

SCHOOL OF ELECTRONIC ENGINEERING AND
COMPUTER SCIENCE

UNDERGRADUATE FINAL YEAR PROJECT STUDENT HANDBOOK

2024/25

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1. INTRODUCTION

This handbook provides an overview of the final year undergraduate projects within the School of Electronic Engineering and Computer Science. Please read and follow the guidelines within this handbook.

The final year project allows you to demonstrate the knowledge, skills, and experience that you have gained during your degree and to extend these by working individually on a research or development problem. Electronic Engineering (EE) and Computer Science (CS) are both practical subjects, and potential employers are typically very interested in the project as it is the key means by which you can demonstrate your ability to “do” EE or CS.

In addition to technical skills, the project will also involve communication, organisational, and time management skills.

The work will be guided by a supervisor and is expected to occupy a quarter of your effort in the final year of your degree.

1.1 AIMS

The final year project is the most crucial element of your degree, as it gives you an opportunity to work on an extensive piece of work within the areas of EE and CS. The project also allows you to demonstrate your problem-solving abilities through applying a range of skills that you have acquired through your UG studies to date.

The final year project aims for you to:

- Draw on knowledge, skills and experience gained from the modules you have taken in your degree.
- Undertake an independent piece of work of appropriate scope and complexity, under the guidance of a project supervisor.
- Communicate the achievements of the project effectively in a written report and a viva.
- Demonstrate the outcomes of the project, where applicable.

2. PROJECT SUPPORT

There will be a series of lectures given by the Project Coordinator to support you in your project. There is also an area on QM+ where the lecture slides can be found, along with other supporting material. You are expected to watch any interactive videos and read relevant articles before the live webinar session.

There is a forum on QM+ for the projects where discussions can take place. This will be monitored by the Project Coordinator, who will answer questions or signpost you to where you can find the relevant information.

Your engagement with the module will be monitored throughout the year. If we notice you are not engaging with the project work, attending supervision meetings or lectures we will get in touch to check in with you.

If you are struggling with your project for any reason or are unsure where to go for help, please contact your supervisor or the Project Coordinator c.revell@qmul.ac.uk

3. TYPES OF PROJECTS

Most students will work on an implementation project, but there are other possibilities. In addition to projects suggested by a supervisor, you can suggest your own. In this case you would need to find a supervisor who considers that the level of difficulty of the project you have suggested is appropriate and is willing to supervise you.

Please note that your project must be aligned with the learning outcomes of your programme of study (e.g. BSc Computer Science, BEng Electronic Engineering et al). A breakdown of the learning outcomes can be found under the headings: 'Academic Content', 'Disciplinary Skills' and 'Attributes' in the [Programme Specifications](#) for your specific degree.

3.1 IMPLEMENTATION

Implementation projects solve a practical problem. They may be hardware based, software based or a combination of hardware and software. An implementation project will involve all the normal stages of the design and development of a system (the proposed solution to the problem): specification, design, implementation, and testing.

3.2 RESEARCH

A research project explores a hypothesis through the 'scientific method'. In EECS, it must be based on technology and must be a genuine research task. It must be original work, for example a review of existing work in an area or a simple business analysis would not be an acceptable research project.

3.3 INDUSTRIAL

An industrial project is one that is carried out in cooperation with an external partner, i.e. a business. It can be either a research based or an implementation project. In this situation there needs to be an industrial supervisor who agrees to support your project as well as an academic supervisor from the School of EECS.

Industrial projects may originate from external contacts that academic staff have or from your own contacts. It is the responsibility of the academic supervisor to ensure that the level of difficulty of the project is appropriate.

3.4 USER STUDY

A user study is a research project that is focused on studying user behaviour in a specific context. It would normally include some implementation, e.g. building a prototype or an application as part of experiment design and setup, and an experimental evaluation of user behaviour in the emulated context of interest.

4. PROJECT SUPERVISION

4.1 SELECTING A PROJECT AND SUPERVISOR

On the **7thMay 2024** a list of project supervisors with their project ideas and areas of interest will be published on QM+. You should use this information to decide which members of staff you would like to contact to discuss your project.

Procedure for supervisor selection and allocation

1. Read the supervisor profiles and project information on the QM+ page: [UG Project Supervisors 2024/25](#). Make sure you carefully consider all the information contained here before emailing a potential supervisor.
2. Before contacting a supervisor, download and complete the 'Initial Proposal Form' from the QM+ page: [Undergraduate Final Year Project 2024/25](#)
3. Complete 'Supervisor Shortlist Form'
4. Contact the potential supervisor by sending them an email with your completed initial proposal form. It is important that when you contact academics that you demonstrate a keen interest and are well-informed about the potential project idea and/or the supervisor's areas of specialism.
5. As soon as you have an agreement with a supervisor, you must a) make all other potential supervisors you were communicating with aware that you will be supervised by another academic and b) stop contacting any further supervisors.
6. The deadline for supervision selection is 31st August 2024. If you have not found a supervisor by then you will be allocated one by the Project Coordinator by the start of Week 1 in Semester A. Please be aware that these allocations cannot be guaranteed to align perfectly with your interests. Therefore, it is vital that you are proactive in finding a supervisor BEFORE the August deadline.

Supervisors have a quota of project students, and the number of vacancies for taking on students will be updated online as students are claimed. Changing supervisors, once you have one, needs the agreement of your old and new supervisors.

4.2 KEEPING IN CONTACT WITH YOUR SUPERVISOR

It is important to meet with your supervisor regularly. Supervisors will have different preferences for how they want to conduct supervision meetings – either individually or as a group. The dates and times for these meetings should be agreed between you. If you have a particular issue that cannot be dealt with in a regular meeting, email your supervisor and ask for an additional appointment. Bear in mind that academics have a busy schedule and sometimes may be away or unavailable due to other commitments. Do factor this into your project planning and try to be as flexible as possible.

