CS908-15 Research Methods

24/25

Department
Computer Science
Level
Taught Postgraduate Level
Module leader
Nasir Rajpoot
Credit value
15
Module duration
10 weeks
Assessment
Multiple
Study location
University of Warwick main campus, Coventry

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.

1. Introduction to research methods

2. Use of secondary sources
3. Critique
4. Round-table research discussion
5. Academic writing
6. Writing research proposals

Learning outcomes

By the end of the module, students 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.
- 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.
- 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.
- 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.

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 A2

	Weighting	Study time	Eligible for self-certification
Assignment : Critical Analysis	40%		No
Assignment : Critical Analysis. This assignment is worth more than 3 CATS and is not, therefore, eligible for self-certification.			
Presentation presentation	20%		No
Assignment : Dissertation Specification - Research Proposal	40%		No
Assignment: Dissertation Specification - Research Proposal. This assignment is worth more than 3 CATS and is not, therefore, eligible for self-certification.			

Assessment group R1

	Weighting	Study time	Eligible for self-certification
Written report - Resit Assignment	100%		No

Feedback on assessment

Written and oral feedback on each component of assessment.

Availability

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-G5PA Postgraduate Taught Data Analytics