Nottingham Trent University

Module Handbook
for

COMP40321
Research Methods

and

COMP40311 Major Project

⚠️	Read this document very carefully. The MSc Project is the most important part of your course. Failure to comply with the instructions provided here could result in failing your whole course.

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In urgent cases, if the module leader is not available, please contact your course leader or the school office. --- Before you contact anyone, make sure you have read these instructions, and checked available files and announcements on NOW.

1 Your deliverables

COMP40321 Research Methods	
7 May 2021	Initial Literature Review Electronic submission by midnight (COMP40321 Dropbox on NOW)
4 June 2021	Ethics form Electronic submission by midnight (COMP40321 Dropbox on NOW)
4 June 2021	Extended Literature Review and Project Plan Electronic submission by midnight (COMP40321 Dropbox on NOW)
COMP40311 Major Project	
23 April 2021	Agreement with supervisor --- inform module leader by email with supervisor CCed (if you are unable to get a supervisor by that date, one will be assigned to you)
25th June 2021	Project Information Record Form Submission via the MSc Project Selection System
2rd August 2021	Supervision Record Form – Electronic submission by midnight (COMP40311 Dropbox on NOW)
20st August 2021	MSc Project Report (draft version, possibly incomplete) due (this will not be marked but you will get feedback on how to further improve your report)
3th September 2021	Complete MSc Project Report Electronic submission (report and auxiliary files) by midnight (COMP40311 Dropbox on NOW)
20st - 24th September 2021	Viva (subject to individual appointment) Your physical presence is required --- do not leave the country at this time

What does it mean?

Electronic submission of the report must be in Microsoft Word or PDF format. Do not zip or otherwise compress the report file.

Auxiliary files --- if you have written software, supply all code. For surveys, provide *anonymised* primary materials, e.g., your original notes, survey forms, outputs of survey web sites or other electronic logs. If you have performed computer experiments, provide log files or other outputs. Use ZIP files where appropriate.

Ethics form --- find a template in the "Research Methods" NOW room. Print and bring it for a discussion with your supervisor. After completion, scan or take a good picture, and upload it.

Supervision record form --- find a template in the "Major Project" NOW room. Use in the same way as the ethics form.

2 Deadline problems

Getting an extension
The only way to get an extension is to use the standard university process: Submit an NEC form together with evidence of your extraordinary circumstances (e.g., health documentation). The form can currently be found at https://www4.ntu.ac.uk/current_students/resources/student_handbook/notification_of_extenuating_circumstances/index.html
(or search "NTU NEC" in Google)

DO NOT email your supervisor or module leader to ask for an extension. They are not authorised to give you one.

If you get an extension of more than one week for your project report submission, your viva and subsequent graduation could be delayed.

Part time students
Part time students would normally be expected to submit along with the full time students. If that is not possible due to other commitments, they must contact the course manager early during their project to agree on a later deadline.

Referred students
Students who fail the Research Methods module, or several other modules, may not be allowed to proceed to the project immediately, but may have to do referrals instead. Once they have passed, they get a later deadline. Students who fail their first project submission will also get a later deadline for a referral. In all cases, you will receive instructions from your course leader via email. Follow them exactly --- the later deadline is just as binding as the first deadline.

Consequences of late submission without authorisation
the same as for all university modules, so
- if first submission and up to five working days late, the work will be marked as usual, but the highest possible grade will be 3LOW
- if first submission and more than five working days late, the grade will be ZERO
- if referred submission and late (no matter how late), the grade will be ZERO

3 You and your supervisor

Project / Supervisor Selection
To help you find a suitable supervisor and propose or select your MSc Project, a Project Selection System has been provided for you which consists of a list of supervisors, their areas of research interest and potential MSc Projects. You can explore research projects and search for projects based on your course of study, areas of interests, or supervisor. Once you have found a suitable supervisor for the project you are interested in, you can register your own proposed project or select from the supervisor's project via the MSc Project Selection System. To register a project, you should provide all the relevant details including your name, student number, NTU email address, project title, selected supervisor, brief description of your proposed project, the aims and objectives. Once you have submitted your project proposal, you will receive an email on the outcome of the selection process. The Selection System allows up to three (3) attempts at finding a suitable supervisor for your MSc project. The deadline for completing this process **is 23 April 2021 at 5pm**. If you are unable to find a supervisor by this deadline, one will be assigned for you shortly after the deadline. Once you have been accepted by a supervisor, you are encouraged to make an appointment with the relevant supervisor to discuss the project in more detail and begin to plan and execute you MSc project.

