

CS5500 MSc Dissertation

Study Guide for 2024/25

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MODULE DETAILS

Module leader	Dr. Sarath Chandra Dantu		
Department	Computer Science		
Credits	60		
Other staff	Dr. Kezhi Wang Dr. Maziar Ghorbani		
Contact and private study time	Supervisor Meetings	20 hours	
	General Study	580 hours	
	Total	600 hours	
Assessment	Dissertation	100%	

ACCESS TO SUPPORT MATERIAL AND ADDITIONAL INFORMATION

Most teaching, learning and support material is provided electronically via the University's [Brightspace](#) system. Note that the details provided in this study guide are based on the formal module syllabus for this module which sets out the agreed content, learning outcomes, assessment and teaching methods. Module syllabus and scheme of studies documents for your programme of study can be found by on the University's Quality Assurance web pages.

INTRODUCTION

In this module, you will be working on a master's dissertation project under the supervision of a member of academic staff from the Department of Computer Science. While working on the dissertation, you will have the opportunity:

- to develop a systematic understanding and critical awareness of an agreed problem relevant to your academic discipline through literature review.
- to plan and execute a major piece of work.
- to apply established techniques of research and enquiry to create and/or interpret knowledge in your academic discipline.
- to critically evaluate both your own research and that of others from their discipline.
- to gain experience in the written communication of complex ideas and concepts.

There are three main types of study:

1. A **research-focused study**, which aims to draw on practical data to assess critically a specified area or topic. Data may come from an empirical study undertaken by the student with an appropriate organisation (agreed by the department) or a meta-analysis of data from literature or from open source datasets.
2. A practical **software development study**, which aims to explore an area or ideas, or demonstrate a concept through appropriate software development, testing and critical analysis.



3. A **literature-focused study**, which aims to integrate and critically discuss a significant body of literature within a specified topic area. This type of study tends to provide some statement of recommendation arising from a critical review and synthesis of relevant literature.

Regardless of the study pursued, it will be necessary to undertake a review of literature for your Background chapter because both the ability to develop knowledge and skills through self-guided learning and the ability to critically appraise literature from the perspective of the problem being addressed are fundamental at master's Level. A literature-focused study requires a systematic review of literature. A detailed appropriate research method must also be used.

LEARNING OUTCOMES

Whatever module or programme of study you are studying for at Brunel University London, there are learning outcomes (LO) that you must meet/achieve in order to be awarded the credits which comprise the module and programme of study. In order to get a pass grade (C- or above) in this module, you must meet these learning outcomes below, that is, you must demonstrate ability to:

- LO1: To critically evaluate relevant research and scholarship within the field of study.
- LO2: To choose and apply appropriate techniques and enquiry, given the research problem (or question) addressed.
- LO3: To propose, present, and critically evaluate a solution to the research problem addressed (or an answer to the research question).
- LO4: To clearly communicate the above achievements to the reader.
- LO5: Demonstrate engagement with the University's ethics process and, where required, gain formal ethical approval from the University and evidence this in the dissertation report.

METHOD OF TEACHING

This module is conducted through self-directed study under the supervision of a member of academic staff. To help you along, there are two briefing sessions scheduled in semester 2 as listed below to explain the dissertation process and demonstrate how to use the RefWorks manager for your dissertation:

Week	Lecture Topic	Date	Lecturer
18	Introduction to master's dissertation	28 Jan 2025	Dr. Sarath Dantu
19	Demonstration of RefWorks reference manager	04 Feb 2025	Dr. Sarath Dantu

Please check the module page on Brightspace for details on the lecture venue.

CHOOSING THE SUPERVISOR AND THE PROJECT

We will release a list of potential supervisors with details on their research interests/project topics on **20th Jan 2025**. You should go through the list, make an appointment, and discuss with the supervisors that have advertised projects/topics matching your interests. As each supervisor will be working with limited number of students, there is no guarantee that you will get your first choice of supervisor and/or topic, so we advise you to start early.

You can also pitch potential research ideas to your supervisor, and they will give you feedback if the proposed idea is suitable for master's dissertation and if they would like to supervise it.

