

THE UNIVERSITY OF HONG KONG
HKU SPACE Community College

Associate Degree Programmes 2023-24
Course Document

Course Title: Information Technology Fundamentals

Course Code:	C	C	I	T	4	0	8	5
QF Level:	4							
Contact Hours: (Including Assessment)	39 Hours							
Aims and Objective								
<p>This course introduces basic concepts in information technology, so as to equip students with the ability to manage information and solve daily life problems.</p> <p>It covers different areas of information technology, including basic computer concepts and knowledge, information literacy, issues related to copyright, intellectual property and ethics. It also covers some hot topics like cybersecurity and FinTech. It is expected that students will gain basic IT knowledges, learn essential fundamental theories and be able to apply procedural skills to support their studies and future work.</p>								
Intended Learning Outcomes of the Course								
<p>On completion of the course, students should be able to</p> <p>ILO1. explain basic principles and theories related to various areas of information technology and digital world; ILO2. identify and explain the importance of information technology to the society; ILO3. perform procedural IT skills so as to enhance their future studies and careers; ILO4. self-learn new IT knowledge and skills.</p>								
Syllabus								
<u>Basic IT</u>								
<ul style="list-style-type: none">• Information Technology and Computers<ul style="list-style-type: none">○ Benefits of using Information Technology and Computers○ Business Use of Information Technology and Computers: Big Data and Cloud Computing • Analogue and Digital<ul style="list-style-type: none">○ Difference between Analogue and Digital○ Binary System○ Conversion between Base-10 and Base-2○ Encoding of Characters and Colors • Hardware and Software<ul style="list-style-type: none">○ Hardware Devices in Computers○ Different Types of Memory○ Different Types of Software • Communication, Network and Internet<ul style="list-style-type: none">○ Different Types of Networks○ Different Types of Transmission Media○ Transmission Speed○ Protocols○ IP Address and Domain Name								

- Introduction to Information Literacy
 - What is Information Literacy?
 - Information Literacy Competency Standards
 - The Process of Information Search and Models
 - The Contexts for Implementation
- Database Search vs Open Web
 - Accessing Information
 - Using Library Subscribed Databases
 - Using Internet Search Engines
 - Evaluating Website Contents
- Data processing, Modeling and Analysis
 - Data to Wisdom
 - Data preparation
 - Knowledge Discovery in Databases
 - Data mining
- Plagiarism & Intellectual Property (IP) Rights, Personal Data Privacy, Cyberspace Ethics
 - The Importance and Different Types of IP Rights
 - The Importance of Personal Data Privacy, and the Legislative Requirements in Hong Kong
 - The Various Issues Concerning Ethical Behavior in the Internet World
- Introduction to Cybersecurity
 - Confidentiality, Integrity, and Availability
 - Legal, Ethical, and Professional Issues in Information Security
 - Cryptography
 - Physical Security
 - Firewalls, VPNs, and Wireless
 - Intrusion Detection and Prevention Systems and Other Security Tools
- Introduction to FinTech
 - Infrastructure
 - Money and Payments
 - Bitcoin and Cryptocurrency Technologies
 - Trends and Opportunities

IT Skill 1 – Image Editing and Design

- Workspace and Basic Operations
 - Getting to Know the Work Area
 - Working with Selections
 - Basic Photo Corrections
- Layer Basics
 - Rearranging Layers
 - Applying a layer Style
 - Updating Layer Effects
- Mask and Channels
 - Creating a Mask
 - Refining a Mask
 - Working with Channels
- Typographic Design
 - Type Basics
 - Creating Type on a Path
 - Designing Paragraphs of Type

- Compositing and Painting
 - Painting a Layer
 - Selecting Brush Settings
 - Mixing Colors with a Photograph

IT Skill 2 – Data Collection using Surveys

- Creating questionnaire
 - Different questions types
 - Questions for classification purposes
- Collection responses
 - Deciding on samples
 - Improving survey effectiveness

IT Skill 3 – Data Analysis using Spreadsheets

- Basic statistics
 - Understanding samples, e.g. mid-points, spreads
- Data cleansing
 - Identifying and removing outliers, erroneous data, etc.
- Analysing and Presenting data
 - Identifying relationships & patterns among data, e.g. correlation, trends, etc.
 - Different types of graphs & charts for presenting data

Assessment

Description	Weighting
Written Exercises	20%
Laboratory Mini-exercises	25%
Quizzes	20%
Mini-project	25%
Individual Self-learning Report	10%

Pre-requisite(s)

Nil

Required and Recommended Reading

Recommended Reading:

1. Kenneth C. Laudon and Jane Laudon, “Essentials of MIS”, 13th Edition, Pearson Education, 2018.
2. William Stallings, “Data and Computer Communications”, 10th Edition, Pearson, 2013.
3. Tyner, K. (2014). Literacy in a Digital World: Teaching and Learning in the Age of Information. Routledge.
4. Reynolds, G.W, “Ethics in Information Technology”, 6th ed., Course Technology, 2018.
5. Bernard 't Hooft, “ The Ultimate GIMP 2.10 Guide: Learn Professional photo editing”, 2018.
6. Kathe Santillo, “Google Forms in the Classroom”, 2nd edition, K. Santillo, 2016.
7. Michael Alexander, Richard Kusleika, John Walkenbach, “Excel 2019 Bible”, 1st edition, John Wiley, 2018.

Website:

1. University of Idaho. (2017). Information Literacy Portal (UI Core Curriculum). Website: http://www.webpages.uidaho.edu/info_literacy/modules/module1/1_0.htm.