

ECON40017 Mathematics for Economists

Credit Points:	12.50		
Level:	4 (Undergraduate)		
Dates & Locations:	This subject is not offered in 2014.		
Time Commitment:	Contact Hours: One 90 minute lecture and one 90 minute workshop per week Total Time Commitment: 120 hours		
Prerequisites:	Admission into BH-COM (BH-COM) or BH-ARTS (BH-ARTS) (Economics), ECON30020 Mathematical Economics (ECON30020) and one of the following:		
	Subject	Study Period Commencement:	Credit Points:
	ECON40001 Advanced Microeconomics	Semester 1	12.50
	ECON90002 Microeconomics	Semester 1	12.50
Corequisites:	None		
Recommended Background Knowledge:	Prior exposure to real analysis is desirable.		
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: sdanilki@unimelb.edu.au (mailto:sdanilki@unimelb.edu.au)		
Subject Overview:	This subject introduces students to the use of advanced mathematics in economics. After reviewing basic concepts we will study in detail some of the classic existence proofs in game theory and general equilibrium theory. Students will be expected to solve problems and generate proofs, and will be assessed on this.		
Learning Outcomes:	On completion of this subject, students should be able to: <ul style="list-style-type: none">• understand the definitions and fundamental concepts of linear algebra, vector calculus and real analysis as they relate to studies in advanced economics;• prove relevant optimisation theorems;• set up and solve optimal control problems;• set up and solve dynamic programming problems		
Assessment:	Assignments consisting of problems and exercises due at regular intervals during the semester (80%) and a two-hour end of semester examination (20%)		
Prescribed Texts:	To be advised		
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:	<ul style="list-style-type: none">• High level of development: problem solving; interpretation and analysis; critical thinking.		

- Moderate level of development: oral communication; written communication; collaborative learning; team work; application of theory to practice; receptiveness to alternative ideas.
- Some level of development: synthesis of data and other information; evaluation of data and other information; use of computer software; accessing data and other information from a range of sources.