Changing Your Supervisor
Once a supervisor has accepted your project proposal, **it is not possible to change supervisor** as every supervisor has a fixed allocation, which is part of their workload agreement. If there are problems in working with a supervisor, you should attempt to fix these by having an open and friendly discussion about what can be improved in the future.

Meeting with your supervisor
You should discuss your project progress regularly with your supervisor. Meetings at least once every two weeks are suggested. Discussions can be held via MS Teams, or email in some cases.
As the main project phase will be during summer, many supervisors will be on leave during some of this time. Make sure that before your supervisor goes on leave, supervision arrangements are agreed, e.g., your supervisor is reachable by email. If your supervisor is going to be out of reach for a longer period, a substitute supervisor should have been provided for that time. If your supervisor is unreachable despite trying several times and no arrangements have been made, please contact the module leader for help.

Updating Project Information
Following supervision meetings with your supervisor, you will have the opportunity to update the Project Selection System if your project title changes. You supervisor needs to approve your new project topic. The deadline for making changes to your project title and direction is Friday 25 June 2021.

The milestone meeting
Between 1st July and 3rd August 2021, you are required to attend a milestone meeting with your supervisor where you will complete a supervision record form. The form is not marked, but if this meeting is not held, or the form is not submitted, it is a sign that your MSc project is not going according to plan and it would result in a negative effect on your marks for the project dissertation. The deadline for submission of the supervision record form is midnight 02 August 2021. Submission is via a Dropbox on NOW.

Draft Dissertation Submission
In general, you and your supervisor will discuss if and when you get formative feedback on drafts/parts of the final report. However, there is one formal deadline two weeks before the Dissertation submission deadline. You will get some feedback (via the dedicated Dropbox folder) on whatever you submit at this time within a few days. This submission is optional and not marked. The deadline for draft dissertation submission is Friday 20 August 2021.

What your supervisor can do for you
- comment on your practical work, make suggestions on improvements
- have a quick look at drafts of report chapters that you send, make suggestions for improvement

- provide you with some literature for your literature review, or help you to find some yourself
- supervise your project planning, make suggestions when you get stuck

What your supervisor CANNOT do for you
- proofread your work to produce a detailed list of changes (that's forbidden by university regulations)
- do the actual work for you
- tell you whether your report contains plagiarism (it is YOUR responsibility to avoid plagiarism)
- give you a preliminary grade, or make any promises about marking

Help from others
It is not always possible to allocate you to a supervisor who is an expert on your project topic. However, you can ask other academics as well as technical staff in the department for advice, too.

4 Equipment

Sources of Equipment

The University is open throughout the summer holidays. Currently the building is opened from 7am to 9pm throughout the week, and 10am to 5pm at the weekend. All of the normal facilities and equipment are therefore available to you, although it may be necessary to make arrangements in advance to use certain facilities.

It is perfectly acceptable for you to use your own computers and other equipment for your project. However, you will be required to demonstrate anything that you create at the end of the project. You must therefore establish whether your work can be demonstrated on our equipment, or otherwise you need to be sure that you can bring your own equipment into the University to demonstrate what you have done. If you are going to do this, any equipment must be PATS tested for electrical reliability by the technical staff before it can be plugged in. It will be your responsibility to make arrangement with the technical staff in advance in order to do this.

