PHAS5020M: MSc Research Project Marking Criteria

Component:	Weight	Marker
Interim Assessment*	10%	Supervisor
Continuous Assessment	30%	Supervisor
Written Report	35%	Assessor + Second Assessor
Presentation	10%	Assessor + Supervisor
Viva	15%	Assessor, with Supervisor present

*The Interim Assessment is composed of the Interim Report (5%) and the Initial Continuous Assessment (5%)

For any questions about the mark scheme, please contact:

Prof. Chris Nixon (c.j.nixon@leeds.ac.uk)

PHAS5020M MSc Research Project: Assessment Criteria

The nature of the module, in which every project is different and where theory/ simulations/ experiments/ data analyses coexist, makes it impossible to provide an exhaustive checklist of criteria. The statements in the tables below suggest some of the criteria that a supervisor or assessor might use against the corresponding headings on the mark sheets. These statements are therefore **indicative** of what characteristics students' work will have, rather than being **prescriptive**. It is up to the judgement of assessors to ascertain the quantity and quality of the work presented.

The MSc Research Project is defined as 'open-ended research going beyond taught material' where such material can be maths, coding, modelling, statistical analysis, virtual reality, applications, all related to physics.

Note that the use of Assistance, including Generative AI, is permitted for some—**but not all**—aspects of project work. For the specific guidance relevant to this work, please read the "Key Facts" page in the Assessment and Feedback area on the Minerva module page.

Specific guidance about the use of Assistance including Gen AI

You **can** use assistance for this assessment, **except** for the limitations stated here. You **cannot** use Gen AI to fabricate data unless it is an inherent part of the project design, and any such data must be acknowledged as synthetic data. Informal and peer assistance may be used in discussing the research, for proofreading documents and for aid in preparing for presentations and vivas. Translation tools may also be used during research, but not during the assessment components such as the presentation and viva. Students remain fully responsible for any work submitted for assessment.

Generative Artificial Intelligence (Gen AI) is a technology that generates content in response to written prompts. **You can use Gen AI in an assistive role to help you perform research**. For example, you may use Gen AI for the following: idea development, literature searching, clarification of basic scientific concepts, editing code, suggesting analysis routines, analysing or plotting your own data and/or project management. You should clearly describe how you have used Gen AI if it has been a significant part of your research. You can ask your project supervisor for advice about the effective use of Gen AI for your research.

Where you use Gen AI tools to support your work, you should always save copies of the outputs that the Gen AI tool produces for you as part of your project notebook. Your supervisor will be able to advise you on keeping good research records.

If you use Gen AI to generate data, you must make clear that this is "synthetic data" and clearly describe how the data was generated. For data that you have generated by laboratory experiments or computational work, you may be asked to provide the raw data as evidence of your research. You should always save copies of the raw data from your research.

You are responsible for the academic integrity of the work you submit, and the work must be an accurate reflection of your own learning, understanding and skills. You are responsible for the process of drafting and refining the work you submit, including generating content, revising, editing and proofreading. It is important to be aware of the limitations of any assistance you use, and you are expected to engage critically with any outputs of assistance.

If used, appropriate use of Gen AI will be graded as part of the Marking Criteria provided on Minerva.

Specific guidance about the Executive Summary

The Executive Summary is a requirement of the Final Report, and students will lose significant marks if they do not write one.

The Executive Summary replaces the usual Abstract and should provide a one-page overview of the project report that emphasises the importance and applicability of the work and area and gives the key results and findings. It should be written to be accessible to an educated lay person, for example, someone who might be starting a science degree. It is assessed both for its content as a fair representation of the material in the report and for the effectiveness of communicating the material at a suitable level for the intended audience. The Executive Summary will be particularly important to support the Second Assessor's understanding of the research performed because this assessor is typically a non-expert on the topic of the project (and may be from a different research group).

The executive summary should be formatted consistently with the rest of the report and may include figures where appropriate to the points being made. It should only include information and points made in the main text and is not an additional page of introduction or background. **There is a one-page limit on the length of the Executive Summary** and students may lose marks if their summary is longer than one page (and this is subject to the minimum font size of 11 point and a minimum margin width of 2.0 cm).

The Executive Summary is not expected to include references, because all statements should relate to matters in the main text of the report (where any necessary referencing is done). Exceptionally, statements that need further support that are not referenced in the main text should be supported with footnotes on the executive summary.

