ST421-30 Data Science Masters Dissertation

26/27

Department
Statistics
Level
Undergraduate Level 4
Module leader
Samuel Touchard
Credit value
30
Module duration
22 weeks
Assessment
100% coursework
Study location
University of Warwick main campus, Coventry

Description

Introductory description

This module is core for students on the MSci in Data Science. 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 Data Science. 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 Departments of Statistics or Computer Science. 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 data science. 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:

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

Indicative reading list

Reading lists can be found in Talis

Specific reading list for the module

Research element

plan and develop an advanced project in data science;

Subject specific skills

Statistics and Data Science 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

Teaching split

Provider	Weighting
Computer Science	50%
Statistics	50%

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.

Assessment group A4

Assessment component	Weighting	Study time	Eligible for self-certification
Workflow Report	10%	10 hours	No

Due in Term 1 Week 10. You will product a workflow report to summarise the topic of your

	Weighting	Study time	Eligible for self-certification

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.

Reassessment component

Written dissertation — Yes (extension)

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.

Assessment component

Oral Presentation | 15% | 10 hours | No

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.

Reassessment component

Written dissertation — Yes (extension)

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.

Assessment component

Written dissertation | 75% | 80 hours | No

Due in Term 3 Week 2. 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 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.

Reassessment component is the same

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:

- IB403-30 Dissertation (MMORSE)
- EC400-30 Statistics Masters Dissertation in Economics
- ST415-30 Statistics Masters Dissertation

Courses

This module is Core for:

- Year 4 of USTA-G304 Undergraduate Data Science (MSci)