Remember that your time with your supervisor is limited so to get the most out of the sessions you should:

- Prepare. It isn't helpful (for you or your supervisor) to just turn up to the meeting without having done any planning in advance. This is your project so think about what you want to get out of the meeting, what you wish to discuss and what specific advice or help you are looking for from your supervisor.
- Highlight any key issues/challenges.
- Inform the supervisor of any progress you have made since the previous meeting (where relevant).
- Make your own notes of what is discussed.
- Keep a project logbook/journal to keep track of your progress, your ideas, any challenges and what is discussed in your supervision meetings. Getting into the habit of doing this will help you to plan your work and the logbook will be a very useful resource to look back on when you are writing your report and preparing for your viva.

IMPORTANT: If your project is not going well, tell your supervisor about it. You should NOT stop going to meetings. Alternatively, if you think some general advice and support would be helpful, contact the Project Coordinator.

4.3 STUDENT RESPONSIBILITIES

- To monitor the project progress. Your role is essentially the project leader whereas the supervisor is more like a consultant and manager.
- To maintain regular contact and arrange appointments with your supervisor.

IMPORTANT: Remember that your project is marked by a supervisor *and* a second examiner. The second examiner may require further details regarding evidence of your implementation/practical work so will be relying on your supervisor to confirm this when it comes to the final assessment. If you have not maintained regular contact with your supervisor, both they and the second examiner will not be able to assess the quality of your work sufficiently.

- To be self-motivated and proactive. Your supervisor will not chase you up or do the work for you.
- To gain the knowledge required independently and deal with implementation details. It is not the responsibility of the supervisor to provide ready-made solutions. You should formulate any problems before asking your supervisor for help.
- To tell your supervisor about any equipment failure, technical or other difficulties, e.g. extenuating circumstances, that could have a detrimental impact on your work or deadlines. If you are uncomfortable discussing any personal situations with your supervisor, please contact the Project Coordinator and/or the EECS Student Support staff.
- To respect academic staff time and to factor this into your planning and time management. You can expect to receive a response to emails and phone messages from your supervisor or the Project Coordinator within five working days (this does not include weekends and holidays). If there is no response from your supervisor within this time, then please notify the Project Coordinator.

4.4 SUPERVISOR RESPONSIBILITIES

- It is the supervisor's responsibility to define the project objectives and the possible outcomes, or to refine these and check whether they are adequate if you have suggested your own project.
- The supervisor will provide advice and guidance but leave solutions and implementation details to the student.
- The supervisor will explain the project assessment method to the student and be responsible for evaluating the student's project in terms of quality and quantity of the effort expended.
- The project title and specification are a joint responsibility of the supervisor and student. The supervisor is responsible for assessing the interim report, progress presentation and will be one of the assessors for the final deliverable of the project, which includes a demonstration and viva.
- Your supervisor is not obliged to chase you if you fail to keep appointments with them.
- Supervisors are asked to notify the Project Coordinator if you are not engaging with the project nor attending meetings.

5. PROJECT OUTPUTS AND WEIGHTING

5.1 PROJECT WEIGHTING

The project is a core module which you must pass to be awarded your degree.

The overall weighting of your project in the calculation for your final degree is as follows:

5.1.1 COMPUTER SCIENCE PROGRAMME STUDENTS

For Computer Science students, the project counts as two modules in the final year and is therefore 25% of the final year mark or 15% of the overall degree classification. You must pass a “problem-solving project” at the first attempt to qualify for partial exemption from the BCS membership examinations.

5.1.2 ELECTRONIC ENGINEERING PROGRAMME STUDENTS

For Electronic Engineering students, the project counts as two modules in the final year and is therefore 25% of the final year mark or 15% of the overall degree classification.

5.2 PROJECT DOCUMENTATION

There are a series of documents relating to your project that you need to produce and submit at different points in the year.

These are:

- Project definition including a project plan.
- Interim report including a revised project plan and a risk assessment.
- Project progress presentation.
- Final report.
- Showcase video.
- Any supporting documentation.

All documents are to be submitted via QM+.

5.3 WEIGHTING OF PROJECT ELEMENTS AND DEADLINES

The weightings are as follows:

| Project Element | Assessed by | Weighting | Deadline | | Submission Location |
|--|--|-----------|---------------------------|---------------------------|---------------------|
| Project definition and plan | Not assessed but approved by supervisor | 0% | Document Submission | 16 th Oct 2024 | QM+ |
| Interim report (includes risk assessment) and Project progress presentation | Supervisor | 5% | Interim Report Submission | 28th Nov 2024 | QM+ |
| | | | Slides Submission | 4th Dec 2024 | QM+ |
| | | | Presentation | 9th- 13th Dec 2024 | Online |
| Draft Report | Not assessed, however supervisor will provide feedback | 0% | Draft Report Submission | 27th Mar 2025 | QM+ |
| Project Video | Supervisor and second examiner | 95% | Video Submission | 8th May 2025 | QM+ |
| Final report, supporting documentation, implementation and presentation at Viva* | Supervisor and second examiner | | Final Report Submission | 6th May 2025 | QM+ |
| Presentation at Viva* | Supervisor and second examiner | | Viva Presentation | 12th to 23rd May 2025 | Online |

Key

| | |
|----------------------|----------------------|
| Formative Assessment | Summative Assessment |
|----------------------|----------------------|

*Failure to attend and participate at the viva will lead to a mark of zero for the project.

6. PROJECT ASSESSMENT

6.1 PROJECT DEFINITION AND PLAN

You are required to submit a project definition document on 16th October 2024. This should be a 3–4-page description about your project. This document will also need to include a project plan.

