Course Overview

Are you excited and curious about new technologies? Do you have a desire to apply technology to enrich the lives of those around you? Do you want a career in emerging fields such as analytics, artificial intelligence, big data, cybersecurity, financial technologies or immersive media?

The Common ICT Programme enables you to explore and learn more about the various IT fields before deciding on which course to pursue!

In this one-year programme, you will learn the fundamentals of Information Technology such as coding and computational thinking, data analytics, cybersecurity fundamentals and user experience design.

You will then be able to choose one of the following diploma courses to undertake for the next two years of your study:

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

Take a byte of the different slices of the IT pie in the Common ICT Programme!

AWS Cloud Practitioner Certification

Many companies are now placing their information on the cloud, as well as creating applications and services on the cloud. Due to cloud computing, we are seeing a big shift from the traditional way businesses think about IT resources. Cloud Computing professionals are in high demand in the IT industry. The AWS Certified Cloud Practitioner offers a foundational understanding of AWS Cloud concepts, services, and terminology.

The School of Informatics & IT curriculum prepares students to acquire the AWS certified cloud practitioner qualification. Industry-recognised certificates give students and prospective employers an added confidence about the cloud proficiency of graduates.

Supported by:

aws academy
Member Institution

CAREER GUIDANCE PROGRAMME
Gain exclusive insight into various ICT job roles through a customised career guidance programme.

FIRM FOUNDATION
Build a solid foundation and get the unique opportunity to learn the fundamentals of IT for one year, before choosing a specialisation for your next two years of study.

CONNECT WITH ALUMNI
Participate in exciting learning journeys and engage with our alumni to learn more about the ICT industry before you choose your diploma course.

Entry Requirements

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.

Subject	Grade
English Language (EL1)*	1-7
Mathematics (E or A)	1-6
Any two other subjects	1-6
2023 Planned Intake	**220**
Net ELR2B2 aggregate range (2023 JAE)	**5 - 16**

To be eligible for selection, applicants must also have sat one of the following subjects: Additional Combined Science, Additional Science, Biology, Biotechnology, Chemistry, Combined Science, Computer Studies, Creative 3-D Animation, Design & Technology, Engineering Science, Food & Nutrition, Fundamentals of Electronics, General Science, Human & Social Biology, Integrated Science, Physics, Physical Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry), Science (Physics, Chemistry Biology).

What You'll Learn

Learn to develop your own mobile and web applications with the coding and user interface skills you acquire. Also, learn the fundamentals of networking, and discover how to create your own analytics dashboard.

Note: Your learning journey and experiences in Year 2 and 3, as well as future career opportunities will depend on the diploma course you choose to be streamed into.

Diploma Subjects - Core Subjects

In Year 1 all students will go through a common curriculum which comprises the following subjects:

Diploma Subjects - Core Subjects　　　　　　　　　　—

Subject Code	Subject	Credit Units	
CIT1C21	**Application Development Project** This subject will introduce the skills required to develop a web application using the latest technologies. Project design, development and deployment will also be covered.	4	∧
CIT1C18	**Computational Thinking** This subject introduces students to the fundamentals of computational thinking and their application in developing programming solutions for problems. Topics covered include programming concepts, simple data structures and programming techniques.	4	∧
CCF1C03	**Cybersecurity Fundamentals** This subject will introduce the principles of cybersecurity and their application in real world scenarios. It also covers what is required to protect and defend digital systems and applications in cyber space. Common types of cyber risks, threats and attacks, as well as the applicable controls will also be discussed.	2	∧
CIA1C11	**Data Visualisation and Analytics**	4	∧

This subject covers the data analytics lifecycle, including gathering, cleaning, processing and visualising of data. Exploratory data analysis methods, descriptive and predictive analytics and the presentation of insights will also be covered.

CIA1C06	Database Application Development	4	^

This subject introduces the fundamental concepts of relational database systems, the design methods specific to relational database, database manipulation using a database query language, and the techniques of implementing relational databases. It will also cover implementation of simple applications to access relational database.

CIT1C14	Data Structures and Algorithms	4	^

This subject introduces students to the fundamentals of recursion and data structures in solving problems using a programming language. Topics covered include stacks, queues, linked lists and trees. Searching techniques and sorting algorithms will also be covered.

CIA1C07	Logic and Mathematics	3	^

This subject covers logic, sets, functions, recursion and graphs. It covers mathematical processes for developing algorithms in computing and other real-life applications. Topics covered include the fundamental mathematical concepts needed for computing.

CCF1C04	Network and Cloud Technology	4	^

This subject covers the theoretical and practical aspects of network and cloud technology. Topics covered include how data is transmitted within an organisation and via the internet, as well as cloud computing technologies, its benefits, organisation, cloud usage, and risks.

CIT1C19	User Experience and Interface Design	3	^
	This subject introduces the concept of Human-Centered Design, and its practice to create useful digital products and interfaces that offer an enriching user experience (UX). The topics covered include designing interfaces, need findings, sketching and prototyping for interactive experiences, and usability testing.		

At the end of Year 1, you will choose your diploma course and be streamed into Year 2.

YEAR 1   **TPFUN**

You will also take this set of subjects that equips you with the crucial 21st-Century life skills you need to navigate the modern world as an agile, forward-thinking individual and team player.

TP Fundamentals (TPFun) Subjects —

Subject Code	Subject	Credit Units	
GTP1201	Career Readiness	1	^
	This subject focuses on personal management skills. It develops an understanding of one's career interests, values, personality and skills for career success. It covers the necessary knowledge, skills and attitudes needed to succeed in the workplace and achieve professional goals. There will be exposure to apply digital and information literacy skills, build competence through self-directed learning methods, and acquire the skills of being a lifelong learner.		
GTP1301	Current Issues & Critical Thinking	3	^
	This subject covers current issues, including diverse local and global concerns, that will impact lives and may have critical implications for Singapore. There will be opportunities to build competence through self-directed learning, communicate and collaborate in active discussions and objectively analyse issues using digital and information literacy skills and critical thinking scaffolds.		

GTP1101	Leadership Fundamentals	2	^

This subject focuses on self-leadership based on the values of integrity, respect, and responsibility. Increasing awareness of self and others will lay the foundations for personal and relationship effectiveness. Consequential thinking, clear articulation of personal values and visions, emphatic listening, and collaboration in serving others are some of the essential skills covered in this leadership journey. There will be opportunities to build and to apply the concepts of being a values-centred leader.

LSW1002	Sports & Wellness	2	^

The subject enables students to build a good foundation for healthy living. Students will have the opportunity to participate in hands-on practical sessions where they will experience and develop both physical and technical skills in their chosen sports or fitness activities. Through a structured curriculum that facilitates group participation, practice sessions and mini competitions, students will be able to build lifelong skills such as resilience, leadership, communication and teamwork. Physical activity sessions will also be supplemented by health-related topics that span the dimensions of health, such as diet, nutrition, stress and weight management, to provide students with a holistic approach to healthy living. This subject also prepares students to be self-directed and accountable for lifelong learning for good health.

GTP1101

Graduation Requirements

All students who enrol through this common programme will graduate with the same diploma as those who had joined a particular diploma right from Year 1. They will be subject to the graduation requirements of the respective diplomas into which they are streamed.

Please refer to the respective diploma websites below:

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