

ECU11022 / ECU11024 — Mathematical and Statistics B

Module Information	
Module Code	ECU11022 / ECU11024
Module Title	Mathematical and Statistics B
Department	ECONOMICS
Year Group	Junior Fresh
Module Personnel	Dr Vitaliia Yaremko and Dr. Jian Cao
Academic Year	2026-27
Credit Weighting	5 credits
Semester	Semester 2
Contact Hours	22 hours of lectures

Module Content	
Module Description	ECU11022 / ECU11024 is an introductory course in statistics. It focuses on methods to summarize data effectively and draw accurate conclusions to support decision-making. Topics discussed are: • Graphical and numerical data description; • Probability theory; • Discrete and continuous random variables; • Sampling; • Confidence intervals; • Hypothesis testing.
Module Learning Aims	In this module we study how to summarize data in a consistent way and draw accurate conclusions that can be used in decision-making. The aim of the module is to guide students so that they: • Understand basic statistical concepts; • Apply statistics to a range of day-to-day problems; • Translate real life questions into statistics questions; • Calculate/compute statistics; • Correctly interpret statistics; • Understand the limitations of statistics.

Module Content	
Learning Outcomes	Having successfully completed this module, you will be able to: • Explain and apply statistical terminology; • Build and interpret summary statistics; • Construct confidence intervals; • Test hypothesis; • Formulate day-to-day problems in statistical terms; • Explaining statistical reasoning in clear, concise, and correct English.
Indicative Reading / Resources	Jaggia and Kelly Business Statistics: Communicating with Numbers McGraw Hill, 5th Edition. The textbook comes with the McGraw Hill Connect online resource which will be used throughout the module for both continuous and summative assessments. The link to purchase the book and access the online platform will be provided before the first lecture. You will need to register with your TCD email address.

Assessment	
Assessment Components	Participation 10%, Quizzes 10%, Term Test 10%, Final Exam 70%
Assessment Details	None

Additional Information	
Prerequisites	ECU11021 / ECU11023
Co-requisites	None
Any other information	None