6.1.1 PROJECT DEFINITION

Your final achievements in your project will be judged against your project definition. It is possible to amend the definition during your project, but any changes must be agreed with your supervisor. You will also need to keep a record of any changes you make and the reasons for these.

Exactly what will appear in your project definition will vary with the nature of your project, but typically it will contain:

- Project Title
- Project Aims – this should be a broad statement of what you intend overall. This can usually be summarized in one sentence.
- Objectives – these will be more specific and measurable, relating to the expected outcomes of the project and presented in a list format typically starting with a verb e.g. 'Investigate', 'Develop', 'Design', 'Identify' and so on. There is no rule about how many objectives to include as this depends on what you consider to be appropriate.
- Details of the specific problem being addressed.
- An initial analysis of user requirements and data collection methods.
- The algorithms, methodologies, and techniques to be employed.
- An initial specification of how users will interact with the system.
- Programming languages, software, hardware, databases.
- A list of background materials consulted so far, including Internet resources.

Your project definition must state how your project will be aligned with the learning outcomes of your degree. A breakdown of the learning outcomes can be found under the headings: 'Academic Content', 'Disciplinary Skills', and 'Attributes' in the **Programme Specifications** for your specific programme.

The project definition *must* be agreed with your supervisor.

A pro forma is provided on QM+ for you to use to structure this.

6.1.2 CONSTRUCTING A PROBLEM DEFINITION

An excellent project depends on the construction of a clear problem definition. Stating the problem to be solved is more than just writing a series of anecdotal notes on the reasons that have motivated you to develop some hardware or write a particular piece of software.

Your initial thoughts on a topic may be: 'I have an interest in healthy living and wish to develop an application that supports users within the elderly community by providing them with intelligent recommendations to lead an independent and healthy lifestyle'. This would be a good starting point for a project, but it wouldn't be sufficient on its own. You will also need to conduct research to establish the specific areas of Electronic Engineering or Computer Science that relate to your topic area.

The method to investigate the underlying problem will require reading books, and research articles (e.g. papers from academic journals and conferences).

In relation to the healthy living example above, you would do the following:

- Read research articles on current software systems developed to encourage health and wellbeing within elderly communities.
- Investigate and review the range of functionalities they support.
- Identify issues and shortcomings.
- Investigate current software frameworks adopted to solve this problem.

It is essential that you have a clear idea of the underlying problem you are trying to solve, and you will only be able to demonstrate this through engaging with the existing literature.

The following resources are excellent starting points for your research.

- ACM Digital Library - <https://dl.acm.org>
- IEEE Xplore Digital Library - <http://ieeexplore.ieee.org/Xplore/home.jsp>
- Google Scholar - <https://scholar.google.co.uk>

It is important that you create notes and summaries of the references that you find useful, as these will inform your literature review, which is a significant component of your interim and final report.

6.1.2 PROJECT PLAN

Your project plan should break down the work you expect to carry out for your project into activities (tasks and sub-tasks) and estimate how long each will take, whether one relies on the completion of another or can be carried out in parallel, etc.

The deadlines that you have for producing documents and the practical work/implementation also appear on the plan. You can use a Gantt chart or any other project management tools of your choice or create your own providing a list of activities and their start and end dates. You will be asked to revise the time plan when you submit your

interim report so the first semester plan may have much more detail than the second semester plan. The plan should also be discussed and agreed with your supervisor.

6.2 INTERIM REPORT & PROJECT PROGRESS PRESENTATION

You will be expected to submit an interim report on **28th November 2024**. Submissions are via QM+ and all reports will be passed through Turnitin. You will also be asked to present your interim report findings to your supervisor during the week commencing **9th December 2024**. You should submit slides ahead of this presentation on **4th December 2024**. The interim report and presentation are a great opportunity for you and your supervisor to review the progress that you have made.

6.2.1 INTERIM REPORT

The interim report is a subset of your final report. It should consist of:

- A literature review of previous work and the background to your project.
- An account of your achievements to date.
- An amended plan for the work you will carry out in the second semester.
- Risk assessment.

The risk assessment should consist of a list of any risks you have identified which could impact on the successful completion of your project. This list should include a description of the possible risk, the impact it may have, the likelihood of the risk occurring, the severity of the effect of the risk on your project and how you intend to manage it. This should be presented in the form of a five-column table. The ratings will be low/medium/high.

| Description of risk | Impact of risk | Likelihood rating | Impact rating | Preventative actions |
|---------------------|----------------|-------------------|---------------|----------------------|
| | | | | |

E.g. Some of the risks in hardware construction will be physical risks associated with construction activities.

6.2.2 PROJECT PROGRESS PRESENTATION

During the last week of semester A - **9th-13th December 24** - you will be expected to prepare and deliver a 10-minute presentation to your supervisor, where you will:

- Provide an update on your project and your progress to date.
- Summarise your literature review findings.
- Describe how your project is aligned with the learning outcomes of your degree.
- Explain the design of the proposed implementation.
- Present your project plan, highlighting the milestones you have already achieved and the timeline for meeting those you have remaining.

The interim report and project progress presentation will be marked by your supervisor and count as 5% towards your final project mark.

6.3 FINAL REPORT

The purpose of your report is to:

- Describe the project to the examiners.
- Highlight your achievements and skills.
- Show that you have evaluated your project and know the strengths and limitations of the work you have carried out.
- Demonstrate that you can carry out a sustained piece of academic writing.

You are required to submit a draft version of your final report to your supervisor on **27th March 2025** so that you can get feedback to improve the final submission.

