

Unit Outline (Higher Education)

Institute / School: Institute of Innovation, Science & Sustainability

Unit Title: Understanding the Digital Revolution

Unit ID: ITECH1100

Credit Points: 15.00

Prerequisite(s): Nil

Co-requisite(s): Nil

Exclusion(s): (GPSIT1100 and ITECH5100)

ASCED: 029999

Description of the Unit:

This unit provides students with a broad foundation in Information Technology (IT), and establishes its context in society currently, historically and into the future. Students will develop an understanding of IT as a process that collects, stores, transports and transforms data to provide information and streamline practices. The unit will cover the lifecycle of data and introduces students to topics such as hardware, software, operating systems, input and output, data storage and manipulation, coding, networking and security, and privacy. This unit also acts as an introduction to the Business Analysis major, and investigates many of the above concepts through a lens of how such systems have revolutionised a range of businesses and industries.

Grade Scheme: Graded (HD, D, C, P, MF, F, XF)

Work Experience:

No work experience

Placement Component: No

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the Unit but gained a final mark of 45 per cent or above, has completed all major assessment tasks (including all sub-components where a task has multiple parts) as specified in the Unit Description and is not eligible for any other form of supplementary assessment.

Course Level:

Level of Unit in Course	AQF Level of Course					
	5	6	7	8	9	10
Introductory	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intermediate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Learning Outcomes:

Knowledge:

- K1.** Explain the historical evolution of IT and the digital revolution, including key milestones and technological shifts in networking, hardware and software components.
- K2.** Articulate the multifaceted impact of IT on broader societies, considering its influence on culture, ethics, economics, and governance, while also exploring future trends and challenges.
- K3.** Relate the significance of data and knowledge to key information systems, emphasising their role in enabling data-driven decision-making to achieve organisational objectives.
- K4.** Identify strategic applications of emerging technologies across various industries, highlighting their potential for transformation and impact on innovation and competitiveness.

Skills:

- S1.** Formulate basic programming logic such as text transformation for simple data manipulation.
- S2.** Interpret and construct representations of business data flow and processes, utilising modelling techniques to visualise operational workflows.
- S3.** Describe the legal and ethical considerations, including IT security and privacy and their implications for responsible technology use and decision-making.

Application of knowledge and skills:

- A1.** Identify complex problems in authentic business scenarios to propose various solutions and justify those decisions.
- A2.** Utilise business information software for data visualisation and analysis, extracting valuable insights to inform strategic decision-making and enhance organisational performance.

Unit Content:

- Fundamental IT Concepts and Definitions;
- IT Past, Present & Future;
- IT Architecture, Infrastructure, and Systems;
- Hardware, Software and Networks;
- IT in context and Industry use;
- Data Management, Artificial Intelligence and Business Intelligence;
- Programming Structures, Constructs, Methodologies, and Tools;
- Software Development
- Ethical, Legal and Green Issues for IT;
- Social Media;
- Networks, Security & Privacy;
- Project, Product and Service Management

FEDTASKS

Federation University Federation recognises that students require key transferable employability skills to prepare them for their future workplace and society. FEDTASKS (**T**ransferable **A**tttributes **S**kills and **K**nowledge) provide a targeted focus on five key transferable Attributes, Skills, and Knowledge that are embedded within curriculum, developed gradually towards successful measures and interlinked with cross-discipline and Co-operative Learning opportunities. *One or more FEDTASK, transferable Attributes, Skills or Knowledge must be evident in the specified learning outcomes and assessment for each FedUni Unit, and all must be directly assessed in each Course.*

FEDTASK attribute and descriptor		Development and acquisition of FEDTASKS in the Unit	
		Learning Outcomes (KSA)	Assessment task (AT#)
FEDTASK 1 Interpersonal	Students will demonstrate the ability to effectively communicate, inter-act and work with others both individually and in groups. Students will be required to display skills in-person and/or online in: <ul style="list-style-type: none"> Using effective verbal and non-verbal communication Listening for meaning and influencing via active listening Showing empathy for others Negotiating and demonstrating conflict resolution skills Working respectfully in cross-cultural and diverse teams. 	Not applicable	Not applicable
FEDTASK 2 Leadership	Students will demonstrate the ability to apply professional skills and behaviours in leading others. Students will be required to display skills in: <ul style="list-style-type: none"> Creating a collegial environment Showing self-awareness and the ability to self-reflect Inspiring and convincing others Making informed decisions Displaying initiative 	Not applicable	Not applicable
FEDTASK 3 Critical Thinking and Creativity	Students will demonstrate an ability to work in complexity and ambiguity using the imagination to create new ideas. Students will be required to display skills in: <ul style="list-style-type: none"> Reflecting critically Evaluating ideas, concepts and information Considering alternative perspectives to refine ideas Challenging conventional thinking to clarify concepts Forming creative solutions in problem solving. 	Not applicable	Not applicable
FEDTASK 4 Digital Literacy	Students will demonstrate the ability to work fluently across a range of tools, platforms and applications to achieve a range of tasks. Students will be required to display skills in: <ul style="list-style-type: none"> Finding, evaluating, managing, curating, organising and sharing digital information Collating, managing, accessing and using digital data securely Receiving and responding to messages in a range of digital media Contributing actively to digital teams and working groups Participating in and benefiting from digital learning opportunities. 	Not applicable	Not applicable

FEDTASK attribute and descriptor		Development and acquisition of FEDTASKS in the Unit	
		Learning Outcomes (KSA)	Assessment task (AT#)
FEDTASK 5 Sustainable and Ethical Mindset	Students will demonstrate the ability to consider and assess the consequences and impact of ideas and actions in enacting ethical and sustainable decisions. Students will be required to display skills in: <ul style="list-style-type: none"> • Making informed judgments that consider the impact of devising solutions in global economic environmental and societal contexts • Committing to social responsibility as a professional and a citizen • Evaluating ethical, socially responsible and/or sustainable challenges and generating and articulating responses • Embracing lifelong, life-wide and life-deep learning to be open to diverse others • Implementing required actions to foster sustainability in their professional and personal life. 	Not applicable	Not applicable

Learning Task and Assessment:

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
S1, S2, S3, K1, K2, K3, K4	Tests and examinations covering a range of taught IT-related topics.	Tests & examinations	30% - 50%
A1, A2, S1, S2, S3, K1, K2, K3, K4	Practical demonstrations of basic IT skills. Presentations and/or reports covering a range of taught IT-related topics and how they can disrupt industries and societies.	Assignments & presentations	50% - 70%

Adopted Reference Style:

APA ()

 Refer to the [library website](#) for more information

 Fed Cite - [referencing tool](#)