



COMMON ICT PROGRAMME (T63)

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 game development?

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, IT systems security 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] Game Design & Development

[T30] Information Technology

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



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) 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
2022 Planned Intake	195
Net ELR2B2 aggregate range (2021 JAE)	4 - 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

YEAR 1

TPFUN

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
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
CIT1C20	Coding and Development Project This subject introduces students to coding principles and practices using an object-oriented approach. The subject also introduces the development of an IT application using the latest technologies. Topics covered include object and classes, composition, simple data structures, application architecture, design and development.	4
CIA1C11	Data Visualisation and Analytics 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.	4
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 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.	4	^
CCF1C02	IT Systems Security Essentials This subject introduces students to the key principles of information security namely confidentiality, integrity and availability and their application in various real world scenarios. Topics covered include IT law, international standards, security policies, procedures, processes to protect IT systems against cyber-attacks and information breaches and the architecture and organisation of the digital components of a computer system.	4	^
CIA1C07	Logic and Mathematics 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.	3	^
CMC1C08	Network Technology This subject covers the theoretical and practical aspects of networking and its related technologies. Topics covered include network protocols and communications, Ethernet networks, TCP/IP networking model, IP addressing, virtual local area networks (VLANs), routing and switching concepts and static and dynamic routing.	4	^
CIT1C19	User Experience and Interface Design 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.	3	^

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

YEAR 1

TPFUN

You will also undergo TP Fundamentals (TPFun) – a set of subjects that equips you with the crucial life skills you need to navigate the modern world as an agile and forward-thinking individual, and team player.

TP Fundamentals (TPFun) Subjects		
Subject Code	Subject	Credit Units
GTP1301	Current Issues & Critical Thinking 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. This subject aims to provide students with the knowledge and skills to: <ul style="list-style-type: none"> • apply critical thinking tools to examine current issues. • effectively search for relevant information from a variety of sources. • evaluate research information. • cite sources to support their views. • articulate an informed opinion about current issues. 	3
CTX1001	Effective Communication	3

This subject introduces the fundamentals of effective communication. It also covers how to communicate with and convince an audience through writing and speaking tasks. The skills in this subject will include the application of strategies for communication, appropriate vocabulary, language features, visual aids, tone and style. The **Message, Audience, Purpose and Strategy (MAPS)** framework will also be applied when planning and engaging in written and verbal communication. There will be opportunities to communicate and collaborate through active learning activities, apply digital and information literacy skills and build competence through self-directed learning.

This subject aims to equip students with the knowledge and skills to:

- apply the factors that influence effective communication.
- structure a compelling point of view through a writing task.
- express their ideas convincingly to an audience in an oral presentation.

CTX1002

Professional Communication

3



This subject covers professional communication skills for the workplace and employability skills in the areas of career preparation. It covers communication and interpersonal skills, including effective virtual communication etiquette, and conducting oneself professionally in the workplace. In addition, essential career preparation skills such as resume writing and interview skills, needed to seek and secure work would be included. The **Message, Audience, Purpose and Strategy (MAPS)** framework would also be applied when engaging in written and verbal communication. There will be opportunities to communicate and collaborate through active learning activities, apply digital and information literacy skills and build competence through self-directed learning.

The subject aims to equip students with the knowledge and skills to:

- communicate effectively in the workplace using principles of effective written communication and interpersonal skills.
- apply effective job search and interview skills in their career preparation.

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.

The aim of this subject is to guide students to:

- design a personal growth plan based on strengths, values and purpose.
- apply the attributes of logical and emotional intelligence to improve team effectiveness.
- identify the key messages of respect in relationships.
- apply the principles of effective personal financial management.

GTP1102

Leadership in Action

1



This subject focuses on Service Learning as an experiential platform to apply the tenets of Self and Team Leadership. Service Learning will be the capstone project for this subject, which will require an analysis of the diverse needs of the community, collaboration with community partners and demonstration of learning, including key elements of empathy. There will be opportunities to build and to apply the concepts of being a values-centred leader.

This subject aims to equip students with the knowledge and skills to:

- plan and carry out a project to demonstrate empathy towards people in a diverse community.
- apply diploma core knowledge and skills through the Service Learning platform to address community needs.
- reflect on the Service Learning experience when working in teams and with community partners.

GTP1201

Career Readiness CARE1

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.

This subject aims to equip students with the knowledge and skills to:

- analyse personal characteristics that can contribute positively to achieving personal, educational and career goals.

