



Professional Development Training

PROJECT DISSERTATION HANDBOOK

2009-10

Please note that this handbook has been prepared on the basis of information available at the time of production (Aug 2009.) Details may be subject to change

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Introduction

The Project forms an integral part of the MSc and successful completion is necessary to satisfy the regulation of the award of a degree.

This handbook aims to:

- Incorporate and expand on information supplied in the Student Handbook
- Describe the procedures for selection and supervision of a project
- Identify the responsibilities of the student, and the role of the academic/industrial supervisors
- State the regulations and assessment criteria of the project
- Summarise the guidelines for the preparation and publication of the project dissertation

Getting started

A compulsory Induction Session is put on in September, and repeated according to student numbers throughout the year. At this session students will receive guidance on project selection, research methods and dissertation presentation.

- Discuss the choice of topic with your supervisor
- Prepare a project specification (a template is attached as Appendix A).
- A detailed project plan should be submitted to your supervisor within approximately one month of the project brief and the dissertation should be submitted by the stated deadline.

Methodology

While it is difficult to define precisely a methodology that will encompass the variety and scope of projects, the following checklist provides an outline of the major elements:

- Choice of topic
- Aims and objectives
- Project specification
- Literature survey
- Investigation
- Project report

Project Topic

Choose a topic which is of interest to you. Discussions should be held with your academic project supervisor to ensure that there is sufficient academic breadth and depth to meet MSc academic standards and credit values.

If you are a work-based student, when commencing the project it is important that you talk about the matter fully with your supporting organisation. It may be appropriate to involve individuals from other departments within your organisation.

Aim of the project

There should be a good reason for carrying out a particular project. If you are currently employed in the area of renewable energy, it is strongly recommended that the project provides or contributes to a solution or a recommendation for a particular problem or strategy query for your supporting organisation, where applicable. It is therefore essential that the aim and feasibility of the project is carefully considered at an early stage.

Reading

Background reading, leading to a sound knowledge of the project topic, is an essential stage in the final selection of a project. It is very important that full reference details of a book or journal are recorded at the time it is consulted. Doing this will save time later on when these details have to be included in the dissertation.

Practical considerations

Consider whether there are any practical issues associated with the project subject – is any test equipment or software required? Is it accessible? Will the information needed be made available? Will the other contributors be available? Is the timescale realistic? Is the subject interesting enough to keep me motivated?

Pilot Study

For some project ideas, an excellent way of discovering if the project is viable is by using a pilot study. This could involve collecting a small amount of data and analysing it as a dry run. A pilot study can be quite basic but should give you valuable information that will cut out wasted time and error in the actual project.

Project Specification

Once the project subject has been given full consideration, then a project specification should be prepared for approval by both your academic supervisor and industrial supervisor where appropriate.

Project Plan

Once a project specification has been agreed it is important to provide a detailed project plan which should consider the following elements:

Background	Outline background to the problem being addressed by the project.
Research Capability	Briefly describe the experience and expertise that the research team (student and supervisors) bring to the project.
Definition of the aims and objectives	Aim – to specify what is the purpose of the project at the highest and most general level
	Identify the objectives – specific results that can be demonstrated to have been achieved
	Design the solution – to develop the optimal solution with the available information and expertise
	Implement the solution – break the project down into ‘workpackages’ to reflect the objectives defined above within the planned resources and measure the results
	Evaluate the results – to analyse the results and to compare performance with the original aim.
Prepare a timetable	Once a project specification has been agreed, it is very important that a timetable for the project is prepared by the student following discussions with the academic supervisor. The project requires approximately 600 hours of study for MSc students and 300 hours of study for Postgraduate Diploma students. This is a significant amount of time and it is important that the project is well planned to avoid wasting time through errors or delays. The student could use a number of different techniques to plan the project including critical path, Gantt charts or a software package. Once the timetable is prepared, the student should regularly check their progress against the

