ELEN90016 Broadband Access Networks

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.
Time Commitment:	Contact Hours: one 3- hours lecture per week Total Time Commitment: Estimated 120 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/
Coordinator:	Dr Robert Warfield
Contact:	Melbourne School of Engineering Office Building 173, Grattan Street The University of Melbourne VIC 3010 Australia General telephone enquiries + 61 3 8344 6703 + 61 3 8344 6507 Facsimiles + 61 3 9349 2182 + 61 3 8344 7707 Email **eng-info@unimelb.edu.au (mailto:eng-info@unimelb.edu.au)**
Subject Overview:	This subject will include: # Basic principles of the design of an access solution, including the application of basic economic optimization principles, # Overview of Internet protocols and services, # Introduction to the use of ATM and MPLS to provide a variety of solutions for access to telecommunications services, # Quality of Service, managed solutions, and Virtual Private Networking, # Management issues in access networks, especially performance and security, # Technological, economic and regulatory aspects of the use of twisted-pair technology,Hybrid Fibre-Coax networks, # Optical access network technologies, # Wireless technologies including terrestrial. radio and satellite as used for access.
Objectives:	The aim of this subject is to provide students with a working knowledge of broadband access technologies. The subject is directed towards students aspiring to a professional engineering or management career in the telecommunications industry.
Assessment:	Assessment will be based on Project (group work) and a Final Examination. Group Seminar on Project 5% (group mark) Written Report on Project. Maximum 1500 words per student. 25%

	(group mark) Formally Supervised written examination - 3 hours 70% (end of semester). This final exam is a hurdle. A student must pass the exam to pass the subject.
Prescribed Texts:	Because of the breadth of topics in this subject, there are no prescribed texts. References to additional material will be given on the subject website.
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 student will have developed: # Understanding of design principles. # Appreciation of the economic and technological issues. # Broad knowledge of a wide range of technologies. # An appreciation of Customer Requirements, and an understanding of how to deliver a comprehensive solution that is based on requirements. # An understanding of the significance and value of their knowledge to a wider community, including business and industry. # An ability to evaluate and synthesize the research and professional literature in the discipline. # A capacity to articulate their knowledge and understanding in spoken and written presentations. # A capacity to value and participate in projects which require team-work. # A capacity to manage competing demands on time, including self-directed project work.
Related Course(s):	Master of Telecommunications Engineering Master of Telecommunications Engineering Postgraduate Certificate in Engineering