

Course Outline

Title: INTRODUCTION TO HEALTH INFORMATICS

Code: ITECH2105

Formerly: CP620

Faculty / Portfolio: Faculty of Science

Program Level:

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

Pre-requisites: None

Co-requisites: Nil

Exclusions: Nil

Progress Units: 15

ASCED Code: 010999

Learning Outcomes:

Knowledge:

- K1.** Recognize and outline fundamental concepts in health informatics;
- K2.** Demonstrate the need for standards for computer systems, health vocabularies and syntactic and semantic inter-operability in health informatics;
- K3.** Reflect on how Australia compares to other countries in relation to health informatics;
- K4.** Recall principles of ethics & privacy relevant to electronic health records;
- K5.** Identify a range of computational intelligence approaches as they apply to health care.

Skills:

- S1.** Outline the role of information technology in the health care crisis;
- S2.** Decode simple Health Level 7 messages;
- S3.** Classify a concept using the SNOMED and OpenEHR schemes;
- S4.** Appraise information systems for a health care context;
- S5.** Appraise simple decision support systems for health care applications;
- S6.** Assess electronic health record situations for privacy breaches;
- S7.** Compare and contrast presentations of health informatics topics.

Application of knowledge and skills:

- A1.** Demonstrate initiative and judgement to adapt health informatics technologies to unique and diverse contexts;

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A2. Relate and interpret emerging developments in health informatics to historical developments.

Values and Graduate Attributes:

Values:

- V1.** Appreciate the legal, social and ethical issues arising from electronic health data;
- V2.** Appreciate the importance of health informatics for the global development of health care.

Graduate Attributes:

Attribute	Brief Description	Focus
Continuous Learning	Show initiative and self-motivation in relation to the discovery of knowledge regarding the way information technologies impact on health care	Medium
Self Reliance	Take responsibility for self-management using skills that contribute to personal and career satisfaction and development	Medium
Engaged Citizenship	Confidently employ and adapt professional expertise regarding the application of information technologies to health care in different cross-border legal, political, economic, cultural and social environments.	High
Social Responsibility	Analyse and examine issues of social justice and equality with respect to the role information technology can play in the provision of health care	Medium

Content:

This course introduces students to the fundamental ideas and techniques of health informatics and major directions health informatics developments. Starting with an outline of the current health care crisis in the global setting, at the core of this course is a systematic coverage on health information technologies including decision support systems, simulation systems, data mining and encryption. The role of standards for inter-operability, messaging and terminology is discussed in the context of electronic health records.

Topics may include:

- The Health Care system in 21st Century, Basic Concepts in Health Informatics;
- Electronic Health Records;
- Health Care Standards, HL7 (Health Level Seven), openEHR;
- Computational intelligence;
- Consumer Health Informatics and the place of Telemedicine;
- Patient monitoring and care systems;
- Clinical Decision-Support Systems and Medical Education;
- Australia in a global market place- standards; agencies etc;
- Ethical and Privacy Issues;
- The future- Computer Applications, Informatics and Biomedicine.

Assessment:

Students will engage in a variety of learning tasks such as research, reading, class

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discussions, group activities, tutorial and/or laboratory exercises, presentations, projects, portfolios, reports, journals.

Learning Outcomes Assessed	Assessment Task	Assessment Type	Weighting
K1,K2,K3,K4,K5 S1,S2,S3,S4,S5,S6, S7	Weekly tasks including workbook problems	Journal, forum, quizzes and/or exercises	30% - 50%
S1,S2,S3,S4,S5,S6,S7 , A1	Self directed initiatives aimed at producing an artefact that demonstrates skill acquisition	Computer based implementations or written reports	20%-30%
A2, K1,K2,K3,K4,K5 S1,S2,S3,S4,S5,S6, S7	Examination questions covering the health care crisis, and health informatics responses	Examination	40%-60%

Adopted Reference Style:

APA

Presentation of Academic Work:

<https://federation.edu.au/students/assistance-support-and-services/academic-support/general-guide-for-the-presentation-of-academic-work>