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**Faculty of Technology**

**IMAT3451**

**Final Year Computing Project**

**Handbook 2010-2011**

**Abstract**

This Handbook provides essential information about the final year Computing project. It explains the purpose of the project, the people involved and their responsibilities. It provides information about all major aspects, including how to get started and about project management. Project deliverables, together with tips on producing them, are described, and the assessment criteria explained. Throughout the Handbook, there are links to sources of further information and support. Updates to this Handbook will be notified via the IMAT3451 Blackboard site.

**IMAT3451 Final Year Computing Project**

**Handbook 2010-2011**

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**1. Introduction**

This handbook provides essential information about your final year project. Read through it before you start your project to find out more about what it will entail. But remember to re-read appropriate sections later in the year at the point where they will be most useful, for example the section on the demonstration/presentation/viva when you are preparing for this next May.

**2. Information and Support**

Sources of information and support for your final year project include:

* This handbook;
* The IMAT3451 Blackboard site, especially the content areas ‘Important Dates’, ‘Module Documents’ and ‘Resources’. The site is updated regularly, and will be used to communicate with you – remember to check for new Announcements *and* to check your DMU email account regularly. Any updates to sections of this handbook will be notified to you via the site;
* The various project briefing/workshop sessions that will be held from time to time, starting with the ‘Options Day’ briefing in the March prior to your final year, and continuing from Induction Week (the week prior to week 1 of the Autumn Term) onwards;
* Your supervisor; see Section 4.3 below for their role;
* Reading list: see Appendix A for texts that cover the project process in general terms; this will also be found under ‘Resources’ on the IMAT3451 Blackboard site;
* Other sources are provided in appropriate sections of this guide, or under ‘Resources’ on this module’s Blackboard site.

**3. What is the Final Year Project?**

The project was the most interesting, challenging and enjoyable module of this academic year.

*2008-2009 final year student*

The project is an extended piece of individual work undertaken during the final year (was Level 3, now known as Level 6) of study. It is a 30-credit module, one quarter of the 120 Level 6 credits-worth of modules normally studied in the final year, so it has a significant effect on the degree classification. Like all 30-credit modules, it entails approximately 300 hours of learning – an average of 10 hours per week throughout the academic year. **However, unlike other 30-credit modules, most of those 300 hours comprise independent learning.** You are entitled to around 5 hours of supervision time and there will be a few project briefings or workshops to attend, but that still leaves around 290 hours of independent study time. You will, therefore, be responsible for managing your own time: see Section 6.

Project management is a vital part of the project. The project is assessed not only on the finished product, but on the way in which you have managed your time and responded to supervision throughout the year. The project, therefore, begins at the start of the academic year, and supervision and the Project Management Panels (see Section 6.5) are an important part of it.

**3.1 Why undertake a project?**

The final year project:

* Provides the opportunity to pursue a topic that interests you in more depth;
* Provides the opportunity to develop and enhance skills that are valued by employers;
* Enables you to integrate learning from your taught modules;
* May provide a stepping stone to more advanced studies (a masters degree, post-graduate research).

‘Your final year project will help you to develop skills in:

Independence Technical skills

Thinking Communication skills

Learning Time management.’

Dawson (2009), pp. 264-65

[see Appendix A for full reference]

Allows students to be given the chance to manage their priorities, something which will be very valuable to future needs!

Very useful module to prepare students for careers, with a high level of independent learning required.

*2008-2009 final year students*

**3.2 Types of project and their deliverables**

Depending on the programme you are enrolled on, your project may be:

* A Software Development Project. The product = a software application.

The project deliverables include the software product and a set of supporting documentation, including reports on areas researched in support of the development activity.

* A Research Project. The product = a research report based on the research activity undertaken.

The project deliverables include the definition of the research question, literature reviews, selection and justification of research approach, analysis and synthesis of research data leading to the research finding, recommendations for further work, etc.

* A Consultancy Project. The product = a consultancy report for a client.

The project deliverables include the definition of a problem area, an investigation of the problem within a particular context/setting, a literature review, a definition of the process to be used for the investigation, an exploration of the problem and the issues involved, a set of recommendations for the client.

It is also possible to have a ‘hybrid’ project that combines elements from more than one of the types of project defined above; for example, a significant amount of research as well as the production of a piece of software.

In addition to the product deliverables, all projects include:

* A ‘Project Summary and Critical Review’. This is a report providing a critical reflection on what you have accomplished; not only what you have achieved in terms of product deliverables, but all the things you have learned along the way. See Section 7.4.
* A demonstration (for software development) or presentation (for research and consultancy) projects, and viva. See Section 7.5.

More information about the project deliverables and report will be found in Section 7.

The project must be an appropriate one for your programme; see the following table and Section 3.3.

|  |  |
| --- | --- |
| **Programme** | **Type of Project** |
| Computer Science  | Software Development |
| Software Engineering |
| Internet Computing |
| AI with Robotics |
| Forensic Computing | Must be a topic/type approved by the programme team. |
| Computer Games Programming |
| ICT |
| *Computer Security – from 2011-2012* |
| Business Information Systems | Software Development, Research or Consultancy |
| Computing Information Management |
| Computing joints |
| Information Systems Management |
| *Computing for Business – from 2011-2012*  |
| Business Information Technology |
| Computing |
| Multimedia |

**3.3 British Computer Society**

Some programmes have, or have been recommended for, British Computer Society (BCS) accreditation for Chartered IT Professional (CITP) and in some cases partial fulfilment for Chartered Engineer (CEng) or Chartered Scientist (CSci). Current information about the accreditation status of each programme will be found under ‘Module Documents -> BCS Accreditation’ on the IMAT3451 Blackboard site.

To meet the BCS accreditation requirements, projects must provide the opportunity for you to demonstrate:

* Ability to apply practical and analytical skills present in the programme as a whole;
* Innovation and/or creativity;
* Synthesis of information, ideas and practices to provide a quality solution together with an evaluation of that solution;
* That the project meets a real need in a wider context;
* Ability to self-manage a significant piece of work;
* Critical self-evaluation of the process.

Projects must also be passed with a minimum mark of 40%.

(From BCS Course Guidelines, section 2.2.6. The full set of BCS guidelines relating to projects will be found under ‘Module Documents -> BCS Accreditation’ on the IMAT3451 Blackboard site.)

**Module characteristics**

The project provides students with the opportunity to carry out a significant piece of work involving critical analysis and reflection to provide an effective solution to a given technical and/or research-based problem. It enables students to apply and integrate previous material covered on the student's course as well as to extend the work covered on the course through research and self-learning. Students will be expected to demonstrate appropriate and proactive project management, and written/verbal presentation skills throughout the period of the project. As well as analysing, designing, delivering and appraising a product of suitable quality, they will be expected to undertake, research, analyse, evaluate and report on some aspects of a subject explicitly allied to the project.

(From the Module Template)

**Learning outcomes**

1. Effectively plan a project.

2. Carry out the work in accordance with the plan and in a rigorous and sound manner.

3. Provide a comprehensive set of research-oriented and/or technically oriented deliverables that are at least to a sufficient Level 6 (3) standard.