MSc Research Project Marking Criteria # Interim Report **Marked by supervisor** **All criteria weighted equally**

Length of report: Interim reports should typically be about **8 pages** long. This page count includes the complete report: title page, Executive Summary, main text, figures, tables, appendices and references. Reports must not exceed **10 pages**. Any material beyond page 10 will not be read or marked. Reports should normally use a minimum font size of **11 pt**, minimum margins of **2 cm**, and A4 pages. A standard journal-style format appropriate to the relevant sub-field may also be used; if you are unsure whether a proposed format is appropriate, discuss this with your supervisor. The appropriate length will depend on the nature of the project. Students are expected to present their work clearly and concisely; a longer report is not necessarily a better report.

For the report there is one pass/fail criteria.

Use of English: If the following criteria are not evident, you will fail the report assessment: (i) Paragraphs are used; (ii) There are links between and within paragraphs although these may be ineffective at times; (iii) There are attempts at referencing; (iv) Word choice and grammar are adequate (do not seriously undermine the meaning and comprehensibility of the argument); (v) Word choice and grammar are generally appropriate to an academic text.

Criteria	No evidence 0	Unsatisfactory 30	Almost 45	Acceptable 55	Good 65	Excellent 75	Exemplary 85
1.Provide a clear summary or abstract to convey context, proposed methodology and/or techniques, activities so far, and any initial results of the project to a graduate lay reader. (i.e. to a non-physicist).	No summary or abstract	Fails to communicate the nature of the project to a lay reader.	Summary or abstract describes some aspects of the project but may be too simple or too complex for the reader.	Clear presentation of the nature of the project, to a lay reader.	All facets clearly communicated to a lay reader.	Excellent clarity and insight for the lay reader.	Exceptional clarity and insight of context, methodology/techniques, activities, implications and limitations, for a lay reader.
2. Set out the report with clear structure using logical, numbered headings, subheadings and professional formatting. Write in good English paragraphs with logical flow of ideas, to present the project work.	No report submitted	No attempt to present the work clearly and professionally. Poor use of sentences and paragraph structures. Confusing to the reader. Language used is too brief or too verbose	Some headings used to divide up the work. But some deficiencies in presentation that distract from the readability of the work. Acceptable English, largely understandable. Sentences and paragraph	Headings are used to divide the report into sections, and presentation is acceptable. Good level of written English. There is a progression of ideas.	Report set out logically with good use of sections and formatting. Good quality of written English and use of vocabulary. With a logical flow of ideas.	Report set out professionally with excellent use of sections and formatting. Excellent quality of written English and use of vocabulary. Highly logical throughout. Language used is excellent in conveying a large	Report set out to the highest professional standard with exemplary use of sections and formatting. Exceptional quality of written English and use of vocabulary, with no typos. Highly logical throughout. Language used is exceptional in

			structures are not used consistently.			amount of information in an effective manner.	conveying a large amount of information in an effective, concise manner.
3. Clearly explain and justify the proposed methods and analysis techniques, clear presentation of the progress attained so far.	No discussion of methods / techniques for calculations, data collection or analysis are provided.	Methods / techniques are unclear or inadequately described.	Some description of methods / techniques, but with little justification.	Methods / techniques are adequately described.	Methods / techniques and their rationale are clearly explained.	Clear and well-justified choice of methods / techniques. The rationale for the chosen approach to the problem is clear and justified.	Exceptionally well-justified methods / techniques with advanced explanation.
4. Quality and usefulness of supporting figures and/or data presentation. **- Attention to detail with legends, tables, captions, symbols, equations, etc.** **- clarity in conveying the message.**	No report submitted	Figure / data presentation is very poor or inappropriate. Figures, tables or equations do little to support the report narrative. No attention to detail in formatting.	Some useful figure / data presentation is included, but important elements are unclear, poorly labelled, inadequately explained or weakly connected to the text. Poor attention to detail in formatting. e.g. Figures and tables presented with no description in the main text.	Figures, tables and equations generally support the report text, although some could be clearer, better selected or better integrated with the material presented. Lack of consistency in formatting.	Figures / data are presented clearly and appropriately. Figures, tables and equations are well selected, labelled and discussed, and effectively support the report.	Figures / data presentation is highly effective and concise. Figures, tables and equations are carefully selected and designed to highlight important aspects of the project and aid the reader's understanding.	Exceptional figure / data presentation. Visual and mathematical elements communicate complex ideas and methods and any preliminary results with outstanding clarity and insight, are fully integrated with the scientific argument, and materially enhance understanding of the work.
5. Provision of a clear description of the future direction of the project	No report submitted	Future direction of research is unclear or inadequately described.	Some description of future direction is provided, but with little detail or reasoning.	Reasonable description of future research plans is presented.	Good description of research plans is presented in detail and with appropriate planning.	Very good description of research plans with details including a timeline for the project and discussion of risk management	Exceptional description of research plans with details including a clear timeline for the project, discussion of risk management and some achievable

