COMP60992 - Research Skills and Professional Issues

Guidelines for Initial Project Report

The University of Manchester

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School of Computer Science

COMP60992 - Research Skills and Professional Issues

Introduction

This course unit covers material that is presented in the second semester. Part of the course unit provides training in research skills and an orientation towards the practice of research. The other part provides training in a range of professional skills and material on expectations and conduct in an industrial and business environment.

It is presented by a range of staff both internal and external, including the Careers Service, Programme Directors, Research Staff and Groups, Industrial Consultants, and a representative from The British Computer Society (the professional body for IT professionals in the UK).

Aims

This course unit has two aims:

(1) Most of the course unit takes place before students begin work on the research project. It offers a grounding in various aspects of research and project management, from the most theoretical (philosophy of science), through the subject-specific (how to choose, refine and develop a research topic), to practical advice on undertaking research, including how to contribute to research, manage research projects, cope with the day-to-day research activity, etc. Talks by leading researchers will provide insight into the world of international recognised research. It covers material and advice on technical writing for the dissertation. Research seminars given by the students form part of the course unit.

(2) The course unit covers various aspects of Professional Skills as required in the IT industry and in Research and Development. The skills necessary in the IT industry are taught through the Careers Service and external consultants from the IT industry. The skills include team-work skills, industrial problem-solving, leadership skills, communication skills and presentation skills. Consideration of ethics and conduct are also presented.

Besides the formal assessment for this course unit, active participation is required, and students will need some of the material to succeed in the Research Project.

Formal assessment

During Semester 2, as part of the assessment of the COMP60992 - Research Skills and Professional Issues unit students are expected to produce a written "Project Initial Report", which

is assessed by both the *supervisor* and *independent examiner*. This report is designed to assist students in the preparation of their Dissertation.

Those doing a group project should read the material below on Individual Projects and then follow the guidance in section 1.5 which discusses group projects.

1.1. Project Initial Report

The precise content of the Project Initial Report will depend upon the nature of a particular project but will typically include:

- Requirements and specifications,
- Project plan (for the overall project including dissertation stage),
- Initial survey of the relevant literature,
- Initial study of the relevant research methods, design methodology, and implementation tools.

The length of the report should *not exceed* 20 pages of single spaced text (excluding cover page, table of contents abstract and list of references). Any additional material may be given in appendices with a limitation of 10 pages. Students must make every effort to be concise in their writing and to avoid inclusion of unnecessary materials. **A strict size limit will be enforced; excess pages will not be marked.**

The structure of the report may follow the list of chapters given below. However, the exact format of the report will depend upon the nature of the project: students should consult their supervisor for a more precise list of material to be included:

1. **Abstract:** a summary of the project;

2. **Introduction:** outlines the scope of the investigation and the problem to be solved;

3. **Background:** discusses relevant background material and related approaches to the area of investigation; situates the project into a wider research theme.

4. **Research methods:** identifies what the project involves, what will be done, how it will be done, what tools will be used, what methodology will be used, what will be delivered, and how the work will be evaluated; this should also include a project plan making clear how the objectives will be achieved.

5. **List of references**;

Marks will also be awarded for "understanding" (see marking scheme below). This covers both the theoretical background and the practical applications of the subject. It also covers the structure and presentation of the report.

The format of the report should follow the presentation guidelines of the MSc dissertation.

1.2. Report Submission Deadline

Students must submit two hard copies of their "Project Initial Report", which must be submitted to the Resource Centre (Kilburn Building, LF 21) by **no later than 09/05/2008.** You are also required to submit an electronic version of your report. **This must be a PDF file.** This file should be uploaded to the Moodle site (moodle.cs.man.ac.uk) in the course area COMP60992 by 09/05/2008. Personalised Coursework Submission Forms can be collected from the Resource Centre. These should be completed and submitted with the two copies of the report.

1.3. Plagiarism

Most reports will not need to extract passages from any other documents, whether they be websites, books, other students' work, other pieces of your own work or any other published or unpublished sources.
Where you do need to extract passages, these should be very short and form a small part of your report and it should be made explicit that these are extracts which are properly referenced.
Plagiarism is a serious disciplinary matter which could lead to your expulsion from the course.

1.4. Project Initial Report Assessment

The report amounts to 30 credits. The report will be assessed *according to the standards expected of the Masters Dissertation* with respect to substance, soundness of contents, and quality of textual presentation. The text should be single spaced. Marking guidelines used by supervisors and independent examiners are given below. Pages in excess of the 20 page limit for the main text and 10 page limit for appendices will not be marked.