Report Structure

The structure of your report will vary depending on the nature of the project. Typically for an implementation project, there is: an introduction justifying the usefulness of the project; a review of previous work on the topic; a requirements section; a design section; an implementation section; a testing section; conclusions; suggestions for further work; and references.

In more detail the structure should include:

- **Title Page** - a template is provided on QM+
- **Acknowledgments**
- **Abstract** - One page maximum, a concise summary of your work. A reader should be able to understand from the abstract what your project is about without having to read the rest of the report. The abstract should be one of the last things you write in the report.
- **Table of contents**
- **Introduction** -Context for the report and the motivation behind your work.
- **Background research and literature review** – These chapters will focus on *what others have done*.
- The next chapters will focus on *what you have done* e.g.
 - **Requirements capture / analysis** – what your system should do
 - **Design** – how you went about your work
 - **Implementation** – practical techniques, problems, solutions
 - Testing and/or evaluation – how well your solution worked
- **Discussion/Conclusions** -This should be a critical analysis of your work and an honest appraisal of the achievements of your project.
- **Further work** -What more you would do if you had time?
- **References/Bibliography**
- **Appendices** - More detailed material that is relevant but not crucial to the understanding of the main message(s), e.g. Detailed experimental results, data sheets, copy of questionnaire / interview scripts.

The report length should be 10,000 words (+/-10%). This excludes references and appendices. Use 12- point type and make sure that figures and tables have captions. The Report Template (Word document) which is available on QM+ should be used for structuring your report.

The submission deadline for your report is **6th May 2025**. This will be assessed by your supervisor and second examiner. Submission is electronic via QM+ and all reports will be passed through Turnitin. Any computer code in text format should be submitted as a separate file under supporting documentation.

Disclaimer

Please note: The project report you submit could be used as an exemplar for future students. These exemplars will be anonymous (i.e. we will remove any information that could make it possible to identify you). If you would like to opt out of this completely OR are happy for your name to remain in the report (should people want to cite your work) please email the Project Coordinator.

6.4 PROJECT VIVA

The viva assessment will be split into two subcomponents:

- Project Showcase Video
- Viva Q&A Session

The viva will be assessed by your supervisor and second examiner. The viva is not marked separately from the report and should not be treated as a separate component of the project. Both are taken into consideration before a final grade is decided. Please note that your performance in the viva can increase or decrease the overall mark you are given.

6.4.1 PROJECT SHOWCASE VIDEO

Video is a powerful medium to disseminate your project as it gives you an opportunity to showcase your work to a wider audience and provide further insights.

You will need to create a 10-minute video (+/-10% duration), where you will be expected to provide an overview of your project and contributions. This is a unique opportunity for you to convince your examiners that your project is high quality and interesting.

The purpose of the video will be to provide an overview of the:

- area you worked in,
- problem you focused on,
- solution you designed and implemented.

The video is an opportunity for creativity. However, it is important that you cover the following aspects of your work:

- the statement of the problem you investigated,
- the description of the methods used to solve the problem,

- a demonstration of your practical/implementation work,
- a summary of your work,
- a presentation of your results (both positive and negative).

IMPORTANT!

- You must appear on camera in the showcase video. A voice-over alone will not meet the requirements. If you fail to appear in the video your viva Q&A session cannot take place.
- Your video must be recorded at normal speed. Any videos speeded up to keep within the 10 min timeframe will lose marks!

The submission deadline for your video is **8th May 2025** via QM+.

6.4.2 VIVA Q&A SESSION

During the weeks commencing **12th -23rd May 2025** you will be allocated a 20-minute timeslot for your viva where you will be assessed by your supervisor and a second examiner on your ability to answer questions about your project. Questions will cover your contributions (i.e., methodology and demo), and the implementation/practical aspects (i.e., coding or experiments) of your project.

The objectives of the viva session are for you:

- To explain and justify your work.
- To demonstrate your ability to respond to questions about your project.

NB: Your second examiner may not be an expert in the field of your project, so you need to ensure that you articulate your project findings in a clear and concise manner.

Please note that a viva Q&A session cannot take place if two examiners are not present.

If you fail to attend the viva, then you will receive a mark of zero for the project.

You will also fail your project if you do not submit the final report, supporting documentation and project video.

8. ETHICS AND PROJECTS THAT INVOLVE HUMAN PARTICIPANTS

The obvious ethical issues are fraud (e.g. passing off work that was done by someone else as your own) and plagiarism (which will be discussed further in Section 10.4). However, projects that involve human participants, e.g. user studies or experimental evaluations, also involve ethical issues. The principal issues are ensuring that participants have given informed consent and that personal details are protected in accordance with the Data Protection Act.

If your project involves human participants, you may need ethical approval. Information about this can be found on the following site:

<https://qmulprod.sharepoint.com/sites/EECS-DevolvedSchoolResearchEthicsCommittee>

If your project requires ethical approval, please include the related documents in the Appendix of your report

9. RESOURCES

9.1 HARDWARE

There is an area of the electronics laboratory for project hardware development, and you can request to be allocated a cupboard space in the lab to keep your hardware and work on your project.

The electronics lab provides a supply of basic electronic parts, and you can take these from the carousel in the 3rd floor electronics lab. For other specific parts you must request that an order form is created. The Lab Manager can authorise purchases up to £15, your supervisor up to £50. Anything above £50 must be authorized by the Project Coordinator. The total maximum budget per project is £100. Check whether we have parts already before you order anything, and we prefer that parts can be re-used. Any items purchased yourself cannot be reimbursed. The project remains the property of QMUL and should be returned to the Lab upon completion.

Be careful about the package that integrated circuits use. Standard DIL packages are good for development on breadboard and strip board, but surface mount parts must have adequate adapters or fabrication of a suitable PCB must be considered before purchasing. If you need to have a PCB manufactured, also see the PCB technician to discuss complexity and lead times for manufacture. All purchasing and fabrications need to have been authorised appropriately before purchase or works are commenced.