Once you reach an agreement with the supervisor on the potential topic of your dissertation, please send an email to Karen Tossell (computerscience-tpo@brunel.ac.uk) with the supervisor in 'CC' informing her that an agreement has been reached by **07th of March 5pm**.

If you are not proactive in this process and do not have a supervisor by the deadline you will be allocated a supervisor by us on **21st of March**.



WORKING ON YOUR RESEARCH AND THE DISSERTATION

It is your dissertation, and you are responsible for the research work and the content of the dissertation. The supervisor is there to offer comment and advice on your work and the dissertation. **It is your responsibility to arrange and agree to regular meetings with your supervisor in advance.** It is advisable to listen carefully, take notes and progressively work on your dissertation. If you do not, your supervisor may be less inclined to take the time to discuss and help you develop your work.

They will also provide informal feedback on drafts of your work. At a minimum you can expect informal feedback on one draft per task. You will, however, need to negotiate the timing of submission of these drafts well in advance to fit in with your supervisor's schedule. If you do not give your supervisor enough time, then you cannot expect appropriate feedback.

*If your supervisor leaves the Department a new supervisor will be appointed. A member of the dissertation team will act as supervisor on a temporary basis until a new supervisor is found. **Note this does not include periods when your supervisor is temporarily unavailable.*** As noted above you must make sure you are aware of your supervisor's availability well ahead of time.

The supervisor is not the sole arbiter of the eventual dissertation standard. Students should see the supervisor's comments as helpful advice and not as judgements on their work. A supervisor cannot change the dissertation learning outcomes.

You may approach any eligible member of staff for assistance with your dissertation content. It is up to you to decide who is best placed to help you. Your supervisor may also ask for another academic to be nominated as an advisor where they believe you would benefit from their expertise. There is no requirement for the advisor to provide formal written feedback.

After your exams in Jun 2025, you should immediately start working on your dissertation. Your supervisor will also become your personal tutor for the duration of the dissertation.

Dissertation Definition Report (Task 1)

The Dissertation Definition Report Task 1 is designed to help you structure your dissertation work, i.e. by this time we expect you to go through the literature and develop a preliminary understanding of the topic (background), identify the project aims and derive objectives (aims and objectives), have identified suitable methods to achieve your objectives (approach) and have prepared a plan to achieve your goals (plan). **It is not assessed, i.e., you will not receive any grade for it.**

The report template is available on Brightspace, and you need to submit the report in pdf format on WiseFlow by 20th Jun 2025, 11:00. It is your responsibility to attend the meeting and discuss the feedback from your supervisor. If you do not submit by the deadline there is no requirement for the supervisor to provide you with feedback. You should discuss with your supervisor about the need for ethical approval for your study at this stage and start the application process.

Ethics Approval Process

The university [research ethics policy](#), requires that all project work follows ethical procedures and conforms to ethical standards. Therefore, during Task 1 **you are required to discuss the ethical aspects of your proposed work with your dissertation project supervisor and, under their guidance, complete the ethics approval form.** This process will be explained in the lecture in week 31.

Without approval of the supervisor

Projects using secondary data should not commence data analysis.

Low risk projects (collecting data from participants through surveys or interviews) should not start any data collection.

Once you have the confirmation from your supervisor that you have met all the requirements of the ethics process, you may start your data collection/analysis. **You must the ethics proforma letter in the Appendix or as an additional file. Failure to do so leads to you failing LO5 and failing CS5500.**



MSc Dissertation (Task 2)

At the end of your dissertation, you will prepare and submit the **MSc Dissertation (Task 2)**, using the template provided on Brightspace. Your dissertation should not exceed 12,000 words ($\pm 10\%$) (excluding title page, abstract, acknowledgements, table of contents, references, and appendices). As stated above, you can get feedback on your dissertation draft from your supervisor, with the condition that you have agreed on a schedule with your supervisor to deliver the draft and receive feedback before the submission deadline. For further details, please refer to Assessment brief.