The university has a small amount of Arduino and Raspberry Pi related equipment available for projects. If there is other hardware that you need, the university may be able to buy it subject to budget constraints. After discussion with your supervisor, complete the equipment purchase form available on NOW. However, obtaining components can take several weeks within the university, therefore orders made after mid-June are unlikely to arrive in time. If you just need a few cheap components, consider buying them yourself as that way, it is not only faster but you can keep them after the project is finished.

5 How to get high marks

- The purpose of the project is for you to demonstrate that you are an independent learner at a postgraduate level. You need to apply the skills that you have learned through the Research Methods module as well as your other modules. A good project report can demonstrate your skills to employers or providers of further study. Parts of it could even be published if you and your supervisor agree on that.
- The *mark sheets* used for marking your project are available on NOW. If you are keen to get high marks, study them carefully.
- For *computing courses*, you are required to create some software or to utilise specialised software in a new way. Your demonstration of postgraduate learning may be shown in your evaluation of the problem to be solved, your software design, the skill with which you implement the design, or the way in which your evaluate what you have produced.
- For *engineering courses*, you may write software, build engineering artefacts, create a detailed design for a product, or develop a solution to an engineering problem. Whatever you create, you should be able to demonstrate postgraduate level skills in a similar way as for the computing courses.
- For *MSc Engineering Management*, there is no requirement to create software, hardware or a specific design, although you can do any of these. What you must do is to conduct some sort of investigation in a topic related to your course (i.e., related to both engineering and management), which enables you to demonstrate knowledge, understanding and the ability to make judgements at a postgraduate level. This must be supported by some independent enquiry, demonstrated through methods such as surveys and analysis of results. Analysis of data must be done by using advanced statistical software such as SPSS.
- You should include the literature survey and project plan that you have created for the Research Methods module in your final project report, but *update* them as appropriate using the feedback you received for your Research Methods submissions.
- There is no required or recommended *page length* (or word count). In the past dissertations have ranged from as little as 20 pages to nearly 100. The important thing to realise is that the Major Project module is a 60 credit point module and therefore represents around 600 hours over 15 weeks, i.e you should expect to work full time, 40 hours per week on the project. You need to organise your time so you can stop working on the technical aspects in time to write up what you have actually done. You then need to write what you have done, avoiding any unnecessary padding. That is then the correct length for your dissertation.
- Make your dissertation *clear and easy to read*. Avoid the overuse of abbreviations as they tend to make the text less readable. Never use technical terms if you are not quite sure what they mean.

If you conduct a survey and/or interview, you are expected to include evidence related to it in an appendix of your report (or in a separately submitted file if it is too much for the printed report). However, take care not to include names or other information that makes individuals identifiable in any part of the submission. Doing so would probably constitute a breach of data protection laws, put the university into an awkward position, and reduce your grade. The same is true for experiments that include human subjects.

6 Report structure

Discuss with your supervisor which structure works best for your topic. There will also be suggestions made during the Research Methods sessions.

General structure
Title Page
i. Abstract page
ii. Acknowledgements
iii. Contents page/s
iv. List of figures and tables page/s
MAIN CONTENTS (as discussed)
References
Bibliography (not necessary for most projects as all literature is already included in the references)
Appendices

Title page
This must contain (on separate lines): The name of the institution, the name of the school, project title, your name, the year. At the bottom of the page you must include the rubric: "Project Report submitted in partial fulfilment of the requirements of Nottingham Trent University for the degree of MSc <Programme>. " Try to restrict the length of the title to six or so words.

Abstract
The abstract is a one A4 page, 1.5 Line Spacing, retrospective account of the achievements, techniques and conclusions of the thesis. On no account are you to exceed one page. Do not go into a great long explanation of the general area, be very precise and stick to what you have achieved. As a guide, the abstract should be approximately 150-200 words long. The scientific community relies on 'The Abstract' as the main means of communicating research interests and achievements.

Acknowledgements
This is the page after the Abstract. It is used to acknowledge those that have assisted you in your work and will normally include your main project supervisor. You may also include personal acknowledgements, such as family and friends that have supported you through your studies.