1	**Abstract**	Summary of the project	10%
2	**Introduction**	Outlines the scope of the investigation and the problem to be solved	10%
3	**Background**	Discusses relevant background material and related approaches to the area of investigation; situates the project into a wider research theme.	20%
4	**Research Methods**	Identifies what the project involves, what will be done, how it will be done, what tools will be used, what methodology will be used, what will be delivered, and how the work will be evaluated;	40%
5	**Understanding**	Demonstration of understanding of the work to be carried out and its theoretical and practical significance; structure and presentation;	10%
6	**List of references**	This should contain a comprehensive and relevant to the topic selection of literature. Proper use of references in the main text must be made. In general references should be formatted using one of, for example, IEEE, Harvard or ACM guidelines, as appropriate.	10%
	Total		100%

1.5. Group Projects

Much of the discussion above about individual projects also applies to group projects. But group projects are significantly different to individual projects and the MSc handbook has a section "Group-Based MSc Projects" which describes this.

Setting up a group project involves some tasks that do not occur with individual projects. As so much of the initial group project work involves the group rather than the individual it is necessary to report on these aspects, such as:

- Regular group meetings. These should have agendas, minutes, notes of what happened.

- Intra-group communications. The communications within the group often has a big effect on the group dynamic and how the project progresses.

- Division of labour. This is crucial. In order to assess your work as an individual we will expect 2 reports a group one which is common to all the members of the group and an individual report. Each group member must have some tasks that

they take overall responsibility for and where they do the work. When we mark group projects we assign a group and an individual mark. The division of labour must permit each individual to be assessed as an individual as well as being assessed as a group member.

The initial project reports from groups will consist of a single shared group report which will be worth 60% of the marks and an individual report worth 40% of the marks. Both these reports should obey the constraints given in 1.1 above which state that a maximum of 20 pages + 10 pages of appendices will be marked for each report. There should be little overlap between the reports though they may of course reference each other and the reports from other group members. For group projects, the initial individual report may be shorter than for individual projects as much of the relevant material will be in the group report.

Thus groups will submit 1 group initial report + each member will submit their individual report.

1.5.1 Group Initial Report Assessment

1	Abstract	Summary of the project	10%
2	**Introduction**	Outlines the scope of the investigation and the problem to be solved Introduces the group.	10%
3	**Background**	Discusses relevant background material and related approaches to the area of investigation; situates the project into a wider research theme.	20%
4	**Research Methods**	Identifies what the project involves, what will be done, how it will be done, what tools will be used, what methodology will be used, what will be delivered, and how the work will be evaluated. Also discusses the set-up of the group, how the work has been divided up and references an appendix giving brief minutes/notes of how the group organization was arrived at.	40%
5	**Understanding**	Demonstration of understanding of the work to be carried out and its theoretical and practical significance; structure and presentation;	10%
6	**List of references**	This should contain a comprehensive and relevant to the topic selection of literature. Proper use of references in the main text must be made. In general references should be formatted using one of, for example, IEEE,	10%

		Harvard or ACM guidelines, as appropriate.	
	Total		100%

The mark for this will be scaled to represent 60% of the final mark.

1.5.2 Individual Initial Report Assessment for Group Projects

1	**Abstract**	Summary of the project	10%
2	**Introduction**	Outlines the scope of the investigation and the problem to be solved by the individual writing the report. Where this fits in the overall group structure (possibly briefly repeating material from the group report).	10%
3	**Background**	Discusses relevant background material and related approaches to the individual's topic of investigation; situates the project into the group's research theme and introduces relevant background research to the individual's work.	20%
4	**Research Methods**	Identifies what the individual's part of the group project involves, what will be done, how it will be done, what tools will be used, what methodology will be used, what will be delivered, how the work will integrate with the rest of the group's work and how the work will be evaluated;	40%
5	**Understanding**	Demonstration of understanding of the work to be carried out by the individual as part of the group work and its theoretical and practical significance. structure and presentation;	10%
6	**List of references**	This should contain a comprehensive and relevant to the topic selection of literature. Proper use of references in the main text must be made. In general references should be formatted using one of, for example, IEEE, Harvard or ACM guidelines, as appropriate.	10%
	Total		100%

The mark for this will be scaled to represent 40% of the final mark.