Working with outside companies

Occasionally students choose to involve outside companies in their dissertation work. Please be aware that Brunel University accepts no liability for any advice or software provided to case study companies in such cases. Furthermore, in supervising dissertation work, staff members accept no duty of care in relation to any work undertaken within case study companies. Students working with outside companies as part of their dissertation should make those companies aware that Brunel University claims copyright on any software written by the student as part of their research. Formal collaboration agreements can be negotiated between an outside company and the University (via the Brunel Research Services and Development Office) if needed. If it is a necessary condition of working with a company, it is possible (although rare) to restrict the finished dissertation reports to within the university, and not to publish them for a specified period of time.

ASSESSMENT

You will be submitting two deliverables towards completion of your dissertation (listed below):

Task 1	Dissertation Definition Report	(0%) formative feedback
Task 2	MSc Dissertation	(100%) summative grade

You will receive formative feedback from your supervisor on Task 1. For details on Task 2 please refer to the Assessment brief on Brightspace.

LATE COURSEWORK

The clear expectation is that you will submit your coursework by the submission deadline stated in the study guide. In line with the University's policy on the late submission of coursework (revised in July 2016), coursework submitted up to 48 hours late will be accepted but capped at a threshold pass (D- for undergraduate or C- for postgraduate). Work submitted over 48 hours after the stated deadline will automatically be given a fail grade (F).

DELIVERABLES AND FEEDBACK - IMPORTANT DATES

You should prepare and submit all coursework according to the instructions in the relevant assessment brief. You should make sure that you are fully aware of the [University's policy on plagiarism and collusion](#). You should also be aware that you *cannot* later claim that you did not know the rules and regulations as you must make yourself familiar with them. If you cannot complete any work on time, you should look at the Department's instructions on what to do. The Department policy is that all coursework must be submitted electronically via the WISEflow system. Please navigate to the [Brightspace](#) pages for this module for further details.

Important dates

In the table below, the key dates and tasks associated with the assessment for the module are set out.

Task	Assignment Title/ Activity	Submission deadline	Feedback due	Weighting (%)
	MSc Supervisor Database Available to Students	20/01/2025	NA	NA
	Selecting a topic and supervisor and sending an email to TPO (Karen Tossell)	07/03/2025	NA	NA
	Unallocated students allocated to supervisors	21/03/2025	NA	NA
Task 1	Dissertation Definition Template	20/06/2025, 11:00	04/07/2025	0% (Formative Feedback)
	Research Ethics Application submission	04/07/2025	NA	NA (See Note 1 below)



Task 2	MSc Dissertation	30/09/2025, 11:00	See Note 2 below	100%
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Notes:

1. The ethics submission deadline is not compulsory, but **you are at risk** if you fail to submit by this deadline, as you **may not receive ethical approval in time to undertake a satisfactory evaluation**, which in turn could affect your final grade. **Not securing ethical approval (or a clear statement that your project does not require ethical approval) will lead your project to fail (since it will not meet LO5).**
2. **Grades for the dissertation will be released following the Board of Examiners meeting in November 2025.** For verbal feedback on your dissertation, please contact your supervisor after the release of the grades.
3. **All deadlines are at 11:00. UK time on the stated date (e.g., if the deadline is 1 February, it means the deadline is 11:00 UK time on 1 February)**

READING LIST

Core reading list

One of the hallmarks of a scholarly approach is that your work is presented in context, and the contributions of others to the problem area are acknowledged. Any reasonable project topic requires a search of the relevant literature – referring to course texts and assuming that there is nothing else available is obviously inappropriate. Whilst searching the literature to gather appropriate information is a difficult and time consuming task which you should make a background activity for the rest of the spring semester, you need to show that you have mastered the necessary techniques and have not missed important articles which are reasonably easily available to you.