							extension goals provided
6. Situate the project and current progress critically in the context of relevant literature. References should be appropriate, relevant, credible, and consistently cited.	No engagement with relevant literature.	Very limited engagement with literature. Sources are poorly chosen or of questionable relevance, with little connection to the project.	Limited engagement with relevant literature. Some sources are inappropriate or poorly connected to the project, with limited use of literature to support the scientific argument.	Appropriate literature is used to provide context for the project and/or discuss the findings. Sources are generally relevant, although engagement is mainly descriptive. Citation and formatting may be inconsistent.	Good engagement with relevant, appropriate literature to motivate the research and interpret the findings. Sources are well chosen and generally used effectively to support the scientific argument. References are consistently cited and formatted.	Strong and critical engagement with high-quality, relevant literature. The literature is used effectively to establish the research context, justify the approach and critically interpret the findings. References are appropriately selected and consistently cited.	Outstanding critical engagement with the literature throughout. Sources are selected with excellent scientific judgement and integrated into a sophisticated discussion of the research context, findings, limitations and alternative interpretations. Referencing is professional and consistent.

MSc Research Project Marking Criteria **Initial Continuous Assessment** **marked by supervisor** **All criteria equally weighted**

Descriptor	No evidence 0	Unsatisfactory 30	Almost 45	Acceptable 55	Good 65	Excellent 75	Exemplary 85
1. Keeping a 'project notebook' of weekly progress including methods, summary or list of raw data, analysis and key results. Must be written in English. Can be electronic.	No notebook or evidence of record keeping	Limited record keeping, confusing, difficult to follow. Not up to date.	Record keeping, too brief and/or missing key information necessary to replicate work.	Record keeping dated, clear and logical. But evidentially not always up to date. or missing some information necessary to replicate work.	Good quality of record keeping. Logical, dated, consistent. Evidence that notes are made contemporaneou sly with the activities.	High quality of record keeping. Logical, dated, consistent. All information and data recorded contemporaneou sly.	Exceptional record keeping. Very easy for supervisor to follow. All information and data recorded contemporaneously and thoroughly. Evidence of progression of ideas or methods.
2. Come prepared to all supervisions (including summaries of work done, proposals, questions and suggested solutions.)	No evidence of any preparation for any supervision meetings.	Only occasionally prepared a little for supervision meetings.	Sometimes came with some level of preparation	Sometimes came with good level of preparation	Typically came with good level of preparation	Typically came comprehensively prepared.	Always came comprehensively prepared, with all documentation readily accessible.
3. Set up sensible plan and timeline early in the project, monitor progress and adapt as needed.	No project plan.	Little evidence of creating a project plan.	Some attempt at creating and using a project plan.	Acceptable project plan and timeline, reviewed from time to time.	Good project plan and timeline, reviewed and adapted regularly.	Comprehensive project plan and timeline, proactively reviewed and adapted at most supervision meetings.	Fully comprehensive project plan and timeline, proactively reviewed and adapted at every supervision meeting.
4. Develop independence through learning, collaboration, and problem-solving	No engagement with training or with the research group. Relies entirely on others without attempting to do the work.	Inconsistent engagement with training opportunities, rarely attempts independent tasks.	Limited participation in training. Shows awareness of problems but little evidence of problem solving. Relies heavily on	Attended some training. Some engagement with other group activities. Some evidence of beginning to problem solving. Some evidence of	Engaged with training. Asked questions. Engaged with other group members. Evidence of trying to solve problems.	Proactively sought training. Asked sensible questions. Engaged with other group members. Able to solve some problems	Proactively sought training. Asked insightful questions. Supported other group members. Solved problems and shared solutions with others.

			guidance from others.	developing independence with support.	Showed some evidence of developing into an independent researcher.	themselves. Demonstrates they are growing into an independent researcher.	Demonstrates strong development into an independent researcher.
5. Apply relevant professional and ethical considerations (e.g. Health and Safety, risk assessments, human participants, Data management, confidentiality, integrity, sustainability, professional use of shared facilities).	Disregard for professional, ethical and safety considerations	Some awareness of need for professional behaviours, but not much exhibited.	Acceptable, baseline consideration of any professional and ethical issues.	Acceptable consideration of any professional and ethical issues.	Evidence of good attention to professional and ethical issues. Or clear acknowledgement of no ethical issues to address.	Comprehensive and responsible attention to professional and ethical issues. All well documented, even if no issues to be considered.	Excellent and highly responsible attention to professional and ethical issues. All well documented. If no issues to be considered, then this is addressed with reasons.

