- Network & Cloud Technology
- User Experience & Interface Design

#### Year 2 Subjects

- Data Engineering in the Cloud
- Data Mining & Business Analytics
- Data Science Essentials
- Data Storytelling
- Data Warehousing & Business Intelligence
- Machine Learning for Decision Making
- Quantitative Analysis
- Text & Social Media Analytics

#### Year 3 Subjects

- Elective subjects<sup>#</sup>
- Major Project

"Students will take two elective subjects (see page 64)

#### TP Fundamentals (TPFun) Subjects

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

As a graduate of this course, you can take up the SkillsFuture Work-Study Programmes (WSP) that lead to a Specialist Diploma in Business Analytics or other IT-related WSPs. You can also pursue the Specialist Diploma courses in Data Science for Business, DevOps, Financial Analytics, AI Solutions Development or similar programmes.

If you intend to pursue a degree in Computer Science, Information Systems or other related programmes at any local or overseas university, you can expect to receive advanced standing at many of these institutions.

- Associate Business Analyst
- Business Intelligence Analyst
- Data Analyst
- Data Engineer
- Database Administrator
- Machine Learning Engineer







#### The Course

We use computers, mobile phones and digital devices to access information daily. Using the Internet for communication and monetary transactions is also commonplace. However, these services have become the prime target of hackers who attempt to access our computer systems to steal account details, demand money through ransomware and plant malware and viruses that compromise our systems. Organisations today seek qualified professionals who can patrol and protect our information and computing systems from these cyber-villains.

In this course, you'll learn how to protect and defend computing and information systems, applications and networks to ensure they are secure. Should a cybersecurity breach occur, you'll be knowledgeable in retrieving and reconstructing the evidence, investigating the cause, and advising on preventing further attacks. You'll undergo hands-on training at the Operational Technology Security Lab, a collaboration with Fujitsu, Cisco and Panasonic; training in cloud computing and security at the TP-IBM Technology Experience Centre; and training in security operations at the Security Information Event Management (SIEM) Centre.

In addition, you'll have the opportunity to identify, contain, analyse and eradicate live malware samples in our Malware Analysis Centre, a facility set up with ST Engineering, Palo Alto Networks and CrowdStrike. Here, you'll learn from these industry leaders who will impart knowledge and skills in handling and analysing malware and operations to supplement and add value to your broad-based education, enabling you to support any industry as a future IT professional.

#### Year 1 Subjects

- Application Development Project
- Computational Thinking
- Cybersecurity Fundamentals
- Data Visualisation & Analytics
- Database Application Development
- Data Structures & Algorithms
- Logic & Mathematics
- Network & Cloud Technology
- User Experience & Interface Design

#### Year 2 Subjects

- Ethical Hacking & Intrusion Prevention
- Enterprise Networking
- Forensics in Digital Security
- Incident Response & Management
- IT Security Management & Audit
- Network Security
- Secure Web Applications
- Servers Administration & Security

#### Year 3 Subjects

- Elective subjects<sup>#</sup>
- Major Project

"Students will take two elective subjects (see page 64)

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

After you graduate from this course, you can take up the SkillsFuture Work-Study Programmes (WSP), leading to a Specialist Diploma in Cyber Security or other IT-related WSPs. You can also pursue the Specialist Diploma in Information Security & Forensics or similar programmes.

In addition, you can pursue a Computer Science, Information Systems or other related degree programmes in any local or overseas university. You can expect to receive advanced standing at many of these institutions.

- Cyber Risk Analyst
- Incident/Forensic/Threat Investigator
- IT Security Auditor
- Network Infrastructure Support Specialist
- Security Operations Analyst
- Security Penetration Tester







#### The Course

Are you keen to create your own interactive, exciting digital environments? Can't wait to leverage breakthrough immersive media technologies? Then, this course is right up your alley!

Gain a strong understanding of how to merge the virtual and physical worlds using sound development principles and elements of game design. Create your own games from conception through to development and deployment. Learn from and work alongside our experts, who have created everything from augmented and virtual reality to video game titles used in the healthcare, hospitality, manufacturing, and education industries.

Our use of industry-leading tools, such as the Unity Game Engine, will also give you a unique advantage. In addition, you'll also earn recognised and valued immersive media and game industry professional certifications while learning with us!

#### Year 1 Subjects

- Application Development Project
- Computational Thinking
- Cybersecurity Fundamentals
- Data Visualisation & Analytics
- Database Application Development
- Data Structures & Algorithms
- Logic & Mathematics
- Network & Cloud Technology
- User Experience & Interface Design

#### Year 2 Subjects

- 3D Modelling
- Augmented Reality Application
   Development
- Computer Graphics & Programming
- Game Design
- Game Development
- Immersive UiUx
- Maths & Physics Programming
- Programming with Game Engines

#### Year 3 Subjects

- Elective subjects<sup>#</sup>
- Major Project

"Students will take two elective subjects (see page 64)

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

As a graduate of this course, you can take up the SkillsFuture Work-Study Programmes (WSP), which lead to the Specialist Diploma in Business Analytics or other IT-related WSPs. You can choose to take up the Specialist Diploma in AI Solutions Development and similar programmes to deepen your skills.

