

436-382 Control Systems 1

Credit Points:	12.50
Level:	3 (Undergraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: Semester 1, - Taught on campus.
Time Commitment:	Contact Hours: Thirty-six hours of lectures, 12 hours of tutorials and practical work Total Time Commitment: Not available
Prerequisites:	436-204 Systems Modelling or 431-221 Fundamentals of Signals and Systems.
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	<p><p>For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry.</p> <p>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 Student Equity and Disability Support: http://services.unimelb.edu.au/disability</p></p>
Coordinator:	Dr Chris Manzie
Subject Overview:	Upon completion students should be familiar with the concepts and terminology of classical linear control design including lead, lag and lag-lead controllers and PID control; know how to draw and analyse Nyquist plots and the root locus; be familiar with the basics of digital controlling including quantisation, ADC, DAC, Z-transforms and design by emulation; understand the principles of filtering and amplification; including filter design, signal conditioning, sensor characteristics and non-linear effects; be able to perform and analyse Fast Fourier Transforms and Discrete Fourier Transforms; and understand how to program PLCs.
Objectives:	-
Assessment:	One 3-hour end-of-semester examination (70%); two assignments each up to 15 pages (20%) and one laboratory report of up to 15 pages (10%), to be submitted throughout the semester.
Prescribed Texts:	None
Recommended Texts:	Information Not Available
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:	Information Not Available
Related Course(s):	Bachelor of Engineering (Biomedical) Biomechanics Bachelor of Engineering (EngineeringManagement)Mechanical&Manufacturing Bachelor of Engineering (Mechanical &Manufacturing) and Bachelor of Arts Bachelor of Engineering (Mechanical &Manufacturing)& Bachelor of Science

Bachelor of Engineering (Mechanical & Manufacturing)/Bachelor of Commerce
Bachelor of Engineering (Mechanical and Manufacturing Engineering)
Bachelor of Engineering (Mechatronics) and Bachelor of Computer Science
Bachelor of Engineering (Mechanical & Manufacturing) and Bachelor of Laws