IMPERIAL

MSci (4th year) PROJECTS 2025-26

A. Tapper, 6th May 2025

The MSci Project – Guidance Note

Introduction

The MSci project is the single largest part of your degree. The projects will bring you much closer to the research carried out in the department and will thus provide you with a very different set of challenges compared to what you are used to. As the projects range across all the different research groups within the department (and some even outside the department), you should not expect that all projects follow the same path. Please read these guidance notes carefully as they may answer many questions that you might have.

Supervision

It is for the supervisor to decide on the exact format of the supervision and there can be large differences between different supervisors. In general, you should expect to have a discussion lasting about an hour once a week. The discussion should be with you as a pair and not grouped together with other students doing projects with the same supervisor unless that has been discussed and agreed between you and your supervisor.

Part of the supervision might be delegated to a postdoc, another member of academic staff or a PhD student. This is fine, but the clear understanding is that it is still the main supervisor who is responsible for the supervision.

Components and assessment

The MSci project has multiple components, as can be seen from the table below. You can also see how these components are assessed and the weight they form of the final mark. Keep the deadlines in mind and submit well ahead of them to avoid last minute panic. All deadlines are at 5pm on the day.

Component	Deadline	Weight	Assessed by
Literature review	06 Oct 2025	15%	Supervisor + Assessor
Risk assessment	13 Oct 2025		
Progress statement	17 Nov 2025		
Poster	20 Feb 2026	5%	Supervisor + others
Continuous assessment		10%	Supervisor
Report outline	09 Mar 2026		
Viva	16-20 Mar 2026	15%	Supervisor + Assessor
Report and lay summary	27 Apr 2026	55%	Assessor + Panel

Literature review

The purpose of the literature review is to get you up to speed on the background for your project. After some initial discussions with your supervisor, you should yourself look up material on the subject. This can be background mathematics, what measurements have been done previously, theoretical background etc.

It is very important to keep in mind that your literature review report should be aimed at a physicist who has not worked in the area of your project. Any reasonably experienced physicist should be able to read through your review and understand it. **Be careful to introduce concepts and terms that were new to you and avoid jargon that is used within the specific area where you worked.** The review should be complete and concise and therefore avoid waffle. Also make sure that you back up any points you make. The English language and the typography should be of a high quality. This means you also should be careful about proof reading to avoid spelling errors, typos and poor grammar. Also make sure that figures use a consistent style and that the writing on them is not too small.

The style should be as in scientific writing. Take note of the style of the papers that you read concerning layout, notation, diagrams, graphs, equations, references, citations, use of English, etc. Look in PhD theses for some very good examples. You can find everything submitted to College at https://www.imperial.ac.uk/admin-services/library/find-books-articles-and-more/theses/

Word and page limits
The review should be typeset in single column format. You can use Word, Latex or anything else, but you should be able to produce a PDF file in the end. The font size should be 12pt. The margins should not be smaller than 2 cm (as used in this document). The page size should be A4. It should be 2,000 – 2,500 words long. The word count excludes title page, and bibliography. **Everything else is included, i.e. abstract, main text, headers, figure captions and table captions**. Try to avoid appendices; if you include them, they are included in the word count. The content of tables themselves, mathematical formulae and extracts of computer code is not included.

Structure
Think of the literature review as the first part of your final report. In structure, it should have:

- Title page with:
    - The project code (e.g. UNIV-Clements-1)
    - A title that clearly identifies what the report is about. The title is not required to be the same as the title of the original project proposal.
    - Your name
    - The date
    - The name of the supervisor
    - The name of the assessor
    - **The word count**
    - The Imperial logo, **but not the college crest** (to comply with college policy)**.**
- Abstract – The abstract should clearly and concisely identify the principal idea for the project.
- Introduction – The review should have an introduction in which the aims and objectives of the project are established and in which the work is clearly put into context.
- Background material – This can be one or more sections which take up the main part of the review. Make sure to reference everything carefully. The style of references can be either such that they appear in numerical order by first appearance or they can be of the (*author year*) style. Do not mix the two. Title the section(s) in an appropriate manner.
- Conclusion/summary – A short summary with your conclusions should be included.
- Bibliography – You must provide a clear and extensive set of references (bibliography) to which you have referred in the text. These should be in the standard format used in scientific journals. Take care to avoid incomplete references where the journal name, edition, year, authors or other parts are missing. Order them numerically if using numbering or alphabetically if using the (*author year*) style.

Handing in
The literature review should be submitted online in Blackboard as a PDF file. Please make sure that you have access by checking a few days before the deadline.