4. Present the project deliverables in a coherent and logical way.

5. Undertake research into one or more identified areas in an appropriate and thorough manner.

(From the Module Template)

**4. People Involved: Roles and Responsibilities**

**4.1 The Student**

You are the person with the main responsibility for your project. It is likely to be the most challenging single piece of work that you have tackled to date – but it should also be the most enjoyable. It is important to understand that it is YOUR project: success or failure is very much in your own hands. You will receive guidance from your supervisor and there are many sources of help available (see Section 2); but the project management and execution will be driven by **you**. You will need to be positive and pro-active in your approach.

When you encounter problems (you will – that is the nature of projects!) you will be expected to find solutions. It is *not* your supervisor’s role to solve them for you, although they will provide guidance where appropriate. The way in which you rise to the challenges that you face will determine how much you learn and will be reflected in your final mark. You will also derive considerable satisfaction from having managed your project and overcome problems along the way.

The student’s key responsibilities are listed on the next page.

Managing the project independently is a useful lesson for future careers.

Independent work, was like a personal achievement to aim for.

*2008-2009 final year students*

I can manage time better than I thought!

 *2009-2010 final year student*

‘Being able to work on your own without detailed supervision is certainly a skill worth cultivating and it should be one of the skills you developed during the course of your project. Industry expects independence from graduates …’

Dawson (2009), p. 264

**Student Responsibilities**

**Project selection:**

* Agree a project with a supervisor well before the start of the final year. There may be some circumstances where this is not possible, in which case you need to find a project and a supervisor without delay.

**Project Contract (Terms of Reference):**

* As your first deliverable, write the Project Contract (or ‘Terms of Reference’).
* Get these signed off by the proposer/supervisor.

**Ethics Approval:**

* With your supervisor’s help, undertake an Ethical Review (it is a University requirement to do so). Complete and sign off the Ethical Review Form at PMP1. If necessary, review this at PMP2.

*Remember that it is part of project management to have these documents signed off*

*by the deadline and to provide them in the appendices of your final report –*

*failure to do so will be reflected in the marking of your project*.

**Project Management:**

* Prepare a project plan and work to it.
* Manage your own time effectively.

*As a 30 credit module, the project represents 300 hours of learning; that is, about 10 hours per week from the start of the academic year to project hand-in. Unlike your taught modules, this is* ***all your own time*** *to spend on the module:* ***the project is therefore significantly larger in scale than any piece of assessed coursework***.

**Supervision:**

* Attend supervision meetings and PMPs.
* Agree with your supervisor how you will get in touch to arrange supervision.
* Check your **DMU** email regularly.

*You can expect to have 5 hours of supervision time from your supervisor over the year; see separate notes on the form this is likely to take and how you can make the most of it.*

**Deadlines:**

* Meet the final hand-in deadline and interim deadlines (e.g. for completing the Project Contract and attending PMPs).
* Make appropriate arrangements for the final demonstration/presentation.

*N.B: unauthorised late submission or failure to attend the demo/presentation*

*will result in a mark of zero for the whole project.*

**Mitigating circumstances:**

* Inform your supervisor if you have problems that affect your work. Note, however, that as the project takes place over several months, small episodes of a few days or a couple of weeks’ disruption to your study is not expected to impact on your ability to meet the final deadline. Severe or prolonged problems need to be discussed with your supervisor. The normal Faculty procedures for extensions and deferrals apply where appropriate; see Section 9.

**4.2 The Proposer**

The ‘proposer’ is the person for whom you are carrying out the project. In the majority of cases, this is likely to be the same person as the supervisor. However, it could be a different person, for example:

* Somebody outside the university, such as your placement employer;
* Another member of staff within the university, who has proposed the project but who is not supervising you.

See Section 5.1, ‘Finding a Project’ for further information about proposals from outside the University.

You will need to obtain your proposer’s agreement to the Project Contract (see Section 5.3) and to liaise with them as appropriate.

**4.3 The Supervisor**

You will be allocated to a supervisor. This is the person with whom you will have the most contact throughout the year. The supervisor is the first marker of your project.

You can expect to have about 5 hours of supervision time from your supervisor. This might typically take the form of 10 30-minute meetings. However, this is only a guide: if your supervisor takes a deliverable to read and comment on (e.g. the literature review for a research project) then this is supervision time and may take the place of a face-to-face meeting.

It is important to maintain regular contact with your supervisor, to keep them informed of your progress and to discuss with them any queries or problems that arise.

For further notes on supervision and how to make the most of it, see Section 6.2.

A summary of your supervisor’s responsibilities will be found in Appendix B.

**4.4 The Second Marker and Project Management Panel**

Your project will be marked independently by two members of staff: your supervisor and the second marker. You will meet with both your supervisor and your second marker on at least two occasions, for Project Management Panel (PMP) meetings. You will also demonstrate or present your project to both of these people (see Section 7.5).

**Project Management Panel (PMP)**

The PMP comprises a meeting with both your supervisor and second marker, the purpose of which is to assess your progress. PMP1 is held during the Autumn, and PMP2 during the Spring, term. The exact dates are to be found on the module’s Blackboard site. For more information see Section 6.5.

**4.5 The Project Co-ordinator**

The Project Co-ordinator is the member of academic staff responsible for the overall administration of IMAT3451; currently this is Susan Bramer. She will organize the project briefings and other support sessions, maintain the Student Handbook and Blackboard site and administer/coordinate the efforts of supervisors with respect to the sourcing, allocation, supervision and assessment of projects.

Note that once you have a supervisor, queries concerning your project should always be directed to your supervisor first, not to the Project Co-ordinator.

‘Imagine your project as a large boulder. At the start of your project, this boulder is quite difficult to push … Getting a project started is always difficult. However, once the project is underway (the boulder is rolling), it becomes much easier to push and gathers momentum as the project unfolds. Now, picture your supervisor alongside you. It is that person’s role to encourage you as you push this boulder (your project) along. Your supervisor will encourage you at the start as you try to get the boulder moving. They are also there to ensure you are pushing in the right direction. The supervisor will have an eye on the route you are taking and provide the occasional prod to keep you (and the boulder) on course. Your supervisor is also there to provide encouragement. If you feel yourself flagging at any stage, your supervisor should be there to support you and give you the help you need.’

Dawson (2009) p. 11

**5. Getting Started**

**5.1 Finding a Project**

The final year project is a significant piece of work and the earlier you can get started on it, the better. Ideally you need to have your project and supervisor agreed by the beginning of the Autumn Term. Thus, you should be trying to find a project in the months before the start of your final year.

At the ‘Options Day’, usually held in the March preceding your final year, there will be a Project Briefing that includes information about how to find a project. The handout used is subsequently made available for students unable to attend (see: http://www.cse.dmu.ac.uk/projects/)

There are two main ways in which to find a project: from the list of proposals, or by sourcing your own proposal. Either way, note that it is **your** responsibility to find a project/supervisor!

Some programme teams will source and allocate projects/supervisors: in 2010-2011 this applies to Forensic Computing, Computing Games Programming and ICT. If you are on one of these courses, you should ***not*** choose a project from the list of proposals – instead, contact your course leader .

**5.1.1 List of proposals**

A list of proposals will be found at: http://www.cse.dmu.ac.uk/projects/

From this you can identify:

* A project proposal that interests you: email the proposer.
* A proposer whose projects are in an area that interests you: email the proposer.
* A proposer you have previously encountered on your course, who you would like to have as your project supervisor: email them.

**5.1.2 Sourcing your own proposal**

Perhaps you have an idea of your own, or your placement employer has proposed a project. In these cases you need to find a supervisor with whom to discuss the idea to see whether it is feasible, and in what way(s) it may need to be changed to ensure that it is a suitable final year project.

