

ELEN90006 Internet Engineering

Credit Points:	12.5
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2015, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: One 3 hour lecture per week Total Time Commitment: 200 hours.
Prerequisites:	4-year Electrical Engineering degree or equivalent.
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	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 Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: http://www.services.unimelb.edu.au/disability/
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Subject Overview:	<p>AIMS</p> <p>This subject develops the professional value of students through building knowledge, skill, and confidence in the area of Internet Engineering. Students will develop their skills of analysing and documenting customer requirements, evaluating a range of technologies, and developing an integrated solution.</p> <p>INDICATIVE CONTENT</p> <p>Topics include:</p> <ul style="list-style-type: none"> # Packet transmission and switching; information transmission at Layer 1 and Layer 2 # Internet Protocol Suite – both current practice and emerging technologies # The operation of applications including Domain Name System, World Wide Web, file transfer, email, video, voice, ecommerce, Web2.0 and P2P # The ability of current (and likely future) Internet technologies to deliver satisfactory customer solutions with respect to Management, Performance, and Security # Design of services to meet Performance and Security requirements, as well as management to address operational problem
Learning Outcomes:	<p>INTENDED LEARNING OUTCOMES (ILO)</p> <p>Having completed this subject it is expected that the student be able to:</p> <ol style="list-style-type: none"> 1 Analyse and document customer requirements 2 Evaluate technologies relative to customer requirements 3 Apply professional knowledge and skills to solve problems 4 Develop, in outline, an engineering solution that delivers value to customers
Assessment:	Assessment will be based on a Project (team work, 2- 3 students) and a Final Examination. A 10 minute team Seminar on Project (approximately 5-7 hours of work per student), during the semester, 5% (group mark); Written Report on Project. Maximum 1500 words per student

	(approximately 25-30 hours of work per student), in week 10 of semester, 25% (group mark); Formally supervised, 3-hour written examination at end of semester, 70% (individual mark). Hurdle requirement: Students must pass the written exam to pass the subject. Intended Learning Outcomes (ILOs) 1, 2 and 3 are assessed in the final written examination. ILOs 1-4 are assessed in the submitted team report.
Prescribed Texts:	Due to the breadth of the subject and rapid developments, no single text is prescribed. Internet resources will be recommended for each topic.
Recommended Texts:	Douglas E. Comer and Ralph Droms, "Computer Networks and Internets", Prentice Hall Behrouz A. Forouzan, "TCP/IP Protocol Suite"
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	On completion of this subject, the students should have developed: <ul style="list-style-type: none"> # Problem solving and analytical skills, # Critical and creative thinking, with an aptitude for continued self-directed learning; # Sense of intellectual curiosity; # Ability to interpret data and research results; # Ability to learn in a range of ways, including through information and communication technologies; # Capacity to confront unfamiliar problems; # Ability to evaluate and synthesise the research and professional literature; # Ability to develop models of practical applications and evaluate their performance by rigorous analytical means
Notes:	<p>LEARNING AND TEACHING METHODS</p> <p>The subject is delivered through sessions that combine lecture presentation, discussion, and mini-tutorials. Private study is also required, in addition to the weekly sessions. Learning is also enhanced by active participation in the online Discussion Board.</p> <p>INDICATIVE KEY LEARNING RESOURCES</p> <p>Students are provided with lecture slides and tutorial problems. Extensive reference material is uploaded or linked on the subject website.</p> <p>CAREERS / INDUSTRY LINKS</p> <p>Student teams are encouraged to interact with industry professionals as part of their assignment. Specific industry interactions may be organised according</p>
Related Course(s):	Master of Software Systems Engineering Master of Telecommunications Engineering