MSc Research Project Marking Criteria **Continuous Assessment** **marked by supervisor in agreement with assessor** **Criteria are weighted as indicated in the descriptor**

Descriptor	No evidence 0	Unsatisfactory 30	Almost 45	Acceptable 55	Good 65	Excellent 75	Exemplary 85
Rationale:							
1. Understand and contribute to the development of an investigation consistent with the identified research question/focus, adapting the approach where appropriate. – 10%	No research question and no attempt to design investigation.	Investigation does not address the research question or no research question.	Poorly described research question with limited relationship to investigation.	Investigation broadly related to research question.	Investigation designed to answer a research question that addresses a gap in the literature.	Investigation designed to fully answer a well-articulated research question that addresses a gap in the literature.	Investigation designed to fully address well-articulated research questions, fully aligned with an identified research gap from the literature.
Project Management:							
2. Set up sensible plan and timeline early in the project, monitor progress and adapt as needed. – $8\frac{1}{3}$ %	No project plan.	Little evidence of a project plan.	Some attempt at creating and using a project plan.	Acceptable project plan and timeline, reviewed from time to time.	Good project plan and timeline, reviewed and adapted at regularly.	Comprehensive project plan and timeline, proactively reviewed and adapted at most supervision meetings.	Fully comprehensive project plan and timeline, proactively reviewed and adapted at every supervision meeting.
3. Kept a good 'project notebook' of weekly progress including methods, summary or list of raw data, analysis and key results. Must be written in English. Can be electronic. – $8\frac{1}{3}$ %	No project notebook or evidence of record keeping	Limited record keeping, confusing, difficult to follow.	Record keeping, but clearly there are missing sections or periods of time (without explanation)	Sound record keeping. Logical but limited analysis and/or missing information	Good quality of record keeping. Logical, dated, consistent, evidence of some critical analysis.	High quality of record keeping. Logical, dated, consistent, evidence of ongoing critical analysis.	Exceptional quality of record keeping. Highly logical, dated, extensive, evidence of ongoing critical analysis.
4. Came prepared to all supervisions (including summaries of recent work, proposals, questions and suggested solutions.) – $8\frac{1}{3}$ %	No evidence of any preparation for any supervision meetings.	Only occasionally prepared a little for supervision meetings.	Sometimes came with some level of preparation	Sometimes came with good level of preparation	Typically came with good level of preparation	Typically came comprehensively prepared. Evidence of leading in the weekly meetings	Always came fully prepared beyond expectations. Leading the weekly meetings.

Descriptor	No evidence 0	Unsatisfactory 30	Almost 45	Acceptable 55	Good 65	Excellent 75	Exemplary 85
Execution of the project:							
5 Competent in experiments/ coding/data collection/ analysis/etc as appropriate. (Note: The content of the project can be as wide as maths, coding, modelling, statistical analysis, applications, all related to physics). **High quality and quantity of work undertaken beyond that taught in core modules. – 45%**	No attempt to generate project outputs. Actively damaged research facilities.	No care and attention leading to unreliable outputs. Negligent use of research facilities. No work undertaken beyond core taught material.	Obtained some useful outputs, but fewer or lower quality than expected. Competent if not efficient use of research facilities.	Competently produced acceptable quality and/or quantity of useful outputs, with some attempt to consider uncertainties.	Competent at producing good quality and quantity of trustworthy outputs with some consideration of reliability and uncertainty. Delivered project as intended, going beyond core taught material.	Care and attention to detail producing high quality and quantity of trustworthy outputs with consideration of reliability and uncertainty. Delivered project as intended to a high standard. Outputs well beyond taught material .	Care and attention to detail producing high quality and quantity of trustworthy outputs with consideration of reliability and uncertainty, well beyond taught material and well beyond what is expected.
6. Drive the project: Learn from others and become independent in all aspects of the project. – 20%	No engagement with training or with the research group. Relies entirely on others without attempting to do the work.	Inconsistent engagement with training opportunities, rarely attempts independent tasks.	Limited participation in training. Shows awareness of problems but little evidence of problem solving. Relies heavily on guidance from others.	Attended some training. Some engagement with other group activities. Some evidence of beginning to problem solve. Some evidence of developing independence with support. Takes note of feedback.	Engaged with training. Asked questions. Engaged with other group members. Evidence of trying to solve problems. Took on board feedback from supervisor or other researchers. Showed some evidence of developing into an independent researcher.	Proactively sought training. Asked sensible questions. Engaged with other group members. Attentive and acting on feedback. Able to solve some problems themselves. Demonstrates they are growing into an independent researcher.	Proactively sought training. Asked insightful questions and sought feedback on their work. Supported other group members. Solved problems and shared solutions with others. Demonstrates strong development into an independent researcher.

