Course Outline

Title: CLOUD COMPUTING

Code: ITECH2201

Faculty / Portfolio: Faculty of Science and Technology

Program Level:

	AQF Level of Program					
	5	6	7	8	9	10
Level						
Introductory						
Intermediate			✔			
Advanced						

Pre-requisites: (ITECH1000 or ITECH1400)

Co-requisites: Nil

Exclusions: Nil

Credit Points: 15

ASCED Code: 029999

Learning Outcomes:

Knowledge:

K1. Investigate hardware and software solutions for virtual servers, virtual desktops and virtual networks;
K2. Develop an understanding of the need for cloud data security management;
K3. Describe the factors driving the need for cloud computing;
K4. Identify key elements of cloud computing;
K5. Discuss managerial considerations and complexities to be evaluated between existing systems and migration to the cloud;
K6. Discuss the role of IT governance for cloud based computing;
K7. Differentiate between various services offered by cloud vendors and outline the associated benefits and constraints of each;

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. Demonstrate a broad understanding of 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;

Values and Graduate Attributes:

Values:

V1. Appreciate the need for cloud computing;

V2. Value ethical privacy and security practices when working with cloud data;

V3. Appreciate the role of the cloud in enhancing green computing and reducing the impact of technology on the environment;

Graduate Attributes:

Attribute	Brief Description	Focus
Continuous Learning	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.	High
Self Reliance	Students will participate in a self-directed and collaborative learning environment to develop their theoretical and technical expertise in the field of cloud computing.	High
Engaged Citizenship	Students will produce an cloud computing migration and management plan, which meets industry standards.	Medium
Social Responsibility	Students will investigate a variety of industry standard software and development techniques to deploy secure cloud based environments.	Medium

Content:

Topics may include:

- cloud computing fundamentals
- 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

Assessment:

Learning Outcomes Assessed	Assessment Task	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%

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K2, K3, K4, K5, K6, K7, 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

Presentation of Academic Work:

FedUni General Guide to Referencing