

# CS908-15 Research Methods

**20/21**

**Academic year**

20/21

**Department**

Computer Science

**Level**

Taught Postgraduate Level

**Module leader**

Sara Kalvala

**Credit value**

15

**Module duration**

10 weeks

**Assessment**

Multiple

**Study location**

University of Warwick main campus, Coventry

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## Description

### Introductory description

The module aims to facilitate students' acquisition of a range of research methods, ensure that students are aware of the legal framework within which research is conducted, and that students are sensitive to the social and ethical issues which affect Computer Science research.

### Module aims

The module will assist students in the various stages involved in undertaking a substantial research project, covering: researching and choosing a topic, finding a supervisor, writing a research proposal, narrowing the scope of the project, planning, researching, writing and finally submitting their dissertation. The module's overall aim is to offer an intellectually challenging and supportive environment which allows students to develop their research and communication skills in the context of undertaking a research project of their choice.

### 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.

Introduction to research methods  
Use of secondary sources  
Critique  
Round-table research discussion  
Academic writing  
Writing research proposals

## **Learning outcomes**

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

- By the end of the module the student should be able to understand the research methods used in Computer Science (CS); distinguish between different types of academic writing strategies; write an effective and feasible research proposal; use electronic systems of bibliographic citation.
- By the end of the module the student should be able to demonstrate improved written and verbal communication skills; use selected CS databases; use systems for bibliography construction; conduct peer reviewing in a professional manner; understand time-management and project management skills; avoid plagiarism of secondary sources by using a variety of writing strategies.
- By the end of the module the student should be able to critique scholarly articles in their research area; conduct a comparative critical analysis of scholarship in their field; formulate a scientifically sound hypothesis and offer support for it through empirical evidence; communicate the results of their peer review; engage with research methods intelligently and with confidence; write a long research paper which sustains an original and sound argument.
- By the end of the module the student should be able to conduct research in CS in an effective and productive manner; write a scientific paper; write a research proposal; conduct a critical review of a scholarly article; conduct peer review; manage a long research project and see it to completion; use secondary sources in their writing in an accurate and honest manner.

## **Indicative reading list**

Please see Talis Aspire link for most up to date list.

[View reading list on Talis Aspire](#)

## **Research element**

independent research

## **Subject specific skills**

- understand the research methods used in Computer Science (CS)
- distinguish between different types of academic writing strategies
- write an effective and feasible research proposal

- understand the principal legal issues which affect computer science research, and be aware of the need to recognise the ethical and social impact of their research activities
- use electronic systems of bibliographic citation
- conduct research in CS in an effective and productive manner
- write a scientific paper
- write a research proposal
- conduct a critical review of a scholarly article
- manage a long research project and see it to completion

## Transferable skills

- understand the research methods used in Computer Science (CS)
- distinguish between different types of academic writing strategies
- write an effective and feasible research proposal
- understand the principal legal issues which affect computer science research, and be aware of the need to recognise the ethical and social impact of their research activities
- use electronic systems of bibliographic citation
- demonstrate improved written and verbal communication skills
- use selected CS databases
- use systems for bibliography construction
- understand time-management and project management skills
- avoid plagiarism of secondary sources by using a variety of writing strategies.

## Study

### Study time

Type	Required
Lectures	10 sessions of 2 hours (13%)
Private study	130 hours (87%)
Total	150 hours

### Private study description

Self-directed study, focused around the assessments.

## 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 A1

	<b>Weighting</b>	<b>Study time</b>
Assignment : Critical Analysis assignment	40%	
Presentation presentation	20%	
Assignment : Dissertation Specification - Research Proposal assignment	40%	

### Assessment group R

	<b>Weighting</b>	<b>Study time</b>
Resit Assignment	100%	

### Feedback on assessment

Written and oral feedback on each component of assessment.

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## Availability

### Pre-requisites

This module leads into the CS907/CS913 Dissertation Project Module.

## Courses

This module is Core for:

- TCSA-G5PD Postgraduate Taught Computer Science
  - Year 1 of G5PD Computer Science
  - Year 1 of G5PD Computer Science
- Year 1 of TCSA-G5P8 Postgraduate Taught Computer Science and Applications
- Year 1 of TCSA-G5PA Postgraduate Taught Data Analytics