



Statistics Course Descriptor

Course Title	Statistics	Faculty	Economics
Course Code	NCHEC402	Course Leader	Dr. Georgios Zouros
Credit Points	15	Teaching Period	Hilary
FHEQ Level	Level 4	Date Approved	June 2020
Compulsory/ Optional	Compulsory for Economics Major and PPE Economics Pathway students		
Pre-requisites	None		
Co-requisites	None		

COURSE SUMMARY

This is an introductory level course for those who wish to use statistics in social science, or in any other context. The course provides a precise and accurate treatment of introductory probability theory, statistical ideas, methods and techniques. The course also enables the students to start on their journey to being able to appreciate empirical literature in the field of Economics.

This course is intended to prepare students for the use of statistics in their more advanced empirical courses (particularly Econometrics and Applied Economics), and accustom students to using statistical methods in their studies.

COURSE AIMS

- Develop the basic statistical tools necessary for further study in Economics and related disciplines.
- Teach the techniques of descriptive statistics, probability theory, statistical inference and hypothesis testing, and simple regression.
- Apply those ideas systematically, with emphasis on their application to economic problems, with the extended use of examples for motivation and illustration.

LEARNING OUTCOMES

On successful completion of the course, students will be able to:

KNOWLEDGE AND UNDERSTANDING

- K1a recognize the statistical concepts and methods that would be useful in specific problems arising in the social sciences

SUBJECT SPECIFIC SKILLS

- S1a apply the concept of hypothesis testing in problems involving inferences about population statistics
- S2a solve problems involving probability, distributions, inference and regression

TRANSFERABLE AND PROFESSIONAL SKILLS

- T1a be able to recognise when a verbal finding or assertion is competently based on statistical study, and be able to identify basic strengths and weaknesses in such commentary

TEACHING AND LEARNING

Students will have the opportunity to engage with:

- 1 x virtual learning environment (VLE)
- 15 x large-group hours
- 10 x tutorial hours (individual or group tutorial)
- Weekly office hours

Students are required to attend and participate in all timetabled sessions for this course and, with the ongoing support available, to manage their directed learning and independent study.

Total study hours for this course are: 150.

EMPLOYABILITY SKILLS

- The course keeps students equipped and practiced with the basic numeracy skills learned at the secondary level.
- The course equips students with data literacy, which is a key transferable skill for a wide range of careers.

ASSESSMENT

FORMATIVE

Students will be formatively assessed during the course by means of set assignments. These do not count towards the end of year results, but will provide students with developmental

feedback, for example weekly exercises are provided and written answers are expected on a weekly basis.

SUMMATIVE

Assessment will be in one form:

AE:	Assessment Activity	Weighting (%)	Online submission	Duration	Length
1	Examination	100	No	2 hours	n/a

The examination will consist of both compulsory and optional questions. The examination will be assessed in accordance with the assessment aims set out in the Programme Specification.

FEEDBACK

Students will receive formal feedback in a variety of ways: written (including via email correspondence); and through discussion during group tutorials. Students will also attend the formal meeting, Collections, at the end of Michaelmas and Hilary in which they will receive constructive and developmental feedback on their term's performance.

Feedback is provided on written assignments (including essays, briefings and reports) and through generic internal examiners' reports, both of which are posted on the College's VLE.

INDICATIVE READING

Note: Comprehensive and current reading lists for courses are produced annually in the Course Syllabus or other documentation provided to students; the indicative reading list provided below is used as part of the approval/modification process only.

BOOKS

Newbold, P., W.L. Carlson and B.M. Thorne Statistics for Business and Economics. (London: Prentice-Hall, 2009) seventh edition.

INDICATIVE TOPICS

Students will study the following topics:

- Centre and spread of a distribution
- Probability, conditional probability
- The Binomial, Poisson and Normal distributions
- Covariance and linear combinations of random variable
- Random sampling, sampling distributions
- Efficiency, biased and unbiased estimators
- Confidence intervals for means and proportions, and difference in means and proportions
- Student's 't' distribution
- Hypothesis tests, power and p-value

- Correlation and Regression
- Fitting a line, least squares estimation
- Sampling variability of the estimates
- Confidence intervals and tests
- Predicting response variable, p-value
- Reliability of statistics as a tool, and reflection on the common uses and misuses of statistics

Title: NCHEC402 Statistics Course Descriptor					
Approved by: Academic Board					
Version number	Date approved	Date published	Owner	Location	Proposed next review date
2.0	June 2021	June 2021	Marianna Koli	1 Academic Handbook > Course Descriptors 2 VLE	April 2025
1.0	June 2020	June 2020	Marianna Koli	1 Academic Handbook > Course Descriptors 1. 2 VLE	April 2025
Modifications (As per AQF4)					
Version number	Date approved	Date published	Modification (including category number)		
2.0	June 2021	June 2021	Category 2: Change to 'Teaching and Learning Strategy'		