You can check a general guide to the items stocked in the lab at: <http://services.eecs.qmul.ac.uk/eecs-laboratories/electronics-labs/components/>.

All components not available in the carousel still need to be ordered, even if stocked.

To request a cupboard/order form email electronicslab@lists.eecs.qmul.ac.uk and copy your supervisor.

If you are using microcontrollers, check that we have access to a software development environment and programming capability for your chosen part.

NB: The budget is only for hardware-based projects where you require electronic components to build a system. It does not include 'off the shelf' products that are add-ons to your system.

9.2 SOFTWARE

Final year students have access to the EECS Teaching Lab when no scheduled teaching is taking place (check lab timetables via your landing page). There may be times where you will still be able to access any unused machines during a scheduled lab but please be considerate of others and remember that teaching takes priority.

All the software you need should be available, but if you think you need something else, please consult the ITS team and your supervisor.

10. REFERENCING AND PLAGIARISM

10.1 REFERENCING

A crucial aspect of any academic writing is ensuring that it is properly referenced. This means that any sources that have informed what you have written in your report must be acknowledged. These also need to be written correctly following a standard referencing system. The two main referencing systems are the Harvard and Vancouver styles. The Harvard system has the author's name and year appearing in the text, which links to a list at the end of the document. The Vancouver system has a number appearing in the text as a superscript or in brackets, which links to a list at the end of the document. The Faculty of Science and Engineering at QM requires students to use the Harvard system ONLY.

It takes practice to get referencing right so familiarize yourself with the Harvard system early on and keep a working bibliography and a list of citations as you go along. This will help you to avoid having to do this from scratch when writing your final report and save you lots of time!

10.2 THE HARVARD SYSTEM

In the text

In his recent article, Leyden claimed that Google's new IM service has had a less-than-enthusiastic reception, "Early reaction to the service has been lukewarm." (Leyden 2005)

Reid and Dunlop (2003) stated that...

Beymer et al (2005) stated that... (3 or more authors)

Fig. 1. Audio classification framework (Divakaran 2004, p.29)

Web references

Leyden, J. (2005) Google Talks Up IM Service. *The Register* [on-line]. Available from http://theregister.co.uk/2005/08/24/google_talk/ [Accessed 7 November 2014]

Department of Health (2006). *Fluoridation of drinking water* [online]. Available at: <http://www.dh.gov.uk/assetRoot/04/13/60/15/04136015.pdf> [accessed 13/9/2006].

Book reference

Naisbitt, J. (1984). *Megatrends*. New York: Warner Books.

Periodical (journal) reference

Raikkonen, K., Pesonen, A.K., Jarvenpaa, A.L. & Strandberg, T. E. (2004). Sweet babies: chocolate consumption during pregnancy and infant temperament at six months. *Early Human Development*, 76 (2), 139-145.

Conference proceedings reference

Beymer, D., Russell, D. and Orton, P. (2005) Wide vs. Narrow Paragraphs: An Eye Tracking Analysis. In: Costabile, M.F. and Paternò, F. eds. Human- Computer Interaction – *INTERACT 2005. Proceedings of the Tenth IFIP TC13 International Conference*, LNCS. Vol. 3585. pp. 758 - 792. Heidelberg: Springer-Verlag.

More information on referencing can be found on the QM+ page: [Find it! Use It! Reference It! Information Literacy Skills](#). You can also find lots of guidance on using the Harvard system online.

10.4 PLAGIARISM

Plagiarism effectively means presenting the work of others without stating where it has come from (sourcing), or to put it simply, trying to pass off someone else's work as your own. Queen Mary defines 'plagiarism' as:

"...presenting someone else's work as one's own, irrespective of intention. Close paraphrasing; copying from the work of another person, including another student; using the ideas of another person without proper acknowledgement; and repeating work that you have previously submitted – at Queen Mary or at another institution – without properly referencing yourself (known as 'self-plagiarism') also constitute plagiarism. Unfortunately, including material without proper acknowledgement has become far too common and QMUL takes a very firm line on any such offences." From the [QMUL Academic Misconduct Policy 2023/24](#)

If you are suspected of plagiarism, you will be reported to the Academic Registrar for an examination offence under the QMUL *Regulations for Assessment Offences*. Under these Regulations, students found to have committed an offence may have their whole diet of assessments invalidated or be expelled from the College.

A range of methods, including special software tools such as TurnItIn, are used to detect plagiarism, and project reports are routinely put through an electronic plagiarism detection system.

11. TIME MANAGEMENT

Managing your time over the two semesters is an important part of your project. You will have a time plan, but this needs to be flexible as you won't know in advance how long things will take. Take time to research, read, think, and discuss with others before diving in.

Plan for slippage and have a contingency plan. Revisit and review your plans and progress regularly. Do not lie to yourself - or anyone else - about your progress! Be honest if things aren't going as planned and talk this through with your supervisor or the Project Coordinator.

Steady work throughout the period is important for success in your project. You cannot leave most of the work until the last month. Remember to leave enough time to write the final report, as this will be very important in how your success is judged.

The project is a core component of your final year, but remember you also have other modules to complete so do factor these in. Make sure you are aware of the deadlines and demands you will have throughout the year and allow for these in your planning.

