

ECU11021/3 — Mathematics and Statistics A

Module Information	
Module Code	ECU11021/ECU11023
Module Title	Mathematics and Statistics A
Department	Economics
Year Group	Junior Fresh
Module Personnel	Martina Kirchberger and Martina Zanella
Academic Year	2026-27
Credit Weighting	5 credits
Semester	Semester 1
Contact Hours	22 hours of lectures and 10 hours of tutorials

Module Content	
Module Description	This module covers: • Linear and quadratic functions; • Indices and logarithms; • Matrices; • Differentiation; • Optimisation of functions of one variable; • Partial differentiation; • Constrained and unconstrained optimisation of functions of several variables; • Basic integration.
Module Learning Aims	In mathematics, as applied to business, economics, and the social sciences, we mainly ask questions like: how can we model and analyse individuals' decisions? How do these change if the environment changes? What happens to economic output if wages change?
Learning Outcomes	Satisfactory completion of this module will contribute to the development of the following key skills: • Abstraction from concrete problems to generic concepts; • Problem solving using quantitative methods;

Module Content

	Explaining quantitative reasoning in clear, concise, and correct English.
Indicative Reading / Resources	Ian Jacques, Mathematics for Economics and Business, 9e, Pearson.

Assessment

Assessment Components	20% midterm, 80% final exam
Assessment Details	N.a.

Additional Information

Prerequisites	None
Co-requisites	ECU11022/4 - Mathematics and Statistics B
Any other information	None