# CS913-60 Dissertation Project in Data Analytics

## 24/25

**Department**
>    Computer Science

**Level**
>    Taught Postgraduate Level

**Module leader**
>    Christian Ikenmeyer

**Credit value**
>    60

**Module duration**
>    50 weeks

**Assessment**
>    Multiple

**Study location**
>    University of Warwick main campus, Coventry

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# Description

## Introductory description

The dissertation is intended to give students the opportunity to consolidate the knowledge that they have acquired during the first half of the MSc, and to undertake a research led project. Students are expected to carry out a significant development exercise, either in the form of a research project or a knowledge transfer project that is applying recent research and the advanced topics taught in the first half of the course.

## Module aims

The aim of your dissertation is to give you the opportunity to consolidate the knowledge that you have gained during the taught component of your MSc through a research-led project. You are expected to carry out a significant development exercise, either in the form of a research project or a knowledge transfer project that applies the topics taught in your course. The project will require strong project management skills, problem-solving abilities, and self directed study. Although not a requirement, there is scope for industrial involvement in dissertation projects, and this is encouraged. The dissertation also provides opportunity for interdisciplinary work, again building on the the modules taught earlier in the course, and will require students to demonstrate a mature knowledge of computer science and its applications.

# 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.

The research interests of staff members, as typically represented (but not restricted to) the modules taught in the first six months of the MSc, will be the major source of dissertation topics. A degree of industrial input and involvement will be encouraged, and can be facilitated through existing academic-industrial collaborations or by addressing specific topics that are of interest to industrial partners. The dissertation project will be prefaced by introductory workshops on issues of project management and planning. All projects will be closely supervised by academics with ongoing feedback and guidance at all stages of the project from the conception to completion.

# Learning outcomes

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

- Carry out a comprehensive research project and critically interpret results in computer science and applications.
- Demonstrate a detailed knowledge and understanding of one area of computer science at, or approaching, the frontiers of research.
- Interpret and evaluate results in computer science.
- Demonstrate independent learning skills.
- Write an extended scientific report and show research skills (including the use of library and web resources).
- Show good oral communication skills.

# Research element

Research paper reading. Research literature analysis and critique.

# Subject specific skills

Computer science research skills.

# Transferable skills

Technical - Experience in undertaking critical reading and interpretation of technical articles. An understanding of the hardware and software systems that are linked to the area of the dissertation. Technical skills in the analysis, design and implementation of complex systems in support of a research and /or commercial goal. Communication - Lecture listening. Technical report writing. Technical document comprehension and analysis. Documenting software solutions. Research paper reading. Presentation skills. Critical Thinking - Systems analysis and technical problem solving. Research literature analysis and critique. Multitasking - Management of competing deadlines and priorities. Management of parallel project activities. Teamwork - Working under the supervision of a an academic advisor. Creativity - Developing solutions to a research or industrial

problem. Leadership - Combining critical thinking and technical understanding in the development of an original solution, whilst being able to convey the process to an informed audience and being receptive to supervisory support.

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# Study

## Study time

| Type | Required |
|---|---|
| Lectures | 6 sessions of 1 hour (1%) |
| Tutorials | 30 sessions of 1 hour (5%) |
| Private study | 564 hours (94%) |
| Total | 600 hours |

## Private study description

Reading, programming, system analysis, system design, system implementation, supporting meetings, project management, presenting and document writing.

## Costs

No further costs have been identified for this module.

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# Assessment

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

## Assessment group A3

| | Weighting | Study time | Eligible for self-certification |
|---|---|---|---|
| Interim Report (4000 words) Written report | 15% | | No |
| Presentation (25 minutes) Presentation | 5% | | No |
| Dissertation Report (18,000 words) 18000 words (excluding bibliography and appendices). | 80% | | No |

## Assessment group R1

| | Weighting | Study time | Eligible for self-certification |
|---|---|---|---|
| Dissertation Report (18,000 words) | 100% | | No |

18000 words (excluding bibliography and appendices).

## Feedback on assessment

Written feedback from supervisor (progress report, presentation and dissertation) and second marker (presentation and dissertation) with additional oral feedback from supervisor.

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# Availability

# Courses

This module is Core for:

- Year 1 of TCSA-G5PA Postgraduate Taught Data Analytics