	timetable. It may be necessary to revise the timetable as data is collated or results obtained. The timetable should be a live, working document. Any modifications required to the project specification should also be made, following agreement with your supervisor(s).
Methodology	Discuss in general terms the way that the project will be undertaken.
Deliverables	List the deliverables specified in the individual workpackages, and indicate alongside each the anticipated date for completion of each.
Beneficiaries and dissemination strategy	Indicate who could potentially benefit from the results of the proposed work. This could range from a specific company or organisation, to the renewable energy industry in general. Indicate how it is proposed that the results of the research will be disseminated, perhaps by providing a copy of the report to the specific organisation, or alternatively by publishing a paper in a learned journal.
Resource requirements	<p>Detail the resources that are required for the project. This should include the following:</p> <p>An estimate of the time commitment of the researchers (student and supervisors detailed separately).</p> <p>Necessary access to other members of staff and their time commitment (information officer, technicians, other academics).</p> <p>The use of any facilities necessary.</p> <p>Construction of any test equipment or models, and likely cost.</p> <p>Information or data that has to be obtained from outside sources, and likely cost.</p> <p>Services that have to be bought in (binding the Report, etc) and likely cost.</p> <p>Total up the anticipated person hours required for the project. Also total up the anticipated cash requirements. Indicate the sources of funding to cover the expenses.</p>

Investigation

Log Book:

Once the detailed project plan has been firmly established the investigation can commence. You must keep a Log Book throughout the project to record progress of the work (a template for recording technical contributions from industrial or academic experts is attached as Appendix B). Key information to be recorded is:

- Name of contributors and description of their contribution to project
- Name of academic and industrial supervisor
- Meeting or discussions with partners including date, names, key issues and outcomes
- Meeting or discussions with both supervisors, date, key issues and outcomes.

Within the dissertation, the student should reference the log book where appropriate. For example, where a decision has been taken, it may be appropriate to include a reference to the log book which demonstrates who discussed the matter and why the decision was taken.

Log Books represent the complete record of project work and must be available for inspection by your supervisors and the external examiner. There is no definite format for the Log Book, but it should be reasonably legible and each entry should be dated. A detailed Log Book will help you to write up your final report as most of the information, results and references are already recorded.

Role of the Academic Supervisor

The student should keep in touch with their academic supervisor to give them updates on the progress of the project and to discuss any problems or queries. For workplace based students it is likely that the academic supervisor will visit to discuss the project with both the student and the industrial supervisor. Students must consult their supervisor about the writing up of their dissertation. The supervisor will read and comment initially on one or two sections of the student's first draft and later will comment in general on the whole first draft. The student should not expect the supervisor later to comment on the re-emergence of errors or weaknesses to which attention was drawn in the first draft. The academic supervisor will not proof read the document and this, along with checking spelling or grammatical errors, is the responsibility of the student.

Regulations and Assessment

Submission

The MSc dissertation may be submitted only after successful completion of the requisite number of taught modules.

The Supervisor may grant students permission for late submission of their MSc dissertation, provided submission is sought prior to 5 years from initial registration. The allowed extension will be specific to the individual student's circumstances. Normally only one extension will be allowed.

MSc Dissertation Regulations

A dissertation submitted for the degree of Master of Science is required to contain a review of relevant material, a description of work undertaken and a detailed discussion of the results and conclusions. A student must indicate by means of explicit references the citation of the work of others, or work by the student, which is not part of his/her submission for the degree. Work submitted for another degree may not comprise part of the submission for the degree of Master of Science.

Copies of the dissertation must be submitted in an approved permanent binding. Three copies must be submitted for examination to the University of Newcastle upon Tyne not earlier than two weeks and normally not later than nine months after the successful completion of the final taught module, for the part-time student. Students must provide notice of the intention to submit a dissertation, together with a declaration that the dissertation has been composed by the student himself/herself, by the time of submission.

MSc Dissertation Assessment

For students seeking the award of the Degree of Master of Science the dissertations will be examined by a member of academic staff, as well as the supervisor(s) of the student. The examiners must recommend one of the following:

- (i) that the dissertation is of a sufficiently high standard to merit the award of the Degree of Master of Science with Distinction. This will only be possible if the earlier work of the student merits such a classification.
- (ii) that the dissertation is of sufficiently high standard to merit the award of the Degree of Master of Science.
- (iii) that subject to minor changes, where the re-typing and re-binding satisfies requirements stated in the Student Handbook, the student be awarded the Degree of Master of Science. The corrected dissertation must be submitted within the period of six calendar months immediately following the date of recommendation. The revision should satisfy the examiners that the required standard has been met.

- (iv) that the student be required to resubmit a substantially revised dissertation within the period of twelve calendar months, immediately following the date of the recommendation. The revision should satisfy the examiners that the required standard has been met.