Table of Contents and List of Figures and Tables
Text processing software can automatically generate these. Note that chapters and sections must be numbered using a decimal notation (e.g., "2", "2.1", "2.1.1"), while appendices are numbered using letters ("Appendix A"). The pages of the dissertation should be numbered from the beginning of chapter 1 and that the pages before chapter 1 numbered using roman numerals.

Appendices
These should be used to hold blocks of information that were generated or used during your project but are so big that, if they put in the main body of the text, would disrupt a person reading the text. The sort of thing that you may find is the complete source code for a program written by the student, reference tables that were used by the student in some engineering calculations or the details of the replies to a questionnaire. For management projects, it is expected that you will provide evidence of your survey taking place and replies received in an appendix.

7 Report formatting / editing

General layout
Page Layout : A4 Portrait, (double sided printing recommended)
Margins : Top 2.5cm, Bottom 2.5, Outer 2.5cm, Inner 4cm.
Font: Arial size 11, 1.5 lines spacing.
Page Numbering: Centre bottom, starting at the start of Chapter 1. Preceding pages use Roman numerals.

Using someone else for proof reading
It is recognised that English is not the first language of our many international students. As such, many may employ the services of a proof reader to check the accuracy of their language use in the dissertation. However, the use of others, whether paid or not, to write or rewrite any part of an assignment for a student, is specifically forbidden and may be penalised under the Academic Irregularities policy, even if the person providing such a service describes it as 'proof-reading'. This means that a proof reader may comment on your prose but not edit it.

When a proof-reader is used students must keep a copy of the following:
  1. The text prior to it being submitted to the proof-reader;
  2. The text returned by the proofreading (with all comments visible);
  3. The final version of the work following corrections (i.e. that submitted for assessment).

If you use a proof reader, you are required to upload items 1 and 2 above when you submit the electronic version of your project to Dropbox. Please see section 15 of the NTU Quality Handbook (13.17 – 13.24) for further details.

References
The definitive document showing how referencing should be done is available on the University Library's web site under the section on Developing Skills:
http://www.ntu.ac.uk/library/developing_skills/referencing_plagiarism/index.html
You should adopt the Harvard reference system for your project and a guide on using this style is also available from the link above.
Important points about referencing:
- You may want to use the exact words used by an author. In these circumstances you must put his or her words in quotation marks and give a reference. For example,
"If non-text content is a control or accepts user input, then it has a name that describes its purpose" (W3C 2004).
You would then include a complete reference to this source in the reference section at the end of your dissertation.
- In other situations, you have not included the exact words of the original author, but you have still used his or her idea. You must still give a reference to the original source. For example, you may write, If you use a picture as a button on a web page, you must add a name which describes what it is for (W3C 2004).
- You must also give a clear reference to any image, diagram or table that you have copied from a source as part of its title/caption.

⚠️ **Failure to acknowledge a source correctly, or put literal quotations in quotation marks, is considered plagiarism and, in many cases, leads to an investigation of academic irregularities with potentially serious consequences for you (see below).**

8 Marking and academic irregularities

How your submissions will be marked
The two assignments for Research Methods will be marked by your supervisor, with moderation provided by the module leader. The first assignment accounts for 10% of the module marks, while the second accounts for the other 90%.
The final project report will be marked by your supervisor and a second assessor. They will agree on a grade after your viva. In some cases, assessment by a third academic is necessary. All projects are moderated by an external examiner before grades are finalised at an awards board meeting.
Feedback will be available on NOW. For the project report, that may take more than the usual three weeks.
The Major Project assessment will be based on your performance during the project period, the characteristics of any product that you produce, the report, and your performance at the viva. Note that the marking criteria for Research Methods and the project are different, so the performance on one module does not indicate performance on the other.