* While you are still on placement, your visiting tutor is a good person with whom to discuss your project idea.

Else:

* Look at the list of proposals to find a proposer whose proposals are in a similar area to the idea you have; or a member of staff you have previously encountered on your course who you would like to have as a supervisor: email them.

Else:

* Contact your course leader to discuss your idea.
* Contact the Project Co-ordinator to discuss your idea.

Note that you must be guided by staff as to whether any proposal of your own is suitable: if it is not, you will have to choose one from the list supplied.

**You may well contact more than one proposer about more than one project, while in the process of trying to choose one. But once you have made a decision about which project and with which supervisor you want to pursue you MUST:**

* **Confirm with that proposer/supervisor which project you are going to do**

**AND**

* **Inform any other proposers/supervisors you have contacted that you are not going to do one of their projects after all.**

**Once you have agreed with a supervisor that they will supervise you, and what project you are going to do, you should not change your mind! If for some good reason you have to make a change, you MUST keep the proposers/supervisors informed without delay.**

**5.2 Early Preparation**

Formal project supervision will start at the beginning of the Autumn Term of your final year. However, there are some things that you can do to get a head start on your project:

* Read a suitable text about how to do a final year project - see the Reading List in Appendix A.
* Revise/extend your knowledge of technologies/tools/techniques you expect to use in your project. For example, systems analysis and design techniques; database design; specific programming languages/software environments.
* Once you have found a project, your supervisor might have other, specific, suggestions.

**5.3 Project Contract**

Your first deliverable at the beginning of the Autumn term will be the Project Contract (also known as ‘Terms of Reference’). This forms a ‘contract’ between you, your supervisor and your proposer (if different from the supervisor). It states what you intend to do: what is the background to and scope of your project, and what are its aims and objectives. It provides a ‘yardstick’ against which your achievements at the end of the project can be assessed.

It is not easy to complete a suitable Project Contract; you will need to discuss it with your supervisor and may have to prepare several versions before it is finalised. More information about the typical content of a Project Contract will be found in Appendix C.

The Project Contract must be signed and dated by you, your supervisor and proposer (if different from the supervisor). Keep the signed copy carefully: you will need to submit it

with your project report at the end of the year. You should have a completed, signed Project Contract by the end of Week 4 of the Autumn term.

If a change in circumstances means that modifications have to be made to your Project Contract during the year, these should be agreed with your supervisor and proposer (where different from the supervisor) and carefully documented.

With your Project Contract you will need to provide a Project Plan: see Section 6.1.

**5.4 Ethical Review**

It is a University requirement that every project must undergo an Ethical Review. This is to ensure the protection of the interests of any humans affected by research studies. Your project may involve a client or end users whose interests must be protected; these can be considered the human subjects of the project and they may be affected by:

* Collection of data directly from people (e.g. via interviews, surveys, questionnaires, observation);
* Collection of data about individuals whose identity can be detected from the data;
* Research involving illegal activities, activities at the margins of the law (e.g. software piracy, illegal downloads of music) or activities that have a risk of injury.

The University policy states that research (including student projects) involving human subjects should ensure:

* All participants volunteer, normally without inducement and give their written consent to participation;
* Written consent is given in the light of full awareness of the objectives of the teaching/research, the procedures to be followed and the anticipated outcomes particularly in the respect of publication of findings;
* All participants be given a written description of their involvement in the project, the demands to be made, their rights and how their rights and interests will be protected, particularly in respect of publication of findings;
* All participants are made aware of their freedom to withdraw consent and discontinue participation at any time;
* Appropriate documentation be designed to meet these objectives and to keep appropriate records, for example information regarding the project should be given in writing and the participant should sign to acknowledge receipt of the material.

You should discuss with your supervisor whether your project will give rise to any ethical issues, and if so how they will be addressed.

A simplified form has been approved for the Ethical Review process on the Computing project; you will find this on the IMAT3451 Blackboard site under ‘Module Documents -> Ethical Approval’. This form is to be completed and signed off at PMP1. If necessary, it can be reviewed at PMP2; it may be that between the two PMPs you decide to involve some human subjects (for example, to carry out some user testing); or if you are undertaking a ‘research’ project you might not have completed your research design, and thus cannot identify what ethical issues may be involved, by PMP1.

The possible outcomes of the Ethical Review are:

1. No ethical issues.
2. Minor ethical issues which have been addressed.
3. Major ethical issues which have been addressed.
4. Ethical issues that have not been resolved/addressed.

It is likely that for the majority of projects the outcome will be 1 or 2: in these cases, the Ethical Review form is completed accordingly, and signed off by the student and supervisors at the PMP.

If the outcome is 3 or 4, the completed form must be forwarded to the Faculty Research Ethics committee

You must keep a copy of the completed and signed Ethical Review form and include it in the Appendices of your project report.

Further information about the University’s Human Research Ethics policy can be found at:

http://www.dmu.ac.uk/faculties/technology/student\_support/hre/index.jsp

**5.5 Literature Review**

All projects will involve some form of literature review; for ‘Research’ projects this is a major component. Guidance on conducting a literature search and writing a literature review will be found in the following sources:

Dawson, C.W. (2009) *Projects in Computing and Information Systems*, 2nd ed, Addison-Wesley.

Chapter 5, ‘Literature searching and literature reviews’ contains guidance on:

* the literature survey process;
* the format of academic literature, and tips on performing a literature search;
* how to ‘critically evaluate’ an article;
* writing a literature review.

O’Leary (2010) *Doing Your Research Project*, Sage.

Chapter 6, ‘Working with literature’.

DMU Library website:

http://www.library.dmu.ac.uk/Images/Howto/LiteratureSearch.pdf

[link active 08-06-2010]

**6. Project Management**

If I would have ... advice to other students, it would be to make more use of their time ... and to become more organised, plan and manage their project ... in order to achieve to the best of their abilities.

Time needs to be managed well from the beginning to the end.

*2009-2010 final year student*

*2008-2009 final year student*

**6.1 Time Management**

As previous students have recognized, good time management is crucial to success in your project. As a 30-credit module it entails approximately 300 hours of learning – an average of 10 hours per week throughout the academic year. However, unlike other 30-credit modules, nearly all of that time comprises independent study. That means you will need to be disciplined, particularly when experiencing the pressure of other deadlines. It is tempting to put the project to one side in order to concentrate on other coursework – don’t give in to this temptation!

Remember, the average amount of effort expected is 10 hours per week – so if you do no work on the project one week, that means 20 hours of effort will be required the following week to catch up! Plan to spend time on your project *every* week.

Alongside your Project Contract you need to prepare a Project Plan. This is usually in the form of a Gantt chart. To complete the plan you will need to:

* Identify the tasks you intend to undertake and their order, remembering that some tasks can be undertaken in parallel;
* Allocate time for each task to be carried out.

You are likely to find it difficult to allocate time to each task as you may not know what is a realistic amount of time. But work backwards from the deadline for project report hand-in (see the IMAT3451 Blackboard site): all tasks will need to be completed by then. Allow some contingency for falling behind (you might get sick, or have some unavoidable delays); for example, you might choose not to plan work during the Christmas and Easter vacations so that you can use them to catch up if necessary. Your supervisor will advise whether your initial plan looks realistic.