If you intend to pursue a Computer Science, Information Systems or other related degree programmes in any local or overseas university, you can expect to receive advanced standing at many of these institutions.

- Applications Developer
- Augmented Reality/Virtual Reality/ Mixed Reality Developer
- Game Developer/Programmer
- Level Designer/Game Designer
- Mobile App Developer
- UI/UX Designer







#### The Course

How does my Grab app locate the nearest available driver? How does my home know to turn on the lights five minutes before I arrive? How can I create a music player for my phone? How can I design an engaging web profile? The answers to all these questions have one thing in common – they are all created and driven by information technology.

In today's world, intelligent applications, mobile applications, data analytics, financial technologies, and the Internet of Things (IoT) drive innovation and disrupt everything around us. Here, you'll acquire essential foundations in IT in your first year. Subsequently, you'll learn best industry practices and develop skills in software development.

Graduates of this course will have the necessary skills and knowledge to develop innovative software solutions through coding that will transform and disrupt society meaningfully. The broad-based and hands-on training you undergo here will also enable you to enjoy job opportunities in any industry you seek to join.

#### Year 1 Subjects

- Application Development Project
- Computational Thinking
- Cybersecurity Fundamentals
- Data Visualisation & Analytics
- Database Application Development
- Data Structures & Algorithms
- Logic & Mathematics
- Network & Cloud Technology
- User Experience & Interface Design

#### Year 2 Subjects

- Agile Methodology & Design Thinking
- Application Security
- Cloud Application Development
- DevOps Essentials
- IoT Application Development
- Machine Learning for Developers
- Mobile App Development
- Full Stack Web Development

#### Year 3 Subjects

- Elective subjects<sup>#</sup>
- Major Project

"Students will take two elective subjects (see page 64)

#### **TP Fundamentals (TPFun) Subjects**

These subjects equip you with the crucial 21st-century life skills needed to navigate the modern workplace as an agile, forward-thinking individual and team player.

- Student Internship Programme
- Effective Communication
- Professional Communication
- Current Issues & Critical Thinking
- Career Readiness
- Career Management
- Global Studies
- Guided Learning
- Innovation & Entrepreneurship
- Leadership Fundamentals
- Leadership in Action
- Sports & Wellness
- Sustainability & Climate Action

#### **Further Studies**

As a graduate of this course, you can take up the SkillsFuture Work-Study Programmes (WSP), which lead to a Specialist Diploma in Business Analytics, Financial Analytics or other IT-related WSPs. You can also take Specialist Diploma courses in areas such as AI Solutions Development, Data Science for Business, and DevOps.

If you intend to pursue a Computer Science or Information Systems degree in a local or overseas university, you can expect to receive advanced standing at many of these institutions.

- Applications Developer
- Application Support Engineer
- DevOps Engineer
- Mobile Applications Developer
- Software Engineer
- Software Tester
- SysOps Engineer
- Systems Analyst
- UI/UX Designer



# SUMMARY OF INFORMATICS & IT COURSE ELECTIVE CLUSTERS

| COURSE                                   | ELECTIVE SUBJECTS   |
|--|---|
| ALL SCHOOL OF INFORMATICS & IT COURSES   | Industry Practice <ul> <li>Guided Work-based Learning 1</li> <li>Guided Work-based Learning 2</li> </ul> <li>Software &amp; Analytics for Sustainability <ul> <li>Data Analytics for Environmental Sustainability</li> <li>Green Software Principles</li> </ul> </li>                               |
| [T69] APPLIED ARTIFICIAL INTELLIGENCE    | Applied Al for Industry<br>• Al for Advanced Manufacturing<br>• Al for Cybersecurity  |
| [T60] BIG DATA & ANALYTICS               | Advanced Analytics<br>• Deep Learning & Object Recognition<br>• Recommendation Systems<br>Advanced Manufacturing Technology<br>• Distribution Centre Management<br>• Industrial IoT Analytics   |
| [T62] CYBERSECURITY & DIGITAL FORENSICS  | Advanced Manufacturing Technology<br>• Distribution Centre Management<br>• Industrial IoT Analytics<br>Digital Forensics<br>• Malware Analysis<br>• Mobile Device Forensics<br>Enterprise Security<br>• Cloud Security<br>• Security Technology & Innovation  |
| [T58] IMMERSIVE MEDIA & GAME DEVELOPMENT | Immersive Technology and Al<br>• Game Al<br>• Immersive Technology Development  |
| [T30] INFORMATION TECHNOLOGY             | Advanced Manufacturing Technology<br>• Distribution Centre Management<br>• Industrial IoT Analytics<br>Business Analytics<br>• Data Mining & Business Analytics<br>• Data Storytelling<br>Fintech<br>• Digital Banking & Financial Services<br>• Introduction to Blockchain Application Development |



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