12. PROJECT MARKING POLICY

Project marking policy for undergraduate projects:

- The pass mark for the project is 40%.
- The final report, video and viva are worth 95% of the final project mark. This is assessed by two examiners (supervisor and second examiner).
- When there is a discrepancy of 10% or less between the marks of both examiners then the average is taken as the final mark unless marks span pass/fail.
- When there is a discrepancy of 10% or less between the marks of both examiners and the marks span the pass/fail borderline, then both examiners will discuss for agreement, if no agreement then the project will be assessed by a third examiner.
- When there is a discrepancy greater than 10% between the marks of both examiners but it is within the same grade i.e. A or F, then the average is taken as the final mark.
- When there is a discrepancy greater than 10% between the marks of both examiners, across different grades, then both examiners discuss for agreement. However, if no agreement is reached then the project will be assessed by a third examiner.
- Third examiner marks will account for 95% of the final project mark. The remaining 5% relating to the interim report/progress presentation will have already been awarded earlier in the year so cannot be changed.
- Normally the third examiner mark remains within the original two examiner marks.

13. RESITTING A PROJECT

If you do not pass your project in the May exam period, a late summer resit is possible. This involves submitting a revised report, supporting material and project showcase video at the beginning of the late summer resit exam period, and attending a viva Q&A session towards the end of it. If the project is passed on resit the mark will be capped at 40%, as with any other resit exam or coursework.

14. CALENDAR - IMPORTANT DATES

| Semester | Week Comm. | Week | Weekly Content | Project Deliverables | |
|----------|-----------------------------|-------------|--|--|---------|
| 1 | 23rd Sept 2024 | 1 | Introduction & Project Definition | | |
| | 30 th Sept 2024 | 2 | Introduction to Research Methods | | |
| | 7th Oct 2024 | 3 | Literature Survey | | |
| | 14 th Oct 2024 | 4 | Information Literacy and Referencing | Project Definition Submission 16th October 2024 | 0% |
| | 21 st Oct 2024 | 5 | Interim Report and Progress Presentation | | |
| | 28th Oct 2024 | 6 | Ethical, Legal, Social and Sustainability Issues | | |
| | 4th Nov 2024 | 7 | | | |
| | 11th Nov 2024 | 8 | | | |
| | 18th Nov 2024 | 9 | | | |
| | 25th Nov 2024 | 10 | | Interim Report Submission 28th November 2024 | 5% |
| | 2nd Dec 2024 | 11 | | Progress Slides Submission 4th December 2024 | |
| | 9th Dec 2024 | 12 | | Progress Presentation 9th -13th December 2024 | |
| 2 | 20th Jan 2025 | 1 | Project Showcase Videos | | |
| | 27th Jan 2025 | 2 | An Examiner's View and Marking Scheme | | |
| | 3 rd Feb 2025 | 3 | | | |
| | 10th Feb 2025 | 4 | Lessons from Previous Reports | | |
| | 17th Feb 2025 | 5 | Viva Assessment | | |
| | 24th Feb 2025 | 6 | | | |
| | 3rd Mar 2025 | 7 | | | |
| | 10th Mar 2025 | 8 | | | |
| | 17th Mar 2025 | 9 | | | |
| | 24th Mar 2025 | 10 | | Draft Report 27 th March 2025 | 0% |
| | 31 st March 2025 | 11 | | | |
| | 7 th Apr 2025 | 12 | | | |
| 3 | 5th May 2025 | Exam Period | | Final Report Submission 6th May 2025 | 95 % |
| | | | | Project Video Submission 8th May 2025 | |
| | 12th May 2025 | | | Viva 12 th - 23 rd May 2025 | |
| | 19th May 2025 | | | | |

Key

Formative Assessment

Summative Assessment

APPENDICES

APPENDIX A - MARKING SCHEME – INTERIM REPORT AND PROGRESS PRESENTATION 5%

| | % | |
|--|---|---|
| INTERIM REPORT AND PROGRESS PRESENTATION | 5 | 1. Project aims and objectives - the project is aligned with the learning outcomes of your programme of study |
| | | 2. Clear problem definition, which is informed by research |
| | | 3. Standard of literature review (Understanding of the topic area) |
| | | 4. Identification of potential risks to the project |
| | | 5. Realistic project milestones and objectives |
| | | 6. Proposed solution - correctness of solution proposed |
| | | 7. Quality of report – format, structure, figures, tables & references |
| | | 8. Q&A - ability to answer questions |
| | | 9. Quality of slides – format, presentation and structure |
| | | 10. Project engagement – regular meetings with supervisor |