As you progress through your project you will need to update your plan. Use it to indicate what progress you have made by showing which tasks are complete and which are ongoing. Bring it along to every supervision meeting and the two PMPs.

Sometimes a plan shows more detail for the first half of the project (October – December) and less for the second half. In this case, it will need to be reviewed and updated. You might have to re-plan if a task takes much more (or less) time than you anticipated. Keep all of the versions of your plan: you will need to submit them in an Appendix of your project report.

The plan could be prepared on paper, or you might prefer to use a spreadsheet or a project planning tool. As well as MS Project, open source software is available, for example GanttProject and ]project-open[. You will find links to these on the IMAT3451 Blackboard site under ‘Resources – Project Manaagement’.

For more help on time management see:

‘Managing your time’ in Dawson (2009), pp. 156-65;

Weaver (2004), pp. 141-48 (includes ‘tactics for managing your time’);

the materials under ‘Resources’ on the IMAT3451 Blackboard site.

Do not underestimate the time it will take to get things done, allow for contingencies.

*2008-2009 final year student*

**6.2 Supervision**

As a part of project management, you will meet regularly with your supervisor. Before each meeting you should complete a ‘Project Progress Report’, summarising:

* What you have done since the previous meeting;
* Problem areas and suggested solutions;
* Your objectives for the next period of time, till the next supervision meeting.

This report will form the basis of the supervision meeting.

Your supervisor might use a paper-based Project Progress Report (see Appendix D for the pro-forma). Or they might use the Blackboard ‘blog’ facility; see Section 6.4.

You can expect to have about 5 hours of supervision time from your supervisor. You can make the most of the supervision time with good preparation, conduct during the supervision session and follow-up activities afterwards: see the guidelines on the following page.

**6.3 Project Diary**

It is a good idea to keep a project diary, noting what you are doing and planning to do, with comments and reflection about your progress (e.g. about alternatives you are considering, problems and possible solutions, and so on). This will help when it comes to writing your ‘Project Summary and Critical Review’ (see Section 7.4).

**6.4 Project Blog**

Some supervisors use the Blackboard blog facility. This can simply be a substitute for a paper ‘Project Progress Report’, enabling both you and your supervisor to keep track of what was discussed/agreed at each supervision meeting. But you can also use it to reflect on your progress, so that it becomes your ‘project diary’ (see previous Section) as well as being a supervision management tool. See Appendix E, ‘Your Project Blog’, for more about blog use ***including important information about who can see your blog***.

**6.5 PMPs**

On at least two occasions during the year you will meet with both your supervisor and the second marker of your project; these are called Project Management Panels (PMPs). PMP1 will be held during weeks 7-8 (15th-26th November 2010); PMP2 during weeks 19-20 (7th – 18th February 2011). Your supervisor will inform you of the arrangements for your PMPs.

The purpose of the PMPs is to make a formal assessment of your progress, and to provide you with feedback from both of the people who are going to be marking your project. You should bring to the PMP:

* A completed Project Progress Report; alternatively, if your supervisor uses the Blackboard blog facility, you should make a blog entry in advance of the PMP meeting. This should summarise:
	+ Work completed to date;
	+ Problems encountered and suggested solutions;
	+ Objectives for the period to the next PMP, or to the end of the project, as appropriate;
* The current version of your Project Plan, indicating what progress you have made;
* Evidence of the work you have completed to date.

**PMP Outcome**

The PMP will result in a formal assessment of your progress to date, as follows:

* Satisfactory: you have made sufficient progress;
* Borderline: there are concerns about some aspects of your project; these are sufficient for your supervisor and second marker to have doubts about whether you will be able to pass the project;
* Unsatisfactory: if you continue as you have been up to the PMP, you are likely to fail the project.

If you fail to attend your PMP your progress will automatically be deemed Unsatisfactory.

Students with a progress assessment of Borderline or Unsatisfactory will receive a letter to that effect. Their names will also be notified to their course leader, as will students who have failed to attend their PMP.

Making the most of Supervision

You can expect to have a total of 5 hours of supervision time from your supervisor throughout your project. This might, typically, take the form of 10 half-hour supervision meetings, including the 2 PMPs. Typically, more meetings might be required in the Autumn Term (e.g. 6) and fewer in the Spring Term (e.g. 4) as you become more independent. However, this is only a guide: if your supervisor takes a deliverable to read and comment on (e.g. the literature review for a research project) then this is supervision time and may take the place of a face-to-face meeting.

You need to make the most of your supervision time. You can do this with good preparation, conduct during the supervision session and follow-up activities afterwards.

**Preparation**

Before attending a supervision session:

* Produce a summary of your progress since the last meeting: the work you have completed, the problems you have encountered and how you propose to solve them, etc.
* Update your project plan.
* Prepare a list of questions that you want to ask your supervisor, or issues about which you need some advice/guidance.
* Prepare a list of the tasks you intend to work on between this and the next supervision meeting.

**During the supervision session**

* Listen to what your supervisor says and make notes.
* Make sure you are clear about any feedback and advice you are given: ask for clarification if necessary.
* Agree with your supervisor the work you plan to tackle next.
* Agree the date of the next supervision meeting OR how contact will be made to agree the next meeting.

**After the supervision session**

* Revise your project plan, if necessary.
* Plan your time between now and the next supervision meeting, taking into account your other work commitments.
* Put in 10 hours a week work on your project.

**Further guidance on making the most of supervision:**

‘Using your supervisor effectively’, (Dawson, 2009, pp. 167-68)

‘Working with your project supervisor’, (Weaver, 2004, pp. 130-35)

If your progress is assessed as Borderline or Unsatisfactory, your supervisor will explain the reasons why, and what steps you need to take to get your project back on track.

If your progress is assessed as Satisfactory, that does not guarantee a pass! ‘Satisfactory’ means that if you continue to work at the same level, you should be able to submit a project by the deadline that will obtain a pass mark (40%). For a higher mark, it could be that you will have to put in more work at a higher level than hitherto.

**6.6 Feedback**

The outcome of the two PMPs provides formal feedback about your progress at those points in the year.

In addition, your supervisor will give you feedback at each supervision meeting. Listen carefully and take notes of the guidance you are given.

On your project plan you will have proposed deadlines for a series of deliverables; these will vary from project to project but might includes such items as a Requirements Specification, storyboards, screen designs, software prototypes, proposed architecture, literature review(s), supporting reports and so on. You should be working on these from October onwards. Show your deliverables to your supervisor as you draft them; that way you can obtain feedback and will be able to improve them before handing in your project report (see Section 7).

**6.7 Project Management Assessment**

You will be assessed on the way in which you manage your project (see Section 8). This includes:

* the extent to which you are able to work to a plan, making adjustments where necessary and managing to maintain progress with the project while meeting a range of other commitments;
* the way in which you use supervision: coming prepared to every supervision meeting, keeping your supervisor informed about your progress and reacting appropriately to the guidance you are given;
* the extent to which you are able to work independently and solve problems for yourself without too much reliance on direction from your supervisor.

*One good thing about the project that should be retained for the future is –*

The factor of letting students plan and completely control their own project, throughout all of its lifecycle, is a very useful experience.

The meetings and PMPs that are held with the supervisor and second marker. These allow the student to set objectives and give them the opportunity to express any concerns, in turn boosting confidence of the student. I found this aspect most beneficial.

*2008-2009 final year students*

**7. Project Deliverables**

At the end of the project you will:

* hand in a project report;
* give a demonstration, or presentation, of your project, answering questions about it.

