# Mathematical and Statistical Methods B

## Module Code: ECU22032

## Module Title: Mathematical and Statistical Methods B

- **ECTS Weighting**: 5
- **Semester/Term Taught**: Semester 2
- **Contact Hours**: 22 hours of lectures and 10 hours of tutorials
- **Module Personnel**: Lecturer - Professor Michael Wycherley

### Learning Outcomes

Having successfully completed this module, you will be able to:

- Explain and apply mathematical and statistical terminology.
- Solve problems related to statistical inference, mathematical optimization and applications.
- Formulate economic problems in the language and abstractions of mathematics and statistics.

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.
- Ability to perform simple statistical analysis.

### Module Learning Aims

This module provides a broad, practically oriented introduction to inferential statistics of the kind used across the range of social science disciplines. It builds on the material on descriptive statistics and probability covered in the Introduction to Statistics module students will have taken in the JF year.

### Module Content

- Construction of confidence intervals for estimators.
- Hypothesis testing.

- Analysis of variance.
- Simple linear regression.

**Recommended Reading List**

Jaggia and Kelly, Business Statistics: Communicating with Numbers, McGraw Hill.

**Module Pre-requisite**

ECU22031 Mathematical & Statistical Methods A

**Assessment Details**

Weekly problem sets worth 20% and a final exam worth 80% of the overall grade.

Due to the availability of solutions, late coursework submissions will only be accepted under exceptional circumstances.

**Module Website**

Blackboard