

## ISYS90069 eHealth & Biomedical Informatics Systems

<b>Credit Points:</b>	12.50
<b>Level:</b>	9 (Graduate/Postgraduate)
<b>Dates &amp; Locations:</b>	This subject is not offered in 2014.
<b>Time Commitment:</b>	Contact Hours: 36 hours Total Time Commitment: 200 hours
<b>Prerequisites:</b>	None
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	None
<b>Non Allowed Subjects:</b>	None
<b>Core Participation Requirements:</b>	For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Overview, Objectives, Assessment and Generic Skills sections of this entry. It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and the Disability Liaison Unit: <a href="http://www.services.unimelb.edu.au/disability/">http://www.services.unimelb.edu.au/disability/</a>
<b>Contact:</b>	email: <a href="mailto:kgray@unimelb.edu.au">kgray@unimelb.edu.au</a> ( <a href="mailto:kgray@unimelb.edu.au">mailto:kgray@unimelb.edu.au</a> )
<b>Subject Overview:</b>	<p><b>Aims</b> ICT is an important component to ensuring quality, safety, access and efficiency in healthcare. This subject introduces current approaches and future directions in eHealth and the use of ICT in healthcare generally as well as key concepts and tools from the underlying discipline of health informatics.</p> <p><b>Indicative Content</b> Topics include electronic health records (EHRs); hospital and primary care and public health information systems; supporting clinical decision-making for health professionals through ICT; eHealth in the community for preventive healthcare and for patient and carer support; regulatory influences on eHealth including management and governance, privacy, security, and confidentiality; the role of data standards, vocabularies, and nomenclatures in eHealth; research and development in eHealth.</p>
<b>Learning Outcomes:</b>	<p><b>Intended Learning Outcomes (ILO)</b></p> <p>On completion of this subject the student is expected to:</p> <ol style="list-style-type: none"> <li>1 Critically analyse approaches to eHealth in contemporary healthcare in Australia and internationally</li> <li>2 Use established evaluation frameworks to review the use of new and emerging applications of ICT in healthcare</li> <li>3 Demonstrate understanding of complex legal, ethical and standardisation problems and solutions in managing health data</li> <li>4 Apply recognised health informatics competency frameworks and career matrices to assess individual and organisational development needs</li> </ol>
<b>Assessment:</b>	A 15-item open-book test (1000 words) of informatics foundation knowledge in either biomedicine or in computing and information science, undertaken in the area of least overlap with the student's previous studies (30%) Addresses Intended Learning Outcomes (ILO's) 3 & 4 Critical appraisal of assigned reading (1000 words) and 5 minute presentation due in class during week 2/3 of 4(30%) Addresses ILO's 1 & 3 Project report (2000 words) and 10 minute presentation due in class during week 4 of 4. Group projects are optional. The same mark will be given to each member. 1000 additional words and 5 additional minutes of class presentation

	are required for each extra person, i.e. 2 people = 3000 words +15 minute presentation; 3 people = 4000 words + 20 minute presentation, etc. (40%) Addresses ILO's 2, 3, & 4
<b>Prescribed Texts:</b>	None. Readings will provided on-line.
<b>Breadth Options:</b>	This subject is not available as a breadth subject.
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>
<b>Generic Skills:</b>	On completion of this subject, students should have developed the following generic skills: <ul style="list-style-type: none"> <li># Clear thinking</li> <li># Improved reading</li> <li># Enhanced ability to work in a team of people, and</li> <li># Presentation skills</li> </ul>
<b>Notes:</b>	<p><b>Learning and Teaching Methods</b> This subject is offered in intensive mode, with 9 hours of class each week over a four week period, including lectures and small group activities.</p> <p>Opportunities are provided for online interaction during class using students' personal internet-connected devices. Subject documents and class records are handled using LMS Blackboard.</p> <p><b>Indicative Key Learning Resources</b> This subject has no textbook. Students have access to lecture audio and slides in the LMS, as well as electronic full-text of recommended readings, including current journal articles, government documents and industry reports. 2012 examples of recommended readings are:</p> <p>Bernstam, E., Smith, J. and Johnson, T. 2010 <b>What is biomedical informatics?</b> (<a href="http://dtl.unimelb.edu.au/R/YC8J9EFFYIQXPY9PXTG2UJJQSL5VAIRJE9BSCCKIDTHH1SHP6UY-00736?func=results-jump-full&amp;set_entry=000023&amp;set_number=000685&amp;base=GEN01">http://dtl.unimelb.edu.au/R/YC8J9EFFYIQXPY9PXTG2UJJQSL5VAIRJE9BSCCKIDTHH1SHP6UY-00736?func=results-jump-full&amp;set_entry=000023&amp;set_number=000685&amp;base=GEN01</a>)</p> <p>Black, A., Car, J., Pagliari, C., Anandan, C., Creswell, K. et al. 2011 <b>The impact of ehealth on the quality and safety of health care: a systematic overview</b> (<a href="http://dtl.unimelb.edu.au/R/YC8J9EFFYIQXPY9PXTG2UJJQSL5VAIRJE9BSCCKIDTHH1SHP6UY-00724?func=results-jump-full&amp;set_entry=000020&amp;set_number=000685&amp;base=GEN01">http://dtl.unimelb.edu.au/R/YC8J9EFFYIQXPY9PXTG2UJJQSL5VAIRJE9BSCCKIDTHH1SHP6UY-00724?func=results-jump-full&amp;set_entry=000020&amp;set_number=000685&amp;base=GEN01</a>)</p> <p>Kuhn K. A., Knoll A., Mewes H. W. et al. 2008 <b>Informatics and medicine: from molecules to populations</b> (<a href="http://dtl.unimelb.edu.au/R/YC8J9EFFYIQXPY9PXTG2UJJQSL5VAIRJE9BSCCKIDTHH1SHP6UY-00688?func=results-jump-full&amp;set_entry=000011&amp;set_number=000685&amp;base=GEN01">http://dtl.unimelb.edu.au/R/YC8J9EFFYIQXPY9PXTG2UJJQSL5VAIRJE9BSCCKIDTHH1SHP6UY-00688?func=results-jump-full&amp;set_entry=000011&amp;set_number=000685&amp;base=GEN01</a>)</p> <p>Payton, F., Pare, G., LeRouge, C. and Reddy, M. 2011 <b>Health care IT: process, people, patients and interdisciplinary considerations</b> (<a href="http://dtl.unimelb.edu.au/R/YC8J9EFFYIQXPY9PXTG2UJJQSL5VAIRJE9BSCCKIDTHH1SHP6UY-00680?func=results-jump-full&amp;set_entry=000009&amp;set_number=000685&amp;base=GEN01">http://dtl.unimelb.edu.au/R/YC8J9EFFYIQXPY9PXTG2UJJQSL5VAIRJE9BSCCKIDTHH1SHP6UY-00680?func=results-jump-full&amp;set_entry=000009&amp;set_number=000685&amp;base=GEN01</a>)</p> <p><b>Careers/Industry Links</b> This subject is important in the field of ehealth and biomedical informatics, i.e. work that concerns the acquisition, storage, retrieval and use of information in, about and for human health, and the design and management of related solutions to advance the understanding and practice of healthcare. This subject is offered jointly by the Faculty of Engineering and the Faculty of Medicine, Dentistry and Health Sciences, and also uses expert guest speakers from industry and government.</p>
<b>Related Course(s):</b>	Master of Information Systems Master of Information Systems Master of Information Systems Master of Information Technology Master of Information Technology Master of Philosophy - Engineering Master of Public Health Ph.D.- Engineering