APPENDIX B - MARKING SCHEME – FINAL PROJECT REPORT AND VIVA 95%

| | % | 0 – 39% Poor | 40-49% Satisfactory | 50-59% Good | 60-69% Very Good | 70-79% Excellent | 80-100% Outstanding |
|--|----|---|--|---|---|--|--|
| PROBLEM DEFINITION, BACKGROUND (LITERATURE REVIEW), AIM AND OBJECTIVES <ul style="list-style-type: none"> Clarity of problem definition Project aligned with programme of study Critical analysis of the literature Clarity of the project aims Clarity and relevance of project objectives <i>Determined by viva and report</i> | 15 | <p>The problem is not substantial for a final year project.</p> <p>There is no evidence of the student providing an overview of relevant literature.</p> <p>The student has not defined the aims and objectives of the project.</p> <p>Project is not aligned with the learning outcomes of the student's programme of study</p> | <p>The problem definition has very little substance, as it is informed by anecdotal experiences, as opposed to research.</p> <p>The report has an adequate overview of a few relevant papers with no critical analysis.</p> <p>The student has defined the aims of the project, however the objectives are vague.</p> | <p>The problem definition is informed by research. The student has also defined a series of research questions.</p> <p>The report has a satisfactory review of relevant papers with a limited critical analysis.</p> <p>The student has clearly articulated the aims of the project, with a number of relevant objectives.</p> | <p>Meets the 'Good' criteria and the following:</p> <p>Very good, concise review of relevant papers with some critical analysis, relevant to the context of the project.</p> <p>Objectives clearly support the project aims.</p> | <p>Meets the 'Very Good' criteria and the following:</p> <p>Excellent literature review with a concise critical review relevant to the context of the project, which also identifies gaps in knowledge.</p> | <p>Meets the 'Excellent' criteria and the following:</p> <p>Evidence of extra-curricular academic reading, critical thinking and original interpretation.</p> |
| ACHIEVEMENT <ul style="list-style-type: none"> Achievement of aims and objectives Use of appropriate methodologies, tools and techniques Evidence of advanced problem-solving skills Quality of output/solution (including creativity and innovation) e.g., computer code <i>Determined by viva and report</i> | 35 | <p>The student failed to achieve the aims and objectives of the project.</p> <p>The student did not use the appropriate methodologies, tools and techniques.</p> <p>There is no evidence of use of advanced problem skills.</p> <p>The student has not produced sufficient deliverables.</p> <p>Quality and completeness of work is poor.</p> | <p>The student has partially achieved the aims and objectives of the project.</p> <p>The student has provided evidence of very basic methodologies and tools for the practical element for the project.</p> <p>Some evidence of problem-solving skills, but they are not advanced for the level of study or founded on solid and sound discipline knowledge.</p> <p>Evidence of effort, but implementation may be only partially functional.</p> | <p>The student has provided clear evidence of achieving the aims and objectives of the project.</p> <p>The practical element is good; however, it lacks rigour or has not been implemented correctly.</p> <p>Evidence of advanced problem-solving skills.</p> <p>Quality: the code or hardware are functional but not neat or tidy.</p> | <p>Meets the 'Good' criteria and the following:</p> <p>The student has adopted a sound methodology to solve the project problem.</p> <p>Advanced problem-solving skills steeped in discipline knowledge are demonstrated throughout the project.</p> <p>Achievement not substantial enough to warrant top mark, e.g. it may contain some ambiguities or faults.</p> | <p>The student has adopted a rigorous methodology to solve the project problem.</p> <p>Advanced problem-solving skills used both within and outside student's core discipline or skill-set (developed by the degree program).</p> <p>The student has produced a considerable output in terms of creativity and innovation. There may be some minor faults in execution or understanding.</p> | <p>Meets the 'Excellent' criteria and the following:</p> <p>Project objectives may have been exceeded.</p> <p>The project demonstrates depth of conceptual thinking and methodological rigour.</p> <p>Workmanship is elegant.</p> <p>The project has contributed to the field.</p> |
| | % | 0 – 39% Poor | 40-49% Satisfactory | 50-59% Good | 60-69% Very Good | 70-79% Excellent | 80-100% Outstanding |

| | | | | | | | |
|--|----|--|--|--|---|---|--|
| <p>QUALITY OF WRITING/REPORT</p> <ul style="list-style-type: none"> • Clarity of ideas <ul style="list-style-type: none"> ○ Style – technical, precise, concise and formal wording ○ Logic – reasoning ○ Flow – the purpose of each section is clear. The links between and within sections are established • Quality of figures and legends • Correct referencing <p><i>Determined by report</i></p> | 12 | <p>The report is unclear or written badly.</p> <p>It is very difficult to understand core ideas.</p> <p>The write-up is disorganised.</p> <p>Figures and figure legends are of insufficient quality.</p> <p>There is no referencing/ done incorrectly.</p> | <p>The write-up is somewhat incoherent, rushed, or verbose, contains important omissions, or irrelevant material.</p> <p>Figures and figure legends are of satisfactory quality.</p> <p>Referencing is satisfactory, but incomplete for some claims or sections.</p> | <p>Adequate project write-up, lacking clarity or detail in places, or containing irrelevant material. Good use of technical language.</p> <p>Figures and figure legends are of good quality, and they are helpful for understanding the project.</p> <p>It is easy to understand the core ideas.</p> <p>Referencing supports claims well, is used well, and uses consistent format throughout.</p> | <p>Clear write-up with logical structure and good flow. Precise, technical, formal style.</p> <p>Figures and figure legends are of very good quality. Graphs are clear, fully annotated, easy to read and used appropriately to support claims.</p> <p>Referencing is good and follows a standard consistently.</p> | <p>Very good write-up with a logical structure, good flow, technically precise and concise style.</p> <p>Figures demonstrate conceptual thinking; graphs are fully annotated, are easy to read and interpret, provide insight, and fully support claims and conclusions; figure legends are concise and informative.</p> <p>Referencing is employed throughout and follows the prevailing or recommended discipline standard.</p> | <p>All criteria for “excellent” met. Only very minor faults in execution, depth of understanding or write-up.</p> <p>Close to faultless in execution and write-up.</p> |
|--|----|--|--|--|---|---|--|

