

ELEN90008 Signalling and Network Management

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	This subject is not offered in 2013.
Time Commitment:	Contact Hours: 1x3 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/
Contact:	Email: William Shieh shiehw@unimelb.edu.au (mailto:shiehw@unimelb.edu.au)
Subject Overview:	This unit will provide students with a practical understanding of modern signalling systems(SIP and XMPP and PSTN/Mobile) the Telecommunication Management Network (TMN) framework, and the network numbering and addressing schemes that underpin the signalling for , and management of telecommunications services.The signalling component will address topics of core network control, personal and terminal mobility management functions. The Network Management part will address the real-time operation of both circuit-switched networks, and TCP/IP networks including the Internet.
Objectives:	<p>On completion of this subject, student should:</p> <ul style="list-style-type: none"> # Understand the principles of SIP and XMPP signalling in telecommunication networks along with traditional PSTN and mobile signalling # Explain and apply the principles of management of telecommunications networks and services. # Demonstrate an ability to apply practical aspects of signalling systems (client-server IP (SIP), client-server XMPP and SS7), the industry best-practice for operations of Internet and circuit-switched networks, and network addressing schemes that underpin signalling for, and the management of, telecommunication services.
Assessment:	A 3 hour written examination (50%) to be held at end of semester.To pass the subject as a whole a student must obtain a result of at least 50% in the final written examination. A Network Management project (15%), no more than 1000 words, due towards the end of semester; A Signalling Assignment (35%), no more than 3000 words, due towards the end of semester.
Prescribed Texts:	None
Recommended Texts:	<p>Additional Reading:</p> <ul style="list-style-type: none"> • Gonzalo Camarillo "SIP Demystified" 2002, ISBN: 0071373403 McGraw-Hill • Henry Sinnreich and Alan B. Johnston, "Internet Communications using SIP", Wiley

	<ul style="list-style-type: none"> • Peter Saint-Andre, Kevin Smith & Remko Troncon. "XMPP – The Definitive Guide", O'Reilly • Travis Russell, "Signalling System 7" (Telecommunications), 2nd edition, McGraw Hill, ISBN 0070580324.
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:	<p>On completion of this subject, the students should have developed:</p> <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.
Related Course(s):	<p>Master of Telecommunications Engineering Postgraduate Certificate in Engineering</p>