ST415-30 Statistics Masters Dissertation

24/25

Department
Statistics
Level
Undergraduate Level 4
Module leader
Krzysztof Latuszynski
Credit value
30
Module duration
22 weeks
Assessment
Multiple
Study location
University of Warwick main campus, Coventry

Description

Introductory description

This module is core for students on the MMathStat degree and optional core for students on an MMORSE degree. It is not available as an unusual option for other students.

In this module you will carry out a significant project over the course of terms 1-3 on a topic of specialist interest. You will be provided with an opportunity to express preferences for your project during the preceding academic year and will be allocated to a project / supervisor before the start of the academic year.

Module web page

Module aims

To allow students to integrate, apply and extend knowledge and skills gained in the taught component of their degree and mastery of some element of Mathematics and Statistics. To give students an introduction to research in the discipline.

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

Students will be allocated a dissertation supervisor in the Department of Statistics. The module will entail regular supervisory meetings as well as independent study and research on a chosen topic and the writing of the dissertation. The dissertation will be on a topic within mathematics and statistics. Students will be provided with a list of available topics but may suggest their own provided this is agreed with the supervisor.

Learning outcomes

By the end of the module, students should be able to:

- Produce an extended piece of academic writing with appropriate referencing of literature sources.
- Conduct a literature review on a selected topic;
- Plan and develop an advanced project themed in Mathematics or Statistics;
- Demonstrate an in-depth understanding of an advanced topic in Mathematics or Statistics;
- Understand, apply and evaluate theory and methodology of relevant literature, showing good judgement in their selection, application and interpretation;
- Communicate the results of advanced scholarship or research to a specialist audience;

Indicative reading list

Mittelbach, F., Goossens, M., Braams, J., Carlisle, D., & Rowley, C. (2004). The LATEX companion. Addison-Wesley Professional.
Krantz, S. G. (2017). A primer of mathematical writing: Being a disquisition on having your ideas recorded, typeset, published, read, and appreciated (Vol. 243). American Mathematical Soc..
Neville, C. (2010). The complete guide to referencing and avoiding plagiarism. McGraw-Hill Education
(UK).

View reading list on Talis Aspire

Research element

- plan and develop an advanced project in mathematics and statistics;

Subject specific skills

Probability, Statistics or other Applied Mathematics research skills

Transferable skills

Your Integrated Masters Dissertation is an opportunity to develop a range of transferable skills (see https://warwick.ac.uk/fac/sci/transferable-skills/more-transferable/) such as communicating orally, writing for your peers, project organisation and time management, or creative and independent thinking. These skills will be worthwhile whether you become an academic or go to

industry.

Study

Study time

Type	Required
Lectures	4 sessions of 30 minutes (1%)
Project supervision	10 sessions of 1 hour (3%)
Supervised practical classes	2 sessions of 1 hour (1%)
Private study	186 hours (62%)
Assessment	100 hours (33%)
Total	300 hours

Private study description

Find, read and evaluate literature, plan and develop research question, collect and find data, carry out analysis, evaluate and interpret findings, communicate results and write dissertation.

Costs

No further costs have been identified for this module.

Assessment

You do not need to pass all assessment components to pass the module.

Students can register for this module without taking any assessment.

Assessment group A4

	Weighting	Study time
Oral Presentation	15%	10 hours

You will prepare and deliver a presentation about your dissertation project to a small audience of your peers and academic staff during a scheduled 2 hour session in week 9 or 10 of term 2.

Your presentation will last 12 minutes and will be followed by questions from the audience.

Written dissertation	75%	80 hours

You will produce a written dissertation on your research project at a level of exposition and technical detail appropriate for another student within the same cohort. 500 words is equivalent to

	Weighting	Study time

one page of text, diagrams, formula or equations; your dissertation is likely to be between 40-80 pages in length.

Up to 10% of the mark awarded for the dissertation will reflect the extent to which you took intellectual ownership of the project; this is an academic judgement on your quality of understanding beyond that evidenced in the written assessment components of the dissertation.

Workflow Report	10%	10 hours

You will product a workflow report to summarise the topic of your dissertation along with the aims and associated steps in order to complete the dissertation.
Your report should be minimal in technical detail, and should be at a level of exposition that another student within the same cohort could read and understand.
500 words is equivalent to one page of text, diagrams, formula or equations; your workflow report should not exceed 6 pages in length.

Assessment group R2

	Weighting	Study time
Dissertation reassessment	100%	

If you do not pass the module you will be allowed to resubmit your dissertation and may additionally be given an opportunity to demonstrate your ability to meet the learning outcomes of the module during an oral examination.

500 words is equivalent to one page of text, diagrams, formula or equations; your dissertation is likely to be between 40-80 pages in length.

Feedback on assessment

- Face-to-face feedback will be given on the workflow report component by individual arrangement with supervisor.
- A short feedback report will provided for the presentation within 20 working days.
- Written feedback will be given on the written dissertation following the examination board.

Availability

Anti-requisite modules

If you take this module, you cannot also take:

- EC400-30 Statistics Masters Dissertation in Economics
- IB403-30 Dissertation (MMORSE)
- ST421-30 Data Science Masters Dissertation

Courses

This module is Core for:

- Year 4 of USTA-G1G3 Undergraduate Mathematics and Statistics (BSc MMathStat)
- Year 5 of USTA-G1G4 Undergraduate Mathematics and Statistics (BSc MMathStat) (with Intercalated Year)

This module is Core optional for:

- USTA-G300 Undergraduate Master of Mathematics,Operational Research,Statistics and Economics
    - Year 4 of G30A Master of Maths, Op.Res, Stats & Economics (Actuarial and Financial Mathematics Stream)
    - Year 4 of G30B Master of Maths, Op.Res, Stats & Economics (Econometrics and Mathematical Economics Stream)
    - Year 4 of G30C Master of Maths, Op.Res, Stats & Economics (Operational Research and Statistics Stream)
    - Year 4 of G30C Master of Maths, Op.Res, Stats & Economics (Operational Research and Statistics Stream)
    - Year 4 of G30D Master of Maths, Op.Res, Stats & Economics (Statistics with Mathematics Stream)
- USTA-G301 Undergraduate Master of Mathematics,Operational Research,Statistics and Economics (with Intercalated
    - Year 5 of G30E Master of Maths, Op.Res, Stats & Economics (Actuarial and Financial Mathematics Stream) Int
    - Year 5 of G30F Master of Maths, Op.Res, Stats & Economics (Econometrics and Mathematical Economics Stream) Int
    - Year 5 of G30G Master of Maths, Op.Res, Stats & Economics (Operational Research and Statistics Stream) Int
    - Year 5 of G30H Master of Maths, Op.Res, Stats & Economics (Statistics with Mathematics Stream)