The deadline for project report hand-in is notified on the IMAT3451 Blackboard site under ‘Important Dates’. You will need to hand in:

* one hard copy of your report (covers/spiral binding is supplied by the Student Advice Centre);
* a disk copy (disks provided by the Student Advice Centre);

and in addition

* submit a copy of your report to Turnitin (further details provided via the IMAT3451 Blackboard site).

**Note that your project report is not returned to you, so if you want a copy for yourself, you will need to make a second copy to keep.**

The format of your project report will depend on the type of project (Software Development, Research, Consultancy or ‘Hybrid’; see Section 3.2). In all cases, remember that for some of the people involved in your project’s assessment (for example, the External Examiner) your report is all they will see: so it is important to ‘get it right’.

See Appendix I for some tips on writing and formatting the report.

**7.1 Project Report: Software Development Project**

The format of the report for a Software Development project is:

Project Summary and Critical Review

*accompanied by*

A set of Appendices.

The **Project Summary and Critical Review** is a single report of about 25 pages that provides a critical, reflective account of the project ***process*.** See Section 7.4 for further information about the contents of this report.

The **Appendices** form the project ***product*** . They comprise the various sets of documentation and reports that you have been producing throughout the life of the project. You should be thorough and evidence all the work that you have undertaken: remember, as stated above, that for some of the people involved in your project’s assessment, the report is all they will see. If there is no evidence in the report of work you have undertaken, they cannot take it into account.

The appendices of a Software Development project will typically include:

* Project Contract: original, signed copy;
* Ethical Review: a signed copy of the Ethical Review form (and any update(s) where appropriate); copies of protocols used to comply with guidelines, where relevant;
* Project Management: an appendix containing your Project Plan(s); Project Blog or Project Progress Reports; any other evidence you may have of project management (e.g. extracts from a project diary if you kept one).

Plus evidence of all the work you have carried out: this will vary as every project is different but might include:

* Report evaluating software and hardware options
* Requirements Specification
* Design Documentation
* Screen dumps of successive prototypes
* Evidence of coding undertaken
* Evaluation of alternative architectures, or solutions to a problem
* Relevant correspondence entered into
* Anything and everything that you have produced as a part of your project: your supervisor will advise what is appropriate to your project, if you are in any doubt.

You should be writing/compiling your appendices throughout the life of your project, so that in April you need only organise them into your report. Your supervisor will expect to see drafts of these appendices as evidence of your progress during supervision meetings and at the PMPs: they form interim deliverables. By writing them as you go along, you will be able to obtain feedback and to improve them before the final hand-in.

**7.2 Project Report: Research and Consultancy Projects**

The format of the report for Research and Consultancy projects is:

Research Report *or* Consultancy Report (as appropriate)

*accompanied by*

Project Summary and Critical Review

The **Project Summary and Critical Review** is a single report of about 25 pages that provides a critical, reflective account of the project ***process*.** See Section 7.4 for further information about the contents of this report.

The ***product*** of a Research project is a Research Report. This is a report aimed at an audience interested in the research topic, as for a research paper. Typical contents for a research report are:

* Introduction and background to the research question
* Literature review(s), leading to a refinement of the research question where appropriate
* Research methodology, leading to the selection and justification of the research design
* Discussion of the empirical work undertaken: i.e. work you have undertaken to gather data for yourself
* Analysis and synthesis of results
* Conclusions: research findings
* Limitations of the study and recommendations for further work.

The report will have appendices containing supporting evidence; for example copies of any surveys used, the data collected, relevant correspondence.

 The ***product*** of a Consultancy project is a Consultancy Report. This is a report whose audience is the client of the consultancy project. Typical contents for a consultancy report are:

* Introduction; definition of the generic area to be investigated
* Articulation of the client’s problem within that generic area
* Identification of the aspects of the client’s problem to be investigated
* Definition of the process to be used for the investigation
* Investigation findings
* Reference to appropriate literature should be made throughout the report
* Recommendations for the client.

The report will have appendices containing supporting evidence; for example transcripts of interviews, relevant correspondence.

**7.3 Project Report: Hybrid Project**

This is a project that combines elements from two or more of the other types of project, for example a significant amount of research or consultancy as well as the production of a piece of software. The report of such a project will therefore include some of the typical content of a Research or Consultancy project (e.g. literature review(s), report on research methods and research design, report on empirical work undertaken and the findings) as well as some of the typical content of a Software Development project (e.g. analysis and design documentation, evidence of coding).

The proportion of ‘research’ or ‘consultancy’ to ‘development’ products will vary from project to project, so be guided by your supervisor as to the most appropriate format for the report. The choice will be either:

* Follow the format for a Software Development project: all of the research/consultancy and development products form appendices. This would typically be the choice if there is more development than research/consultancy effort in the project.

Or:

* Follow the format for a Research or Consultancy project. This would typically be the choice if there is more research or consultancy than development effort in the project.

**7.4 Project Report: Project Summary and Critical Review**

**7.4.1 Contents**

The Project Summary and Critical Review is a single report of about 25 pages that provides a critical, reflective account of the project *process*. Typical content includes:

* Title page: Project title, your name, course and P-number
* Abstract: a summary of about 250 words of the project aims/objectives, the methods/techniques used to realise these and the results/conclusions. The Abstract is the *last* thing that you write.
* List of Contents: sections/subsections of the report, appropriately numbered, and the page numbers where they will be found
* List of Appendices: it is useful to list them all here, even if they are bound separately
* List of Figures (where applicable)
* List of Tables (where applicable)
* List of Abbreviations (where applicable)
* Acknowledgements.

Followed by a series of sections that provide a reflective summary of your project *process*, for example:

* Introduction/Background to the project
* Project Management
* Sections on each major step, e.g. Requirements Determination; Design; Implementation; or for Research or Consultancy projects, Selection of Research Question/Topic and Context; Conducting Literature Review(s); Undertaking the Research/Investigation
* Problems encountered and how they were solved: this could be integrated with the discussion of the stage when they were encountered, or could be discussed in a separate section
* Critical evaluation of the final product, and of the entire project as a learning process
* Summary/conclusions/recommendations for further work
* References (& Bibliography if relevant): it is essential to reference the works that you cite in the text. See Appendix F for a guide to referencing.

Throughout the Project Summary and Critical Review you should make reference to the Appendices. For example, in the section dealing with Project Management, refer to the appendix that contains the project plan(s) and so on. For Research and Consultancy projects, you can make reference to chapters in the Research/Consultancy Report.

See Appendix I for some tips on writing and formatting the report.

**7.4.2 Being ‘critical’ and ‘reflective’**

The Project Summary and Critical Review should provide a *critical* and *reflective* account. An account lacking these qualities will state something like:

*‘task A was completed, then task B and after that task C’.*

A *critical* and *reflective* account, on the other hand, will not only state, *‘task A was completed’* but then go on to consider:

* How did I go about task A? Could it have been done another way? Was the way I chose to do it a good choice? Why?/Why not? What were the alternatives? Did I consider these alternatives at the time? Why/Why not? What have I learned from doing task A? Would I do the same again? Why/Why not? What effect did the way I did task A have on other parts of the project? etc.

In other words you need to justify what you did and why you did it, to comment on all aspects of your project, and to reflect on your own learning.

