Information Technology

"The challenges facing businesses today require solutions that are grounded on innovation in technology. We are also seeing several disruptive trends such as artificial intelligence, block chain, data analytics, DevOps and the Internet of Things (IoT), which requires the workforce of the future to adapt to the ever changing landscape. This future workforce needs to be agile and flexible in delivering innovative technology solutions. The Diploma in Information Technology course at Temasek Polytechnic helps provide a solid foundation for developing IT professionals for the industry."

Sam Liew
Managing Director
Accenture Singapore

How does my mobile app locate the nearest Grab? How does my home know to turn on the lights 5 minutes before I get there? How do self-driving cars learn to drive on their own? How does a robot recognise my speech and reply? The answers to all these questions and much more share one common thing: they are all created through and driven by information technology.

In today's world artificial intelligence-based applications, mobile applications, data analytics and the Internet of Things (IoT) are driving innovation and disrupting everything around us. Graduates from this course are able to develop innovative software solutions through coding that will transform and disrupt society in a meaningful way. If you are passionate about transforming the culture and environment around you through IT, then consider this course in Information Technology.

You have two clusters of elective subjects to choose in this course:

- **Business Analytics Cluster,** which focuses on analysing and interpreting data and developing visualisations using dashboards.
- **Game Development Cluster,** which focuses on the knowledge and skills needed to design and develop games.

In your final year, you will integrate the knowledge that you have acquired to complete a major project. You will also be attached to either a local or overseas company as an intern and this will provide you an opportunity to apply your skills in a real work environment and also prepare you to contribute as an IT professional when you graduate.

This course has an established track record of producing highly successful students who have won top positions in national and international IT software applications and development competitions as well as create their own start-up companies. Upon graduating, our students can pursue further studies through the Earn & Learn Programme which enables them to work and deepen their skills, or they can undertake a degree course.

Career Opportunities

With a broad-based education in IT, your employment prospects are excellent. You will be able to fill positions such as applications developers, systems analysts, IT consulting analysts and platform engineers in government organisations, software houses, large multinational corporations and financial institutions.

Graduation Requirements

Cumulative Grade Point Average : min 1.0
TP Fundamentals Subjects : 40 credit units
Diploma Subjects
   Core Subjects : 72 credit units
   Elective Subjects : min 8 credit units
Total Credit Units Completed : min 120 credit units

Application

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

Entry Requirements for Singapore-Cambridge GCE O Level Qualification Holders

To be eligible for consideration for admission, applicants must obtain 26 points or better for the net ELR2B2 aggregate score (i.e. English Language, 2 relevant subjects and best 2 other subjects, including CCA Bonus Points) and meet the minimum entry requirements of this course. CCA cannot be used to meet the minimum entry requirements.

For details on GCE O Level Minimum Entry Requirements, refer to page 214.

Course Structure

TP FUNDAMENTALS (TPFun) SUBJECTS			
SUBJECT CODE	SUBJECT	LEVEL	CREDIT UNITS
CCS1006	Communication & Information Literacy	1	2
CCS1007	Workplace Communication	1	2
CCS1008	Persuasive Communication	1	2
CGS1002	Global Studies	1	3
CGS1003	Managing Diversity at Work*	1	3
CGS1004	Global Citizenship & Community Development*	1	3
CGS1005	Expressions of Culture*	1	3
CIN1001	Innovation & Entrepreneurship	1	2
GCC1001	Current Issues & Critical Thinking	1	2
LEA1011	Leadership: Essential Attributes & Practice 1	1	1
LEA1012	Leadership: Essential Attributes & Practice 2	1	1
LEA1013	Leadership: Essential Attributes & Practice 3	1	1
LSW1002	Sports & Wellness	1	2
MCR1001	Career Readiness 1	1	1
MCR1002	Career Readiness 2	1	1
MCR1003	Career Readiness 3	1	1
TGL1001	Guided Learning	1	3
CSI3004	Student Internship Programme	3	16

Students must choose one of these three subjects or TGL1001 Guided Learning.

DIPLOMA SUBJECTS – CORE SUBJECTS

SUBJECT CODE	SUBJECT	LEVEL	CREDIT UNITS
CCF1C02	IT Systems Security Essentials	1	4
CIA1C06	Database Application Development	1	4
CIA1C07	Logic & Mathematics	1	3
CIA1C10	Data Analytics	1	4
CIT1C14	Data Structures & Algorithms	1	4
CIT1C18	Computational Thinking	1	4
CIT1C19	User Experience & Interface Design	1	3
CIT1C20	Coding & Development Project	1	4
CMC1C08	Network Technology	1	4
CGE2C11	Object-Oriented Analysis & Design	2	4
CIT2C18	Mobile App Development	2	4
CIT2C19	Software Quality Assurance	2	4
CIT2C20	Full Stack Web Development	2	4
CIT2C21	Microservices	2	4
CMC2C16	IoT Application Development	2	4
CIT3C15	Machine Learning for Developers	3	4
CMP3102	Major Project	3	10

DIPLOMA SUBJECTS – ELECTIVE CLUSTERS

SUBJECT CODE	SUBJECT	LEVEL	CREDIT UNITS
Business Analytics			
CDA2C02	Data Mining & Business Analytics	2	4
CIA2C13	Data Visualisation	2	4
Game Development			
CGE2C16	Game Development	2	4
CGE2C20	Game Design	2	4