Assessment and feedback
The literature review is marked by the supervisor and the assessor. An important part of the marking is to provide you with feedback that is relevant for the final report. It is marked with the weightings 20:20:30 according to the three criteria:

- Key Literature - Efficient use of library and other resources. Has key literature and appropriate background material (research articles, preprints, web-resources) been identified. Is there evidence of finding material beyond what was directly pointed to by the supervisor.
- Presentation of the literature review report - This concerns the logical structure and presentation, the use of English and the quality of the figures and graphs. This also considers if the report overall serves its purpose as a literature of the project area well.
- Depth of scientific understanding and clarity of explanations - Is there evidence of that the literature is understood. Are explanations clear and concise. Can they be understood by somebody who is not an expert in the field.

Safety hazard

You should hand in a safety hazard form after a full discussion with your supervisor. If additional forms or training courses are required, documentation of this should be scanned and emailed to the MSci project coordinator. You should under no circumstances start any work in a lab before the form has been submitted. Even if you will only work in an office all the time, I still need the form and I need one form for **every student**.

Progress statement

This is a simple form that should be filled out by you and then discussed with your supervisor. It serves mainly as a health check on the project to see if progress is as expected. No mark is attached to it, but it is compulsory to hand in.

Poster
Your goal in this activity is to design and present a poster describing your MSci research project together with your partner (this is the only element of the project prepared jointly with your partner). The design of the poster is completely up to you, but it should allow a physicist, who is not a specialist in the research area, to understand:

- the motivation for the work;
- what you have done;
- your key results and conclusions;
- the implications that your work may have for future research in the area.

You will present your poster in an in-person poster session to project supervisors, your peers, and others from the department. The poster sessions will be in March, and you must attend your assigned session and present your poster. You should prepare a short overview presentation of the poster and then be ready for discussion.

The poster must be A1 size and portrait orientation. It must include the project title, your names, the name of your supervisor and research group. Make sure all text and graphics are clear. Text should be large enough to be legible from a distance of ~1-2m. Any material from external sources used in the poster must be suitably referenced.

This activity will give you experience in developing effective visual and oral communication skills. In designing your poster think about what would draw you in to take a closer look at one specific poster among the many hundreds that would typically be displayed at a conference.

Try to limit the amount of text on the poster: diagrams, graphs and tables are usually much more effective and attractive in terms of attracting an audience. Make sure you prepare to present the poster orally at the poster session. A major benefit of the poster format is that it allows for individual and enjoyable conversations. The posters may also be posted on the department website to showcase the research being done in the MSci Projects.

Verbal feedback will be given in the poster session by your supervisor and others from the physics department. Things to consider:

- Organisation and use of space: Is the poster well laid out, well written and telling a clear story?
- Clarity of content: Is the content pitched at the right level and supported by suitable tables, diagrams and figures?
- Verbal presentation: Explain the content well such that the essence of the work and its impact are apparent, using the poster as a prompt?

Continuous assessment

Continuous assessment is carried out by the supervisor during the Spring term and refers to your work on the project carried out up until that point. The supervisor is asked to evaluate with equal weight according to the criteria

- Student effort and effectiveness of that effort in moving towards objectives.
- Scientific quality and comprehension.
- Demonstration of effective use of skills.

Report outline

You are requested to submit a maximum of three pages as a report outline. You should use this as a way of getting feedback on what material you will put into your report, the overall structure, maybe an example of a figure etc. It is the last chance for you to receive feedback on the report writing from your supervisor. There is no fixed format for this, but the page limit is strict. If above three pages are submitted, the supervisor will only be forwarded the first three. Feedback on the report outline will be given before the viva or at the latest during the viva feedback.

Viva

The viva is done by you alone (not with your partner) and with the supervisor and the assessor. It consists of three parts.

- An oral presentation from you. Typically, this takes shape as a presentation where you have a set of slides. You are given 15 minutes to make your presentation and timeliness is part of the assessment criteria.
- After the oral presentation, the supervisor and the assessor will ask you questions. These can range from very detailed questions on how you implemented something, or they can be on the broader context of your work and its implications.
- Feedback on the viva itself. How you performed, how you could be better in a similar situation in the future and recommendations on what to take particular care with for your final report. Feedback on your report outline should also be given here if it has not already been done.

The assessment of the viva is done with equal weight to the following criteria:

- How the work fitted into the context of related work.
- If it presented a comprehensive review of the work undertaken.
- How clear were the conclusions which could be drawn?
- Confidence in delivery of presentation, when discussing the work and answers to questions.
- Presentation quality, that is, the logical structure, the quality of slides, figures and graphs and meeting the 15 min requirement.