Under ‘Resources’ on the IMAT3451 Blackboard site you will find some references to sources about critical thinking that may help you when writing your Project Summary and Critical Review.

**7.5 Demonstration/Presentation/Viva**

An essential component of the project is the ability to provide a demonstration (of a Software Development product) or presentation (of a Research or Consultancy product) and to answer questions on it (sometimes described as ‘defending’ your work verbally at a viva). If yours is a ‘Hybrid’ project, your supervisor will advise on the appropriate combination of presentation/demonstration required.

The demonstration/presentation/viva is normally arranged by your supervisor and should take place in the weeks immediately following project report hand-in. It is usually attended by the supervisor and second marker; although where relevant the proposer or anyone else the supervisor thinks is appropriate could attend.

**If you do not attend your demonstration/presentation**

**your project will be awarded a mark of zero!**

The demonstration/presentation/viva provides the opportunity for the markers of your project to gather further information about it, as well as to see how well you can demonstrate/present and defend it. The demonstration/presentation/viva is assessed: see Section 8.

The demonstration/presentation/viva should last no more than 30 minutes, including 10 minutes for questions. See:

Appendix G for more information about preparing for and giving a demonstration/presentation;

Dawson (2009) pp. 245-47, ‘Demonstrating software’ and pp. 222-35, ‘Oral presentations’;

Weaver (2004) pp. 275-79, ‘Software demonstrations’ and pp. 279-81, ‘Formal presentations’.

In some cases, the supervisor and second marker may extend the viva component into a further session, possibly involving other members of staff. For example, if part of a software product requires scrutiny by someone with specialist expertise. You would normally be informed at the end of the first demonstration/presentation/viva if a further session is required.

**8. Project Assessment**

**8.1 Assessment criteria**

Your project is assessed against a set of criteria. There are criteria specific to Software Development projects, another set that are specific to Research projects and another for Consultancy Projects; for Hybrid projects these can be tailored as appropriate. In addition there are criteria that are used to assess all projects. The criteria are listed in Appendix H.

For each criterion, the level of achievement is assessed as being one of the following:

Fail / Poor / Satisfactory / Good / Very Good / Excellent / Outstanding

The overall mark is derived by taking into account the level of achievement across all of the criteria. You will find descriptors for each level of achievement for each of the criteria on the IMAT34351 Blackboard site under ‘Assessment’.

As indicated in the criteria descriptors, for a project to be awarded a mark in the ‘outstanding’ range (80%-100%), it must be exceptionally good and professional in every way. If you do a meticulous job on a straightforward project it will be hard for you to obtain a mark greater than in the 70s. If you do an excellent job on a challenging project, then it is possible to achieve a mark in the 80s and 90s.

The following list summarises the qualities that are typically expected of a project with a mark of 80% or more:

* The scope of the project is challenging; i.e. something that is complex in terms of size, and/or intricacy of understanding the problem and/or its resolution.
* The development and management of the project are meticulous and rigorous. All principal development/management decisions are justified.
* The documentation is complete and comprehensive.
* Software development: the quality of the product is not far off the level expected of a commercial product.
* Research: the outcome is publishable. Excellent quality and application of academic references is visible.
* Consultancy: the outcome is of a commercial, professional and publishable standard. Excellent quality and application of appropriate references is visible.
* Extremely sound understanding and defence of the work at the demonstration/ presentation/viva.

**8.2 Assessment process**

Your project will be independently marked by your supervisor and second marker. It will then be subject to internal moderation. This process ensures that all projects have been marked to a consistent standard. Finally, projects are moderated by the External Examiner. The final, moderated marks are submitted to the Programme Assessment Boards and will be released with the final marks of all of your modules through the usual official channels.

Do not, therefore, ask your supervisor what your mark is: they are not able to tell you!

**9. Deadlines, Extensions, Deferrals and Resits**

*2009-2010 final year student*

I really enjoyed the project and [it] allowed me to learn many new things about myself, allowing me to develop.

I have learned so much from the project, from being a systems analyst to systems developer, at the same time managing the project.

It gave me a great sense of achievement at the end.

*2008-2009 final year students*

The deadline for project report hand-in will be found on the IMAT3451 Blackboard site. Failure to meet the deadline without prior agreement will be subject to the normal penalty: work submitted up to 14 days late will be capped at 40%; after then the mark will be zero.

**9.1 Extension**

Your supervisor is able to grant an extension of up to 14 days, if you complete a form to request a coursework extension (obtainable from the Student Advice Centre) and take it to them *with appropriate evidence*. The following are not considered valid reasons for requesting an extension:

* **Your PC’s hard disk crashing, or getting a virus, or similar software/hardware failire, are not valid circumstances for obtaining an extension to the project deadline.** You are expected to have learned by the final year to make regular backups of all of your work! If you do work on your own PC, copy your work regularly to your account on the Faculty network, where it will be automatically backed up.
* Coursework bunching or examination dates are not considered valid reasons: these affect all students and it is part of project management to deal with them.
* Short periods of illness or other absence at any time during the year: again, it is part of project management to make up for lost days.

If you think you have a valid reason to request an extension, discuss this with your supervisor well in advance of the final hand-in deadline. Requesting an extension retrospectively, after the deadline, is likely to be seen as evidence of poor project management.

**9.2 Deferral**

If work on the project has been disrupted in a major way during the year, it may be appropriate to apply for a deferral; discuss this with your supervisor. Requests for a deferral are considered by a Faculty Deferral Panel (they cannot be granted by your supervisor or the Project Co-ordinator). You need to complete a form to request a coursework deferral, obtainable from the Student Advice Centre and hand it with appropriate evidence to the Faculty Office.

If a deferral is agreed, the deadline is extended till mid-July and the mark considered at the September resit/deferral assessment boards, with graduation delayed till the following July.

**9.3 Resits**

The pass mark for the project, as for all modules, is 40%. If a project is awarded a mark below 40% and the student is entitled within the regulations to a resit, the resit is by one of two ways:

1. By undertaking further work as specified by the supervisor during the Summer resit period to bring the project to a satisfactory standard. This may not be feasible in every case.
2. By undertaking a new project during the following academic year.

Be confident in yourself and you can achieve anything.

*2009-2010 final year student*

*2008-2009 final year student*

**Appendix A**

The final year project is a great part of the course ... it is the hardest but most rewarding part of the final year.

**IMAT3451 - Reading List**

Development / Hybrid Projects

Weaver, Philip (2004) *Success in Your Projec*t. Pearson Education Ltd.

A very useful guide for development projects.

**Dawson, Christian W. (2009) *Projects in Computing and Information Systems: a student’s guide*. 2nd ed. Pearson Education.**

Useful guide for all students, but particularly helpful for literature searching, literature reviews and presenting information.

**Ricketts, Ian W. (1998) *Managing Your Software Project*. Springer.**

A useful introduction to the documentation required for developing a software project.

Britton, Carol & Doake, Jill (2005) *Software System Development*. 4th ed. McGraw-Hill.

Describes a variety of design approaches.

**Research / Hybrid Projects**

**Dawson, Christian W. (2009) *Projects in Computing and Information Systems: a student’s guide*. 2nd ed. Pearson Education.**

Useful guide for all students, but particularly helpful for literature searching, literature reviews and presenting information.

**Oates, Briony (2006) *Researching Information Systems and Computing*. Sage.**

**O’Leary, Zina (2009)** *The Essential Guide to Doing Research*. 2nd ed. Sage.

A useful book which offers guidelines for carrying out research.