Oral Examination

A candidate submitting for the Degree of Master of Science will be required to attend an oral examination after submission of the Dissertation. This will be carried out by two Dissertation Examiners, one of which will be the academic supervisor and will be arranged by the Director. The oral examination will be used to further assess the students understanding of the Dissertation subject and provide the student with an opportunity to defend the content.

Presentation

The form in which the final dissertation is presented is determined, to some extent, by the project topic. Some details of the binding requirements for the dissertation are given in the previous section.

It is recommended that work-based students deliver a presentation at the end of the project to their industrial supervisor, and any other interested parties within their organisation. This presentation should be recorded in the student's log book, but is not part of the formal assessment of the project.

Contents

Every dissertation should include the following, in the order listed below:

- Copy of the project brief, including modifications made during the course of the project.
- Clear statement of the objectives of the work.
- Brief statement of the methodology used to carry out the project, including relevant information about techniques and theory used. Details of theory and working of formulae should be included in the appendices.
- Summary of student's contribution including any results of analysis. Results should not be discussed or interpreted in this section. It is often appropriate to make use of table and figures as they convey information very effectively. If so, tables and figures should be numbered consecutively and keys should be included if abbreviations are used.

- Discussion of student's opinions and conclusions. This discussion should show your ability to evaluate results critically and interpret their implications for theory and industrial application.
- Acknowledgements of those who have helped you to complete the project.
- Reference list of all and only those references made in the text.
- Appendices of theory, working of formulae or any other data not appropriately included in the main part of the dissertation.

Assessment of the project will include the submission of the student's log book, a dissertation and an oral examination. The marking of the dissertation will be based on:

45%	Technical content	Literature review + theoretical & experimental work.
15%	Originality	Novel subject covered or approach adopted. Expanding on knowledge gained during studies.
15%	Effort	By you. (You had regular meetings, worked extra hours to overcome unexpected problems, etc.)
15%	Presentation	Structure & layout of MSc Project report.
10%	Oral defence	Oral defence of your project

References

All references are to include names of authors, paper titles, names of sources (books or journals), names of publishers and year of publication. The standard form to be adopted is:

1. WATSON, D.G.M., Practical Ship Design, Elsevier, Amsterdam, 1998.
2. The Merchant Shipping (Load Line) Regulations 1998. MSN 1701(M). Maritime and Coastguard Agency.

Dissertation Length and Time

In writing the dissertation, the emphasis throughout should be on orderly presentation and conciseness.

The MSc dissertation will normally have a length not exceeding 80 pages, single sided, 1.5 line spacing and font size 11 – plus annexes. Every page should be numbered. The Project carries 60 credits at level M with 600 notional hours of study time.

There is no mandatory minimum length.

Plagiarism

Although making reference to established work is quite understandable and often desirable, whole-scale and large-scale copying of material from another source is not. When done without reference to the source, it represents plagiarism and is a serious offence.

The original reference should always be cited and any material used verbatim enclosed in “quotes”. It must be made clear what is your own work and what others have done.

General Information and Summary of Advice

Plan your project in good time.

Find a subject that you are genuinely interested in and that is of benefit to your organisation, if appropriate. This will help your motivation.

Think out the practical implications with care. Give careful consideration to the timescales - don't be too ambitious and seek as much advice as possible before you start.

When writing the dissertation use clear and concise writing. Try to communicate in a clear and methodical way, explaining any terms used. Use punctuation correctly and check for spelling and grammatical errors.

Ensure that you demonstrate:

- that you understand the relevance of your own work,
- your technical competence
- an ability to assess your work and that of others with critical objectivity.
- an understanding of the technical and commercial implications of your work with your organisation.

APPENDIX A

PROJECT SPECIFICATION

Renewable Energy Flexible Training

PROJECT SPECIFICATION

Student:

Organisation:

Academic Supervisor:

Industrial Supervisor:

Background:

Purpose:

Key References:

Academic Supervisor:

Date:

Industrial Supervisor:

Date:

APPENDIX B

PROJECT PROGRESS MEETINGS

MSC PROJECT PROGRESS MEETINGS

Project Title		
Student Name		
Student's Organisation		
Supervisors	Academic	Industrial
	Name:	Name:
	University:	Organisation:

Date of meeting	
Name of Partner	
Partner's organisation	
Role and responsibility	
Area of expertise	
Project meeting notes	<p><i>continue overleaf if necessary</i></p>