Report
The MSci Project report should be 8,000 – 10,000 words long. Specific guidance on the report and lay summary will be issued later. The report is assessed by the assessor and a member of the *MSci project panel*.

Plagiarism & AI tools

Plagiarism must be strictly avoided (penalties for this can be very severe). Therefore, never use the words or ideas of others (from whatever source they might arise e.g. published papers, the web or other student reports) without a proper attribution. Note that material from your Literature Review Report can be reused in your final report without attribution. For further information on plagiarism, see under:

www.imperial.ac.uk/admin-services/library/learning-support/plagiarism-awareness/

You are required to submit the literature review electronically and you should be aware that plagiarism is checked using TurnItIn.

Please read and observe the College policy on AI tools, here:

https://www.imperial.ac.uk/students/academic-support/ai-and-study-guidance-hub/

Record keeping
It is essential that you keep good records during your project. This can be in the form of a traditional hand-written logbook with glued in plot or it can be some note keeping app on your tablet. The format doesn't matter, but it is important that you keep track of derivations, measurements, set-up, new ideas occurring during discussions etc.

Supervisor meetings
The schedule and style of supervisor meetings will be different from one supervisor to the next. There might also be variations in the supervision during the year. However, in general you should expect about one hour of discussion per week. These discussions will be with your project partner. Make sure to make the most of these discussions by being well prepared. Have plots ready (rather than trying to create them on the spot and wasting time), make a list of points you want to discuss, have a plan for work in the following week and present it.

Make sure to take notes during the meeting. If a white board is used for discussions, it might be helpful to take a photo at the end and then type up notes afterwards.

The supervisor discussions might be delegated by the supervisor to somebody else. This is in general fine but should not be done to the level that the supervisor is losing track of the project.

Time management
The level of effort for the different parts of the project are scheduled as

- Literature review 60 hours
- Main project 300+ hours.
- Meetings with supervisors 20 hours.
- MSci Project Report writing 80 hours.

This works out to about 14 hours per week. From previous years, the experience is that the workload tends to increase during the project. Also be aware that writing up the report takes a lot of time, so you should start early. As you will do exam preparation during the same time that you write up the report, planning is essential.

Computing
Many of you will need computational resources for the project. This can take the form of using resources within the research group, the computers on Level 3 in Blackett or indeed your own laptops. There is no requirement for a project to use your own computing resources, but you might choose to do so as it is the easiest. The Research Computing Service is also providing access to High Performance computing at College and this can be applied for as part of the project. See https://www.imperial.ac.uk/admin-services/ict/self-service/research-support/rcs/computing/ for details.

Back-ups
Keep back-ups of everything you do, for example on College OneDrive. This is important for your programs, the reports you are writing, the notes you take as you go along etc.

When things go wrong
You might feel that the MSci project is not progressing in the way that it should. It might be that you can't find any relevant literature, that you feel that you lack guidance on the use of some software, that equipment is missing or that supervision feels inadequate. Initially you should raise concerns with your supervisor. If you feel that this does not resolve the issue, then get in contact with the MSci project coordinator. Be aware that all projects have their ups and downs though – this is a part of any research project.

If you are in danger of missing some deadline, please get in contact with your personal tutor and myself as early as possible. It is simply not an option to hand in part of the MSci project late without mitigating circumstances. Work handed in late will be dealt with according to the College late hand-in regulations.

In rare cases, it might also be necessary to change the supervisor during the project due to illness or other extraordinary circumstances. If such a situation should arise, it will be dealt with on a case-by-case basis.

Feedback deadlines
As the project is a major piece of course work, it is not bound by the maximum of two weeks after the deadline for supplying feedback. The process of the marking is complex as it involves a large number of supervisors, assessors and panel members. The anticipated dates for supplying feedback are:

Component	**Anticipated date for feedback**
Literature review	20 Oct 2025
Poster	During allocated poster session
Report outline	20 Mar 2026
Viva	20 Mar 2026
Report and lay summary	July 2026 (after final degree results)

The feedback will include the preliminary grades for the components as well as verbal formative feedback on why the grades were awarded and how improvements can be made where appropriate. The grades are preliminary as they need to be confirmed by the examiners' meeting at the end of the academic year. For the final report, providing preliminary grades would be against College regulations and therefore final written feedback and grades are available only after the final degree results are confirmed.

Contact details
The contact details for the MSci project coordinator are:

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