**Cornford, Tony & Smithson, Steve (2006) *Project Research in Information Systems*. 2nd ed. Palgrave MacMillan.**

A useful guide to final year projects which have a strong research focus.

**Appendix B**

**Summary of Your Supervisor’s Responsibilities**

This is a summary of the responsibilities of a final year undergraduate project supervisor. They should be read in conjunction with the summary of student responsibilities (see Section 4).

**Project set-up:**

* Propose projects and make them available by the specified deadline each year.
* Engage with students in the project selection process.

**Supervision:**

* Agree and sign off the Project Contract (Terms of Reference) by the specified deadline.
* With the student, undertake an Ethical Review and complete and sign off the Ethical Review form at PMP1; review if necessary at PMP2.
* Provide 5 hours of supervision per student. Typically this might take the form of 10 half-hour supervision meetings, including the PMPs, perhaps 6 in the first and 4 in the second term. However, there may be variations, e.g. to read and comment on a deliverable will take up a portion of the supervision time.
* Provide clear guidance as to how the student can maintain contact.
* Organize the final demo/presentation/viva.

**Feedback:**

* Provide feedback as an outcome of each supervision meeting. Supervisors are encouraged to use the blog facility on the IMAT3451 Blackboard site with their students to record project management and supervision activities and outcomes.
* Provide written feedback as a result of each PMP. This should provide clear guidance to the student on their progress to date, especially areas for improvement, in addition to the overall assessment of Satisfactory, Borderline and Unsatisfactory progress.
* Provide written feedback to the student at the end of the project to support the final mark.

**Administration:**

* Fulfil various administrative requirements as requested by the Project Co-ordinator (e.g. updating the Blackboard record for students when requested; setting up a blog on Blackboard for project management).
* Acting as first marker for the projects directly supervised and second marker for a set of other projects (normally those for the other supervisor in the PMP).
* Complete the assessment sheets to an appropriate standard, including the provision of written feedback to the student (see previous section).
* Formally reporting any significant problems that affect the student’s progress or performance to the Project Co-ordinator, Year Manager, or Programme Leader, as appropriate.

**Appendix C**

**Project Contract**

The typical content of a Project Contract is as follows:

**Student Name, P-number, Course and Email address**

**Project Title**

 A brief but concise statement of the nature of the project.

**Project Proposer**

The name, affiliation and contact details of the project proposer; ‘Self’ if it was proposed by you.

e.g. A. Proposer, Placement Corporation, 011111111, proposer@pcorp.com

or M.Y. Lecturer, Department of Computer Technology, myl@dmu.ac.uk

**Supervisor**

The name, affiliation and contact details of the supervisor, if different from proposer.

**Project Background**

A brief description (a paragraph of 100-200 words) providing the project background/context. e.g. is it based on a business need? a technical need? does it arise from the interests of a particular person/company?

**Aim/Objectives/Deliverables**

This is the heart of the Contract, and will require discussion with your supervisor and possibly several iterations to get it right. It is against the objectives and proposed deliverables that the final product will be assessed. So it is important to ensure that all aspects of the assessment criteria (see Appendix H) are included in the list of objectives/deliverables.

**Aim**: a statement of the overall aim of the project (in one or two sentences).

**Objectives**: a list of specific, measureable objectives, each of which is likely to result in a deliverable. They specify all the work tasks to be undertaken to meet the stated aim. They will vary from project to project, as every project is different, but some examples are provided below.

***Software Development projects might include such general objectives as:***

* To investigate system requirements and produce a Requirements Specification.
* To research and write a report on good practice in HCI design.
* To design an interface using the findings from the HCI report.
* To design and execute a suitable test plan.

***Or they might be more specific, e.g:***

* To review and report on how mathematical simulation techniques could be applied to a traffic simulator.

***Research projects might include such objectives as:***

* To conduct a literature search into e-learning, resulting in a literature review of the topic and a definition for the purposes of this project.
* To investigate and report on research approaches and methods.
* To select and justify an appropriate research design for this project.
* To undertake empirical work in accordance with the research design.

Of course these are only examples: each project will need a complete set of objectives/deliverables.

**Resources and Constraints**

A list of any specific resources that the project requires; for example hardware and software; access to people or organisations.

A list of any known constraints, for example availability of certain resources.

**Sources of Information**

 A list of sources you intend to use. These could include:

* Specific books/journals if you already know of them;
* Library/Internet;
* Organisations or individuals you intend to contact.

**Schedule of Activities**

Having defined the tasks to be undertaken in the list of objectives, you need to prepare a Project Plan to show how you intend to carry them out: see Section 6.1.

At the end of the Project Contract, provide a space for you, the proposer and/or supervisor to sign and date it:

**Student\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Proposer \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Supervisor\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Then keep the signed copy somewhere safe: include it as an Appendix of your Project Report (see Section 7).

**Appendix D**

**Project Progress Report (PPR)**

Programme/Course Title:

Name: Assessment Period :

Project Title: Report Number:

Objectives for Period: (refer to previous report)

Summary of Progress for Period: (identify evidence of progress)

Problem Areas and Suggested Solutions:

Objectives, Deliverables & Plan for Next Period:

Date of Next Review:

Student’s Signature: Date:

PMP Comments (if any):

**Appendix E**

**Your Project Blog**

**Access**

Many supervisors will set up a blog for their project students on the IMAT3451 Blackboard site. You will find these under the ‘Blogs’ Content Area, within folders arranged A-Z by supervisors’ surnames.

You should be able to see only your own blog. However, note that your blog is visible to all staff who are project supervisors (but not to any student other than yourself).

However, only your supervisor and yourself should normally make entries in and comments on your blog.

**Suggestions for how to use your project blog**

As a support to project management and supervision:

BEFORE each supervision meeting update your blog to record:

* Progress since the previous supervision meeting: the work you have completed, any meetings you have had, etc.
* Problems you have encountered and how you propose to solve them.

*See the PPR in Appendix D for suggested headings to use.*

DURING the supervision meeting your supervisor will:

* Refer to your blog when discussing your progress.
* Enter comments and the objectives for the next work period.

AFTER the supervision meeting:

* Refer to your blog to remind yourself what tasks you need to complete
* Add entries (see below).

The blog may be used in a similar fashion for the two PMPs.

To keep a regular diary of what you are doing on the project:

* You will find this useful in compiling your main report in April.
* Record your thoughts about problems you have encountered, and how you propose getting around them.
* Make comments about your progress.
* Reflect on how your project is going and on the learning you have achieved.

**Appendix F**

**Guide to Referencing**

All sources used should be cited within the text, and listed in a ‘References’ section with full bibliographical details. The Harvard system of citation and referencing is recommended; see ‘The Harvard System of Referencing’ handout available from:

http://www.library.dmu.ac.uk/Images/Selfstudy/Harvard.pdf

[link active 08-06-2010]

**Within the text**

Cite your source of information by providing the author’s surname and date of publication as follows:

Smith and Patel (2008) state that final year projects are “a waste of students’ time”. However, there is some evidence that final year projects help develop skills appreciated by employers (Ahmed, 2007).

See also the Library guide to using references and quotations:

http://www.dmu.ac.uk/Images/c4\_08\_viii\_references\_quotations\_tcm6-15599.pdf

[link active on 08-06-2010]

**Format of References**

At the end of the text, list the full bibliographic details of each work cited in A-Z order so that they can be located easily by the reader:

Ahmed, M. H. (2007) Students and Employability. *Journal of Educational Research*, vol. 25 (no. 3), pp. 35-52.

