SYLLABUS 2025-2026

Statistics

MODULE SPECIFICATION

Module Code	2526_ECO_1_EN_015
Campus	Oxford
Department(s)	Territorial Economy and Sustainable Development
Level / Semester	Undergraduate Year 1 (U1); Equivalent to FHEQ level 4 Semester 02
Language of Instruction	English
Teaching Method	☒ In-person (face-to-face) ☐ Distance learning (live online) ☐ e-Learning (asynchronous) ☐ Hybrid: _____
Pre-requisite(s)?	Final year level in mathematics, Fundamentals of Applied Mathematics for Management, and basic knowledge of Excel software
ECTS *Reminder: 1 ECTS = between 20 and 30hr- student workload*	3
Equivalent FHEQ credits	6
Study Hours	60 hours which comprise of 28 directed learning and 32 independent learning/assessment hours

MODULE DESCRIPTION

Module Aims	This module provides an introduction to the main statistical tools used to describe and understand quantitative data related to human and social phenomena. It is designed to equip students with a foundational methodology for conducting quantitative studies, enabling them to

	make data-driven decisions in various professional contexts. The curriculum will cover key areas such as descriptive statistics, including univariate and bivariate analysis. The module will emphasise the importance of using figures to accurately assess a situation and inform a manager's choices in fields such as marketing, finance, and human resources.
Teaching Arrangement	Students are encouraged to learn actively and cooperatively in teams and will undertake a group project in groups of 4 to 5. Class sessions will involve lectures, case studies, discussions and debates, and presentations of related topics and current issues related to the module content. Students should read the relevant textbook chapters and materials before class and should be prepared to raise questions and arguments in class on related topics.
Learning Outcomes	By the end of this module, students should be able to: 1. Identify and describe the main mathematical and statistical tools used for analysing management data. 2. Perform basic calculations relevant to business and management sciences. 3. Interpret the results of simple mathematical and statistical analyses to inform decision-making.
Competency Goals *(Knowledge, expertise and interpersonal skills)*	PGE_U_CG05 - Innovate to adapt to its environment PGE_U_CG07 - Improve performance through digitalisation
Alignment with Programme Learning Goals	PGE_U_CG05_LO01 - Analyse the organisation's activity and develop innovative projects PGE_U_CG05_LO04 - Develop decision-making support tools PGE_U_CG07_LO02 - Protect data and make data-driven decisions

SESSION TOPICS / MODULE SCHEDULE

(Please note, a session/sequence may be more than one scheduled class)

Session 1: What is Statistics (pt. 1)

Content:

- Introduction and main definitions
- Statistical studies
    - Approach and steps of the scientific method
    - Use of statistical data (descriptive statistics/inferential statistics)

References:

- Lind, D.D., Marchal, W.G. and Wathen, S.A. (2023) *Statistical techniques in business and economics*. 19th edn. McGraw-Hill Education.

Last reviewed: 11/09/2025

Session 2: What is Statistics (pt. 2)

Content:

- Notion of variables
    - Nature of variables
    - Levels of measurement
- Statistical pitfalls: keeping a critical mind about quantification

References:

- Lind, D.D., Marchal, W.G. and Wathen, S.A. (2023) *Statistical techniques in business and economics*. 19th edn. McGraw-Hill Education.

Assignments:

- Read the dedicated module sheet, reviewing exercises from the previous sequence and practicing proposed comprehension questions
- Work on statistical study

Session 3: Univariate Analysis (pt. 1)

Content:

- Visual presentation (frequency distribution and visual/graphical representation)

References:

- Lind, D.D., Marchal, W.G. and Wathen, S.A. (2023) *Statistical techniques in business and economics*. 19th edn. McGraw-Hill Education.

Assignments:

- Read the dedicated module sheet, reviewing exercises from the previous sequence and practicing proposed comprehension questions
- Work on statistical study

Session 4: Univariate Analysis (pt. 2)

Content:

- Measure of central tendency (mean, median, mode)

References:

- Lind, D.D., Marchal, W.G. and Wathen, S.A. (2023) *Statistical techniques in business and economics*. 19th edn. McGraw-Hill Education.

Assignments:

- Read the dedicated module sheet, reviewing exercises from the previous sequence and practicing proposed comprehension questions
- Work on statistical study

Session 5: Univariate Analysis (pt. 3)

Content:

- Measure of dispersion: range, standard deviation, coefficient of variation, quartiles, deciles, boxplot

References:

- Lind, D.D., Marchal, W.G. and Wathen, S.A. (2023) *Statistical techniques in business and economics*. 19th edn. McGraw-Hill Education.

Assignments:

- Read the dedicated module sheet, reviewing exercises from the previous sequence and practicing proposed comprehension questions
- Work on statistical study

Session 6: Bivariate Analysis (pt. 1)

Content:

- Bivariate analysis for quantitative variables: linear correlation and regression

References:

- Lind, D.D., Marchal, W.G. and Wathen, S.A. (2023) *Statistical techniques in business and economics*. 19th edn. McGraw-Hill Education.

Assignments:

- Read the dedicated module sheet, reviewing exercises from the previous sequence and practicing proposed comprehension questions
- Work on statistical study

Session 7: Bivariate Analysis (pt. 2)

Content:

- Bivariate analysis for quantitative variables: links between variables and chi-square independence test

References:

- Lind, D.D., Marchal, W.G. and Wathen, S.A. (2023) *Statistical techniques in business and economics*. 19th edn. McGraw-Hill Education.

Assignments:

- Read the dedicated module sheet, reviewing exercises from the previous sequence and practicing proposed comprehension questions
- Work on statistical study

KEY TEXTS

1. Lind, D.D., Marchal, W.G. and Wathen, S.A. (2023) *Statistical techniques in business and economics*. 19th edn. McGraw-Hill Education.
2. Curwin, J., Slater, R. and Eadson, D. (2013) *Quantitative methods for business decisions*. 7th edn. Cengage Learning.

SUPPLEMENTARY TEXTS

1. Coetzee, S. and Van der Merwe, P. (2010) 'Industrial psychology students' attitudes towards statistics', *SA Journal of Industrial Psychology*, 36(1), pp. 1-8. doi:10.4102/sajip.v36i1.843.

MODES OF ASSESSMENT

Continuous Assessment (40%)	Individual exercises	20%
	Group statistical study	20%
Final Exam (60%)	Closed book written exam	

Last reviewed: 11/09/2025

MODULE DESIGN TEAM

- Author: *Mathilde Aubry*
- Reviewer: *Ambrose Egwuonwu*
- External Reviewer: *TBA*

Last reviewed: 11/09/2025