At (or near) Brunel the following resources are available:

- The Brunel library has many journals published by ACM and IEEE - these cover diverse aspects of computer science and information systems. Brunel has online to ACM and IEEE journals.
- The BCS/IEE library is open to you. The IEE building which houses the library is near to the Embankment tube station, at the other end of the park in Savoy Place (next to the Savoy hotel).
- You may also use the Science Reference library in London.
- The Brunel library holds several abstract journals, most computing/information systems/software engineering articles will be covered by Science Abstracts C and reading the abstract will often enable you to assess the relevance of the article without going to the effort of locating the full text.
- The Brunel library also holds the Science Citation Index (SCI), which allows you to trace references to articles or the work of particular authors reasonably easily. SCI also allows crude topic searches by looking for key word pairs in titles, but this is an unreliable approach because titles can be very misleading. The last few years of SCI are available on CD. A set of online citation indexes is provided by Web of Science; you will need an ATHENS ID and password to access these.
- There are several online information resources that may help you locate suitable material. The Brunel University library maintains links to a number of these from their Information Resources web page.
- There are several other university libraries in the London area; you may need an introduction from the Brunel librarian or your supervisor.
- If all else fails, you can use the inter-library loan scheme, but you will have to pay for the service, and it can be very slow.
- Organise your search carefully. Haphazard searches are time intensive and not very useful.
- As this is a major academic writing, you will benefit from the services of the [ASK team](#).

Supplementary Reading

Please note that there is a wealth of material, much of it freely available on the web or in the library. The above are suggestions but you are encouraged to search for and make use of other sources. It is important that you learn to become self-reliant and able to access and assimilate material for yourself. Many of the topics necessary for this project will not be covered by lectures. Therefore, you will need to work through the exercises and guidance material provided in labs, via Brightspace or from your own investigations.

The following may be helpful:

- Coolican, H (2004) *Research Methods and Statistics in Psychology* (4th Ed). Hodder & Stoughton.
- Easterby-Smith, M., Thorpe, R and Lowe, A. (2018) *Management Research: An Introduction*. Thousand Oaks: Sage.



- Hart, C. (2018) *Doing a literature Review*, Thousand Oaks: Sage.
- Huberman, A.M. and Miles, M.B. (1994) *Data management and analysis methods*, in N.K. Denzin and Y.S. Lincoln (Eds.), *Handbook of Qualitative Research*, pp. 428-444, Thousand Oaks: Sage.
- Jones (1999) *Doing Internet Research*, Thousand Oaks: Sage.
- Miles, M.B. and Huberman A.M. (1994) *An expanded sourcebook: Qualitative data analysis*, 2nd edition, Thousand Oaks: Sage.
- Pears, R. and Shields, G. (2019) *Cite them right: the essential guide to referencing and plagiarism*. Newcastle-upon-Tyne: Pear Tree Books.
- Robson, C (2011) *Real World Research: A resource for social scientists and practitioner-researchers*, Blackwell.
- Sharp, J.A. and Howard, K. (1996) *The Management of a Student Research Project*, 2nd edition, Aldershot: Gower.
- Williamson, K. and Johanson, G. eds., (2017). *Research methods: Information, systems, and contexts*. Chandos Publishing.

EXPECTATIONS OF ARTIFICIAL INTELLIGENCE USE

Generative AI tools such as ChatGPT, Bard, GitHub Copilot, Alpha Code etc., are powerful tools and might help you in building your understanding of the research topic. But please beware that these technologies are not error free, biased, may be inaccurate, contain fabricated information and may mislead you with fake references (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10277170/>). Therefore, please use generative AI tools cautiously, apply critical thinking, check multiple literature sources, understand the generated code, develop your understanding of the topic/code, and implement your own text/code. Any use of AI-tools for example proof-reading, should be acknowledged (e.g.: ChatGPT for proofreading/algorithm design). **Do not present any AI-generated content as your own and any such practice can lead to academic misconduct.** The University has general guidance on [using artificial intelligence in your studies](#).

ADDITIONAL VITAL INFORMATION

The [College Student Handbook](#) can be found on the University's web pages. The handbook is a useful source of information for all aspects of your studies, including procedures of how to inform us of problems you are facing with your studies, how to apply for an extension to your coursework, plagiarism, house style for assignments, joint and group work submissions and other important matters. The Department assumes that you familiarise yourself with this information, so you will need to look at these pages carefully at various times throughout your studies. The Department also operates within the rules and regulations of the University more generally, and you should also look at what are known as '[Senate Regulations](#)' on the University's web pages. These policies and procedures might change from one academic year to another, and it is in your interest to review them on an on-going basis.

