ELEN90014 Multimedia Content Delivery

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2012, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 1X 3 hour lecture per week; Total Time Commitment: Estimated total time commitment of 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 Michael Biggar
Contact:	Email: William Shieh **sheihw@unimelb.edu.au (mailto:sheihw@unimelb.edu.au)**
Subject Overview:	A study of underpinning requirements, technologies, standards, industry developments, trends and network architectures in the delivery of multimedia (including audio and video) telecommunications services. The topics will include: # Introduction to multimedia services and their requirements # Compression technologies for transmission # Technologies for multimedia transmission and distribution: video and audio compression, multiplexing techniques, error recovery, streaming solutions and multimedia storage # integrated multimedia and content distribution system solutions (such as IPTV, video-on-demand, digital TV and video calling). # Architectures of multimedia and content delivery networks # Current trends in multimedia distribution and content delivery networks # Copyrights and content distribution rights
Objectives:	On completion of this subject, the students should have developed the skills and knowledge to understand current technology solutions and identify and work in emerging research directions in the field. Specifically, they should have a solid understanding of: • Requirements for multimedia services; • Multimedia signal representation; • Data compression techniques; • Video coding and representation • Audio and speech coding and representation; • Multimedia storage and retrieval • System components supporting the exchange and trade of multimedia content (e.g. Content Management, Digital Rights Management, Content Adaptation); • Digital Television technologies and architectures; • Video Calling (including Videoconferencing and videotelephony); • Multimedia over packet networks including the Internet; • Multimedia over mobile/wireless communications networks.

	• Video-on-Demand and IPTV
Assessment:	• Formally supervised written examination - 3 hours 50% (end of semester). This final exam is a hurdle. A student must pass the exam to pass the subject. • Written class test - 1 hour 20% (mid semester); • A project or homework assignments (1500 – 3000 word limit) 30% (end of semester).
Prescribed Texts:	"Video Processing and Communications", by Yao Wang, Jorn Ostermann, Ya-Qin Zhang, Publisher: Prentice Hall. (Suggested, not mandatory.)
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: • An advanced understanding of how a knowledge base evolves; • An ability to identify weaknesses and risks in technical solutions; • Analytical, critical and creative thinking, with an aptitude for continued self-directed learning; • A sense of intellectual curiosity; • An ability to interpret data and research results; • An ability to learn in a range of ways, including through information and communication technologies; • An ability to evaluate and synthesise the research and professional literature; • A capacity to manage competing demands on time, including self-directed project work.
Related Course(s):	Master of Telecommunications Engineering Postgraduate Certificate in Engineering