CS344-30 Discrete Mathematics Project

26/27

Department
Computer Science
Level
Undergraduate Level 3
Module leader
Greg Watson
Credit value
30
Module duration
22 weeks
Assessment
Multiple
Study location
University of Warwick main campus, Coventry

Description

Introductory description

The third year project is an extended, individual piece of work which forms a core element of the Discrete Mathematics degree. Students choose a topic and find a supervisor in the summer term of their second year.

This module is not available to sutdents from other departments.

Module aims

To provide experience of undertaking a significant individual research or development exercise from conception through to design, execution and delivery.

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 select a project during the third term of their second year by submitting an outline of the

proposed project and finding an academic member of staff to supervise it. The Project Specification, which outlines the project plan, is submitted during the first term. The written Progress Report on the current state of the project is submitted early in the second term for 15% credit (combined with the Project Specification). The Final Report, which is a detailed written report of the project, is submitted during the Easter break, with a plan submitted to the supervisor near the end of the second term. The student will take part in the Viva, which is a short presentation and extended question and answer session, early in the third term. The Final Report and Viva, together, are worth 75% of the module credit. The student will submit a short document, worth 10%, describing how they have managed their project, at the same time as the Final Report. This module is primarily not a taught module, but a major design and development exercise for the student carried out under supervision.

Learning outcomes

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

- - Plan and manage a significant individual project, including detailed considerations of resources, timetabling and professional issues
- - Build a substantial software system from design to documentation, or carry out a substantial research project from methodology to conclusions
- - Present their work orally, with appropriate uses of audio-visual aids and interactive demonstrations, and respond to questions effectively
- - Produce substantial technical report and reflective writing

Indicative reading list

Reading lists can be found in Talis

Specific reading list for the module

Research element

The entire project may be based around undertaking a significant research exercise from conception through to design, execution and delivery.

Subject specific skills

The individual project involves consolidating, combining and applying a wide variety of subject specific skills gained in the rest of the degree course so far.

Transferable skills

- Technical - Technological competence and staying current with knowledge
- Communication - Verbal, listening, writing, technical communication skills, using different medium for communicating
- Critical Thinking - Problem-solving, analysis of possible solutions etc

- Multitasking - Soft skills such as time management, organization skills etc
- Creativity - Ability to harness creative ideas and turn them into tangible and strategic products/solutions

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Study

Study time

Type	Required	Optional
Lectures	8 sessions of 1 hour (3%)	
Seminars	2 sessions of 1 hour (1%)	
Project supervision	20 sessions of 30 minutes (3%)	
Practical classes	(0%)	2 sessions of 2 hours
Online learning (independent)	2 sessions of 1 hour (1%)	
Private study	278 hours (93%)	
Total	300 hours	

Private study description

Private study and independent learning in this module includes:

- Research into the subject area of the project, and into available existing solutions.
- Planning and managing own work.
- Preparing for and learning from supervision meetings.
- Designing, solving, programming, testing and evaluating own software artefacts or research outcomes.
- Preparation of the written reports and the Viva.
- Reflecting on feedback received on the Progress Report and the Final Report Plan.

Other activity description

Evaluation Day.

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 A8

	Weighting	Study time	Eligible for self-certification
Progress Report	15%		No
Progress report on the project, with a length of 4,000 words.			
Final Report & Viva	75%		No
Final Report length: 9,000 words. Viva duration: 45 minutes.			
Project Management Report	10%		No
A short written report describing how the student has managed their project. Length: 1,000 words.			

Assessment group R6

	Weighting	Study time	Eligible for self-certification
Resit Final Report (including Project Management) & Viva	100%		No
Final Report length: 10,000 words. In addition to the content which is expected to be included in the non-resit version of the Final Report, the Resit Final Report should also include a discussion of how the student has managed their project (Project Management). Viva duration: 45 minutes.			

Feedback on assessment

Project Specification: Oral feedback from supervisor within two weeks of submission.
Progress Report: Feedback via Tabula within 20 university working days.
Final Report & Viva: Feedback via Tabula on or before end-of-year mark release.
Project Management Report: Feedback via Tabula on or before end-of-year mark release.

Availability

Pre-requisites

This module is not available to students from other departments.

Courses

This module is Core for:

- UCSA-G4G1 Undergraduate Discrete Mathematics
  - Year 3 of G4G1 Discrete Mathematics

    - Year 3 of G4G1 Discrete Mathematics
- UCSA-G4G3 Undergraduate Discrete Mathematics
    - Year 3 of G4G1 Discrete Mathematics
    - Year 3 of G4G1 Discrete Mathematics
    - Year 3 of G4G3 Discrete Mathematics
- Year 4 of UCSA-G4G4 Undergraduate Discrete Mathematics (with Intercalated Year)
- Year 4 of UCSA-G4G2 Undergraduate Discrete Mathematics with Intercalated Year