Smith, J. And Patel, H. (2008) *Wasting Students’ Time at University*. Haddison-Wessley.

See also the Library guide to citing bibliographic references:

http://www.dmu.ac.uk/Images/c4\_09\_ix\_citing\_references\_tcm6-15600.pdf

[link active on 08-06-2010]

Further useful guidance will be found in:

Dawson (2009), pp. 208-15, ‘Referencing material and avoiding plagiarism’;

Weaver (2004), pp. 100-103, ‘Recording references and data’.

**Appendix G**

**Giving a Demonstration/Presentation/Viva**

To be able to present your work and discuss it in a professional manner is an important skill.

The demonstration/presentation/viva should last for no more than 30 minutes. You will be assessed on the way in which you present your work, and the way in which you are able to respond to questions and discuss it. See the assessment criteria provided under ‘Assessments’ on the IMAT3461 Blackboard site.

You will find useful tips about preparing for and giving verbal presentations at:

http://www.dmu.ac.uk/study/library/lss/focus\_on/fo\_communication\_index.jsp

[link active 08-06-2010]

Note also the references provided in Section 7.5.

**Preparation**

As time is limited you need to prepare carefully. Prepare a demonstration/presentation of about 20 minutes, allowing 10 minutes for questions and discussion. You may need to be selective; ensure that you cover the key objectives and outcomes of your project.

Demonstration: show all the key functionality, have sample data ready to enter where appropriate.

Presentation: cover the research questions, research design, key findings

or

consultancy topic & context, investigation process, key recommendations.

Be ready to explain the limitations of your work, and what further work could be done.

**During the demonstration/presentation/viva**

There is no need to ‘dress up’ (unless you choose to do so!) but you need to demo/present in a professional manner:

* Introduce yourself and your project.
* Speak clearly, addressing the ‘audience’.
* For a demonstration, you do not normally need any ‘visual aids’: you have a software product to demonstrate.
* For a presentation, you would normally need some visual aids, such as slides. Tips on preparing visual aids will be found under ‘Verbal Presentations’ at the url provided above.

Discuss the demonstration/presentation with your supervisor before hand, if you want further re-assurance about what they expect.

Remember: it is your project, you have worked on it all year – you will (hopefully!) be proud of it and have plenty to say about it.

**Appendix H**

**Assessment Criteria**

The Assessment Criteria used for Software Development, Research and Consultancy projects are listed below. Hybrid projects will use an appropriate combination of criteria, as agreed between the supervisor and student.

For each criterion, the level of achievement is assessed as being one of the following:

Fail / Poor / Satisfactory / Good / Very Good / Excellent / Outstanding

For descriptions of what is meant by each level of achievement for each criterion, see under ‘Assessment’ on the IMAT3451 Blackboard site.

**Software Development Projects**

* Practical achievement as evidenced by the demonstration and documentation of the product, comprising each of the following:

Scope/complexity

Understanding of the problem domain/requirements

 Professional use of approach/methodology & techniques

 Design

 Implementation of the solution to the problem

Testing

 Product documentation

* Theoretical understanding as evidenced by the entire project report
* Project Summary & Critical Review
* Project Management
* Demonstration/Viva
* Flair/Creativity

**Research Projects**

* Research task: scope & complexity
* Research question understanding & contextualisation
* Research Methodology: plan
* Research Methodology: implementation
* Quality of answer to the research question
* Project Summary & Critical Review
* Project Management
* Demonstration/Viva
* Flair/Creativity

**Consultancy Projects**

* Consultancy task: scope and complexity
* Task understanding & contextualisation
* Investigation process: plan
* Investigation process: implementation
* Relationship with the client
* Quality of recommendations to the client
* Project Summary & Critical Review
* Project Management
* Demonstration/Viva
* Flair/Creativity

**Appendix I**

**Writing and Formatting the Report**

For useful tips on writing in general, and on writing reports, see the ‘Focus On’ series of handouts available from:

http://www.dmu.ac.uk/study/library/lss/focus\_on/fo\_communication\_index.jsp

[link active 08-06-2010]

Look out for any special workshops; information will be disseminated via the IMAT3451 Blackboard site.

**Structure**

The ‘Project Summary and Critical Review’, and Research and Consultancy Reports, should be divided into numbered sections and sub-sections. Each section deals with a major topic; if this comprises several components, use a sub-section for each.

Within a section/sub-section, text should be divided into paragraphs. Each paragraph consists of one or more sentences that together make a logical whole. To start a new train of thought, start a new paragraph.

Examine the way in which this Handbook has been structured as an example.

**Language**

 **‘Voice’**

All parts of the report, except for the ‘Project Summary and Critical Review’ should be written in the ‘passive’. Do ***not*** use the first person (‘I’), nor phrases such as ‘the student’ and ‘the author’.

**Examples:**

Wrong: I found that many studies have been carried out into ...

Correct: Many studies have been carried out into ...

Wrong: The student decided to interview some of the lecturers ...

Correct: It was decided to interview some of the lecturers ...

In the ‘Project Summary and Critical Review’ it is permissible to write using the first person, for example:

‘My project management skills greatly improved ...’.

However, it is possible to avoid using the first person ‘I’ or ‘My’ too many times by rephrasing the sentence.

**Example:**

Wrong: ‘The student produced an Entity-Relationship diagram ...’

OK in the ‘Project Summary and Critical Review’: ‘I produced an Entity-Relationship diagram ...’

Avoiding the first person: ‘An Entity-Relationship diagram was produced ...’

Avoid contracted forms such as *isn’t*, *can’t*: in a formal report these should be *is not*, *cannot* respectively.

**Tense**

It is important to use the correct tense in your ‘Project Summary and Critical Review’.

Present tense: what is the case ***now***.

Past tense: what happened in the ***past***.

Future tense: what will/is likely to happen in the ***future***.

You are critically reflecting on work that you ***have undertaken*** during the year, to produce a product that does something ***now***.

So:

When you are discussing what you did, use the ***past***tense.

When you are explaining what your product does, use the ***present*** tense.

**Examples:**

Wrong: Work will be undertaken to ... [future]

Correct: Work was undertaken to ... [past]

Wrong: The program will be able to ... [future]

Correct: The program is able to ... [present]

**Page layout**

* Paper size: A4.
* Print single-sided.
* Spacing: single or 1.5.
* Font: a matter of personal choice, but standard fonts for the main text such as Arial or Comic Sans in 10pt is clear and readable; else Times New Roman 12pt. Use a bigger font for headings.
* Page numbers: number all pages, and show in the Contents List the pages where each section/sub-section starts.
* Figures: if used, place them centrally on the page and provide a number and title underneath.
* Tables: if used, place them centrally on the page and provide a number and title above.
* Margins: 3cm on the left (to allow room for binding) and 2cm on the right, top and bottom are recommended.

**Proof-reading**

Use a spell-checker, but do not rely on this alone: it will not pick up ‘typos’ where a correctly-spelt but inaccurate word has been used, or substituted by the software.

Allow time to read carefully through your report. You will be more likely to notice errors if you leave it aside and return to it a few days after writing. If you are not confident about your written English, ask someone else to read it too. So allow time in your planning for proof-reading and correction.