Preparing for the Viva
The viva will last approximately 10 minutes and a timetable for the times and places for the vivas will be published on NOW soon after the hand in deadline. The viva is basically a conversation between you, your supervisor and the second assessor. You are NOT expected to prepare a formal presentation. You will be asked a number of questions about your project. The examiners will ask you about things that are unclear in the dissertation. For example, if you have undertaken the project in collaboration with a company, it may not be clear in the dissertation which of the actions described were performed by you and which were carried out by other members of the company. You will also been given the opportunity to tell the examiner about anything that is not fully explained in the dissertation, but that you feel should be taken into account when marking it. If you have produced a piece of hardware or software, you might want to bring it to the viva as there might be an opportunity to briefly present it. The two assessors will decide whether there is enough time for this once their questions are answered.
If you do not attend the viva, it may not be possible for you to graduate.

Academic Irregularities
In order to ensure fair marks, we take the following precautions:
- We expect you to be in contact with your supervisor throughout the project period. We are always going to be suspicious of a student who has avoided their supervisor or who suddenly makes dramatic progress just before the hand in after struggling throughout the rest of the project. If you keep in touch with your supervisor you will have someone sensible to advise you if you have gone wrong and there are often ways of rescuing a project that has not gone entirely to plan.
- We ask you to submit an electronic copy of your dissertation to your supervisor's Dropbox which has Turnitin enabled. This will check to see if your dissertation matches web sites, academic journals or other students' work. This includes student work from other Universities which has been submitted to Turnitin.
- We will discuss the work that you have done with you at the viva. We will of course be very suspicious if you do not understand what you claim to have done.

You should note that if you are found to be guilty of plagiarism you will face severe consequences, in some cases students had to leave this school without any qualification at all. Details of the University's policy on academic misconduct can be found in the Student Handbook on the University Web site at:
http://www.ntu.ac.uk/current_students/resources/student_handbook/index.html.

9 Frequently Asked Questions

I have secured a placement, what happens to my project?
Once you go on placement, your project work rests until you come back to university approximately one year later. Your submission deadline will then be the same as that of next year's students, check NOW upon return. Also contact the module leader immediately upon return so that you can be assigned a new supervisor. You can express preferences but there is no guarantee as the number of supervision slots available at that time of the year is very limited.
The deadline for securing a placement is 26th June and if you do not secure a placement by this date, you must proceed to your project. More information on placements is contained in the Postgraduate Handbook in the MSc Comp NOW room.

Can I get a leave of absence while I work on my project?
The summer time is reserved for your project work, and is therefore not the right time for a holiday, to visit relatives, etc. If your project work requires you to spend some time away from university, you can do so with prior permission of your supervisor, and after justifying that this is really necessary. The maximum away time granted is two weeks. Projects that require more time away are not suitable.

Can I change my project topic?
It is not possible to change your project topic during the Research Methods module. If required, project topics can be modified after the second Research Methods submission but not after Friday 25 June 2021. Your supervisor needs to approve of the new project topic, and you need to submit your new project topic via the MSc Project Selection System after supervisor's approval. However, this should only be considered as a last resort because you would have the extra task of writing a new literature review and project plan in this case. These would not have to be submitted or marked separately (in other words, you would not have to take the Research Methods module again unless you previously failed it and were told to repeat it by the course leader), but would have to be submitted along withall other parts of the final project report.
Students returning from placement may also change topic upon return if they intend to switch to a topic that they discovered during their placement. This also requires approval of the supervisor and notification of the module leader.
Later changes of topic are not allowed. However, it is always possible to change the focus or scope of a project within the chosen topic if necessary. This should be discussed in detail with your supervisor as it could affect your marks.

Do I need ethical approval for my project? If so, how do I get it?
While writing the project plan for the second Research Methods submission, you should discuss this question with your supervisor, and, based on that, submit the department's ethics form to indicate whether any further approval is necessary for your project. The brief answer is that projects that do not involve human subjects or surveys are unlikely to require ethical approval.
If your project requires ethical approval, your supervisor can provide you with the school's proposal form. Complete that form AS SOON AS POSSIBLE as the approval process can take several weeks.

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