- make career decisions that are aligned with their interests, skills and values.

GTP1202	<p>Career Readiness CARE2</p> <p>This subject focuses on career management skills. It covers the importance of workplace readiness skills to adapt and respond to the changing job market environment. Career ownership and continuous learning for lifelong employability will be emphasised. There will be exposure to apply digital and information literacy skills, build competence through self-directed learning, and acquire the skills of being a lifelong learner.</p> <p>This subject aims to equip students with the knowledge and skills to:</p> <ul style="list-style-type: none"> • identify their work profiles to help them in their career choices in a changing job market environment. • take career ownership for continuous learning and lifelong employability. 	1	
LSW1002	<p>Sports & Wellness</p> <p>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.</p>	2	
CIN1001	<p>Innovation & Entrepreneurship</p> <p>The subject is designed for learners from all disciplines to embrace innovation in either their specialised field or beyond. Learners will be taught to apply the Design Thinking framework to develop problem statements, ideate and identify feasible solutions. Learners will be exposed to several tools for prototyping. In addition, commercial awareness will be imbued in learners through various innovation and entrepreneurship concepts or tools. This subject also prepares students to be self-directed lifelong learners who are digital and information literate. It nurtures communicative and collaborative citizens who can use objective analysis in problem-solving.</p>	2	
CGS1002	<p>Global Studies</p> <p>This subject provides essential skills and knowledge to prepare students for an overseas experience. They will examine the elements of culture and learn the key principles of cross-cultural communication. In addition, they will gain an appreciation and awareness of the political, economic, technological and social landscape to function effectively in a global environment. The subject prepares students to be responsible citizens and leaders who can contribute to the global community through effective communication and collaboration.</p>	3	
CGS1003	<p>Managing Diversity at Work*</p> <p>This subject explores the concepts of identity, diversity and inclusion at the workplace. It examines the relationship between identity and diversity, the benefits and challenges of diversity and the strategies that promote inclusion and inspire collaboration in a diverse workplace. Examples of the elements of diversity covered in this subject include nationality, generation, ethnicity and gender. The subject prepares students to be responsible citizens and leaders who can contribute to the global community through effective communication and collaboration.</p>	3	
CGS1004	<p>Global Citizenship & Community Development*</p> <p>Students will examine the meaning and responsibilities of being a Global Citizen, in order to contribute towards a more equitable and sustainable world. In addition, students will learn how sustainable solutions can support community development, and, execute and critique a community action plan that addresses the needs of a specific community/cause. The subject prepares students to be responsible citizens and leaders who can contribute to the global community through effective communication and collaboration.</p>	3	
CGS1005	<p>Expressions of Culture*</p> <p>This subject provides a platform for an understanding of culture and heritage through modes of expression. Students will be introduced to global and local cultures via everyday objects, places and human behaviour seen through time and space. Students will explore issues and challenges in culture and heritage sustainability in community, national and global contexts. The subject prepares students to be responsible citizens and leaders who can contribute to the global</p>	3	

community through effective communication and collaboration.

CGS1005

Expressions of Culture*

3



This subject provides a platform for an understanding of culture and heritage through modes of expression. Students will be introduced to global and local cultures via everyday objects, places and human behaviour seen through time and space. Students will explore issues and challenges in culture and heritage sustainability in community, national and global contexts. The subject prepares students to be responsible citizens and leaders who can contribute to the global community through effective communication and collaboration.

GTP1302

Guided Learning

3



The subject introduces students to the concepts and process of self-directed learning in a chosen area of inquiry. The process focusses on four stages: planning, performing, monitoring and reflecting. Students get to plan their individual learning project, refine and execute the learning plan, as well as monitor and reflect on their learning progress and project. The learning will be captured and showcased through a curated portfolio. The self-directed learning project will broaden and/or deepen a student's knowledge and skills. Students will enhance their problem solving and digital literacy skills through this subject.

CSI3004

Student Internship Programme

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This structured programme is designed to link your learning with the real work environment. You will be placed in organisation(s) with opportunities to apply the concepts and skills acquired in the course of your study. Besides reinforcing technical concepts and mastering of skills in areas that you have been trained, the practical training will enable you to build important skills such as problem-solving, communication, teamwork, and to cultivate good attitude and a strong work ethic.

*Students must choose one of these three electives under the 'Global Studies 2' subject, or take 'Guided Learning'

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 \(T62\)](#)
- [Game Design & Development \(T58\)](#)
- [Information Technology \(T30\)](#)