

Module Code	ECS1003
Module Title	Statistics and Inference
Level	4
Credit	30
Owning Subject	Economics
Level Restrictions	

Aims

This module aims to introduce students to the analysis and interpretation of quantitative data. Topics include summary statistics, probability, random variables and probability distributions, statistical inference, point estimation and confidence intervals.

Learning Outcomes

Knowledge

On completion of this module the successful student will be able to:

1. use graphical and numerical methods to calculate and illustrate descriptive statistics;
2. use the basic concepts of probability;
3. test basic statistical hypotheses.

Skills

This module will call for the successful student to demonstrate the ability to:

4. use Excel to present and describe data;
5. apply statistical methods to economic data;
6. provide statistical inference of the basic economic problems.

Syllabus

- Descriptive statistics
- Measures of central tendency, variability and grouped data
- Probability and its postulates
- Discrete random variables and probability distributions
- Continuous random variables and probability distributions
- Statistical inference
- Sampling and sampling distributions
- Point estimators and confidence intervals
- Hypothesis Testing

Learning, Teaching and Assessment Strategy

The content of the module will be delivered via weekly two-hour lecture and one hour seminar or computer lab sessions. Students can also meet with the lecturer in office feedback hours or by appointment to discuss matters related to the module and their

learning progression. Summative short quizzes of 15 minutes duration will be conducted at regular intervals throughout the year during lecture or seminar sessions. This will form part of the learning and teaching as students will get into the habit of revising their learning materials at bitesize whilst clearing up any doubts about the materials that has been covered with the immediate feedback given to them straight after the quizzes.

Assessment Scheme

Formative Assessment

The formative assessment consists of regular homeworks for which feedback will be given. Attendance is compulsory both in lectures and seminars.

Summative assessment

1. Weeks 1-10: Quizzes once every two weeks, each worth 4%, to assess learning outcomes 1, 2, & 4.
2. Week 11: First in-class test, worth 30%, to assess learning outcomes 1, 2, 3 & 5.
3. Weeks 13-22: Quizzes once every two weeks, each worth 4%, to assess learning outcomes 2, 3, 5 & 6.
4. Week 23: Second in-class test, worth 30%, to assess learning outcomes 2, 3, 4 & 6.

At least 40% or better for EACH ASSESSED COMPONENT is required to pass this module.

Assessment Weighting

Quizzes: 40%; In-class tests: 60%

Learning Materials

Your online reading lists can be accessed from the My Study area of UniHub. They highlight essential and recommended reading for all modules you are registered on.