



Course Outline (Higher Education)

Institute / School: Institute of Innovation, Science & Sustainability

Course Title: CLOUD INFRASTRUCTURE AND SERVICES

Course ID: ITECH2310

Credit Points: 15.00

Prerequisite(s): (ITECH1104)

Co-requisite(s): Nil

Exclusion(s): (ITECH2201)

ASCED: 020199

Description of the Course:

Cloud is an important evolution with the convergence of various advancement in the technologies. The services provided by the Cloud has a great positive impact on contemporary IT infrastructure. This course enables students to investigate the range of services, and organisational impact of Cloud. It also facilitates the students to have hands-on experience in using and deploying some of the Cloud services. Other technologies related to Cloud such as green computing and data storage are also covered in this course.

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

Work Experience:

No work experience: Student is not undertaking work experience in industry.

Placement Component: No

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the course but gained a final mark of 45 per cent or above and submitted all major assessment tasks.

Program Level:

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

Level of course in Program	AQF Level of Program					
	5	6	7	8	9	10
Advanced	■	■	■	■	■	■

Learning Outcomes:

Knowledge:

- K1.** Investigate hardware and software solutions for virtual servers, virtual desktops and virtual networks.
- K2.** Describe the factors driving the need for cloud computing.
- K3.** Identify key elements of cloud computing.
- K4.** Discuss managerial considerations and complexities to be evaluated between existing systems and migration to the cloud.
- K5.** Differentiate between various services offered by cloud vendors and outline the associated benefits and constraints of each.
- K6.** Discuss the role of IT governance for cloud based computing.

Skills:

- S1.** Coordinate operational processes in relation to service management, monitoring, administration, support and control of cloud computing environments.
- S2.** Illustrate cloud architecture models.
- S3.** Utilise cloud software application development platform through the investigation of real world web services.

Application of knowledge and skills:

- A1.** Develop a migration management plan for a cloud based solution.
- A2.** Apply knowledge of the cloud application development platform for a range of e-business systems such as e-health, e-banking, e-learning and e-government.
- A3.** Adopt problem solving and decision making strategies to communicate solutions with key stakeholders for a variety of issues relating to cloud computing.
- A4.** Research current issues and challenges in relation to cloud computing.

Course Content:

Topics may include:

- Cloud architecture model.
- Infrastructure as a service (IaaS).
- Platform as a service (PaaS).
- Software as a service (SaaS).
- Data storage.
- Virtualisation.
- Security and privacy in the cloud.
- Cloud governance.
- Mobile cloud computing.
- Green computing.
- Cloud migration.
- Cloud application workflow development.

Graduate Attributes

Federation graduate attributes statement. To have graduates with knowledge, skills and competence that enable them to stand out as critical, creative and enquiring learners who are capable, flexible and work ready, and responsible, ethical and engaged citizens.

Attribute	Brief Description	Focus
Knowledge, skills and competence	Utilising a PBL approach facilitated by the use of contemporary industry based case studies requiring management, support and control of cloud computing environments, students will continue to develop their knowledge and skills in the development and use of cloud infrastructure and services.	High
Critical, creative and enquiring learners	Students will participate in a self-directed and collaborative learning environment to develop their critical thinking skills and expertise in the field of cloud computing.	High
Capable, flexible and work ready	Students will illustrate their capabilities to flexibly address industry problems to recognised standards.	Medium
Responsible, ethical and engaged citizens	Students will appreciate the ethical and social impact of cloud based environments.	Medium

Learning Task and Assessment:

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
K1, K2, S2, S3, A1, A2, A3, A4	Develop skills in the analysis and practical application of content introduced.	Tutorials/Assignment(s)	30% - 50%
K2, K3, K4, K5, K6, S1, A2, A3, A4	Participate in lectures and labs/tutorials, read and summarise theoretical and practical aspects of the course.	Examination(s)/Presentation(s)	50% - 70%

Adopted Reference Style:

APA

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

Fed Cite - [referencing tool](#)