| | | | | | | | |
|---|----|--|--|--|--|--|---|
| <p>EVALUATION, TESTING AND ANALYSIS</p> <ul style="list-style-type: none"> • Adequacy and rigour of testing • Quality of the documentation of testing • Critical analysis of results • Analysis of strengths/weaknesses • Presentation of possibilities for further work • Critical analysis of the relationship between theory and practical work produced • Awareness of Legal, Social Ethical Issues and Sustainability <p><i>Determined by viva and report</i></p> | 13 | <p>For design & build, integration, or software-based projects, testing is insufficient or poorly designed, so that it does not support the claims.</p> <p>For a research-based project, there is no critical analysis of the results. Weaknesses and improvements are not considered.</p> <p>For both types of projects, critical analysis is not attempted.</p> <p>Documentation is poor.</p> <p>There is no reference to the legal, social and ethical issues and sustainability.</p> | <p>For design & build, integration, or software-based projects, testing is attempted but is not complete or has design flaws.</p> <p>Testing documentation lacks detail or is incomplete.</p> <p>For a research-based project, the critical analysis of the results is trivial. Weaknesses are only partially identified.</p> <p>For both types of projects, the the evaluation is limited, e.g. it is primarily based on informal observations, or the results do not fully bear out the conclusions.</p> <p>Documentation is patchy; it provides information but not insight. Description of procedures lack detail. Result tables do not support drawing of conclusions.</p> <p>There is a very brief reference to the legal, social and ethical issues and sustainability.</p> | <p>For design & build, integration, or software-based projects, testing may be designed and planned well, but it is not comprehensive, or it may lack rigour. Not all requirements are fully verified by testing.</p> <p>For a research-based project, critical analysis of results is presented but may lack rigour or may present some reasoning flaws. Weaknesses and improvements have partially been considered, but some gaps remain.</p> <p>For both types of projects, the evaluation lacks rigour in execution and reasoning.</p> <p>Documentation enables replication of tests. Tables are used appropriately to document test conditions and results and support drawing of conclusions.</p> <p>There is awareness of the legal, social and ethical issues and sustainability, but complex issues are not explored.</p> | <p>For design & build, integration, or software-based projects, testing verifies majority of requirements using rigorous and well-documented procedures with only minor flaws.</p> <p>For a research-based project, there is evidence of critical analysis of results. Weaknesses and improvements have been considered to some depth.</p> <p>For both types of projects, documentation provides the detail that enables scrutiny and replication of tests.</p> <p>For both type of projects, the student adopted rigorous evaluation process and the results fully support conclusions.</p> <p>There is awareness of the legal, social and ethical issues and sustainability that goes beyond the obvious or the trivial.</p> | <p>For design & build, integration, or software-based projects, there is evidence of thorough and flawless testing.</p> <p>For a research-based project, there is critical analysis of the results. Weaknesses and improvements have been fully thought out with well-supported arguments.</p> <p>For both types of projects, the evaluation provides an evidence-based critical analysis of the project, drawing strongly on deep discipline knowledge.</p> <p>Documentation is detailed, methodical, rigorous, and clear, enabling replication of tests and proper scrutiny of results.</p> <p>There is a clear awareness of the legal, social and ethical issues and sustainability, with some complex issues teased out.</p> | <p>For design & build, integration, or software-based projects there is comprehensive testing. Analysis of strengths & weaknesses are present.</p> <p>Documentation is outstanding (includes details to allow replication).</p> <p>For a research-based project, there is critical analysis of methods and results. Weaknesses and possible extensions are argued well and offer further interest in the topic.</p> <p>Documentation is outstanding (includes details to allow replication).</p> <p>There is a very clear awareness of the legal, social and ethical issues and sustainability.</p> |
| | | | | | | | |

| | % | 0 – 39% Poor | 40-49% Satisfactory | 50-59% Good | 60-69% Very Good | 70-79% Excellent | 80-100% Outstanding |
|--|----|--|---|---|--|--|--|
| DIFFICULTY LEVEL AND AMBITION (In light of the student's prior knowledge) <ul style="list-style-type: none"> Level of difficulty of the project in terms of understanding and implementation <i>Determined by viva and report</i> | 10 | <p>Level of difficulty is insufficient. E.g. the project may have replicated existing work without adding contribution, or execution is trivial for the level of study within the student's core discipline.</p> <p>The student has produced very limited or incomplete deliverables (code, hardware, report).</p> <p>No evidence of troubleshooting or seeking workarounds when problems were encountered.</p> | <p>The level of difficulty is basic and satisfactory.</p> <p>The project produced a working solution with only basic functionality. Novelty and contribution are minor or trivial.</p> <p>Some evidence of troubleshooting or seeking workarounds when problems were encountered.</p> | <p>Project not particularly ambitious, however the student has implemented a good project or a working solution to the problem.</p> <p>Evidence of resourcefulness: student proactively sought alternative routes to solving issues in the project.</p> <p>Evidence of good troubleshooting skills.</p> | <p>The challenge that was set was met with correct and confident application of the scientific or engineering methods.</p> <p>Evidence of resourcefulness: Student proactively sought alternative routes to solving issues in the project.</p> <p>Evidence of good troubleshooting skills.</p> <p>Evidence of critical thinking in all stages of the project, including when tackling unforeseen difficulties.</p> | <p>Meets the 'Very Good' criteria and the following:</p> <p>The student has produced a considerable body of deliverables in terms of both software/hardware and write-up.</p> <p>Excellent troubleshooting skills.</p> <p>Evidence of lateral thinking and proactive engagement with challenges.</p> | <p>Meets the 'Excellent' criteria and the following:</p> <p>Challenging goals, and substantial deliverables, which have the potential to inform further development or study (e.g. publication).</p> <p>The student has produced work that should be put forward for a prize nomination.</p> |
| | % | | | | | | |
| VIVA Q&A SESSION | 5 | <ul style="list-style-type: none"> Ability to answer questions - synthesis and ability to defend. Confidence in answering questions related to the practical/implementation (i.e., code) aspect of the project. Demonstration of knowledge and understanding | | | | | |
| | % | | | | | | |
| PROJECT SHOWCASE VIDEO | 5 | <ul style="list-style-type: none"> Problem Statement - A clear statement of the problem being investigated. Method - The video clearly outlines the methods (i.e., implementation/practical) that have been used to solve the problem. Contribution - The video highlights the contribution that this project makes. Demonstration – The video provides a clear demonstration of the implementation/practical aspect of the project. Quality of Video – organisation, presentation and does not exceed the maximum time of 10 minutes (+/- 10%). <ul style="list-style-type: none"> Videos must be recorded at normal speed. Any that have been speeded up to keep within the 10-minute time limit will lose marks. | | | | | |