MSc Research Project Marking Criteria **Report** **Marked by both 1st and 2nd assessor** **All criteria weighted equally**

Length of report: Project reports should typically be about **32 pages** long. This page count includes the complete report: title page, Executive Summary, main text, figures, tables, appendices and references. Reports must not exceed **50 pages**. Any material beyond page 50 will not be read or marked. Reports should normally use a minimum font size of **11 pt**, minimum margins of **2 cm**, and A4 pages. A standard journal-style format appropriate to the relevant sub-field may also be used; if you are unsure whether a proposed format is appropriate, discuss this with your supervisor. The appropriate length will depend on the nature of the project. Students are expected to present their work clearly and concisely; a longer report is not necessarily a better report.

For the report there is one pass/fail criteria.

Use of English: If the following criteria are not evident, you will fail the report assessment: (i) Paragraphs are used; (ii) There are links between and within paragraphs although these may be ineffective at times; (iii) There are attempts at referencing; (iv) Word choice and grammar are adequate (do not seriously undermine the meaning and comprehensibility of the argument); (v) Word choice and grammar are generally appropriate to an academic text.

Criteria	**No evidence 0**	**Unsatisfactory 30**	**Almost 45**	**Acceptable 55**	**Good 65**	**Excellent 75**	**Exemplary 85**
1.Provide clear one-page executive summary to convey context, activities, results, implications and limitations of the project to a graduate lay reader. (i.e. to a non-physicist).	No executive summary	Fails to communicate the nature of the project to a lay reader.	Executive Summary describes some aspects of the project but may be too simple or too complex for the reader.	Clear presentation of the nature of the project, to a lay reader.	All facets clearly communicated to a lay reader.	Excellent clarity and insight for the lay reader.	Exceptional clarity and insight of context, activities, implications and limitations, for a lay reader.
2. Set out the report with clear structure using logical, numbered headings, subheadings and professional formatting. Write in good English paragraphs with logical flow of ideas, to present the project work.	No report submitted	No attempt to present the work clearly and professionally. Poor use of sentences and paragraph structures. Confusing to the reader. Language used is too brief or too verbose	Some headings used to divide up the work. But some deficiencies in presentation that distract from the readability of the work. Acceptable English, largely understandable. Sentences and paragraph	Headings are used to divide the report into sections, and presentation is acceptable. Good level of written English. There is a progression of ideas.	Report set out logically with good use of sections and formatting. Good quality of written English and use of vocabulary. With a logical flow of ideas.	Report set out professionally with excellent use of sections and formatting. Excellent quality of written English and use of vocabulary. Highly logical throughout. Language used is excellent in conveying a large amount of	Report set out to the highest professional standard with exemplary use of sections and formatting. Exceptional quality of written English and use of vocabulary, with no typos. Highly logical throughout. Language used is exceptional in conveying a large

			structures are not used consistently.			information in an effective manner.	amount of information in an effective, concise manner.
3. Clearly explain and justify the methods and analysis used, critically interpret the results in the context of relevant theory and/or previous work, and evaluate their reliability, uncertainties and possible alternative interpretations. Identify appropriate future work.	No methods of data collection, calculation or analysis provided.	Methods and analysis are unclear or inadequately described.	Some description of methods and analysis, but with little justification or interpretation.	Methods and analysis are adequately described. Some interpretation of results in the context of other work, with limited consideration of reliability, uncertainty or future work.	Methods and their rationale are clearly explained. Results are appropriately analysed and interpreted in the context of relevant theory and/or previous work. Reliability and key uncertainties are considered. Sensible future work is proposed.	Clear and well-justified choice of methods and analysis. Results are critically interpreted in the context of relevant theory and/or previous work, with evaluation of reliability, significant uncertainties and plausible alternative interpretations. Future work is well justified.	Exceptional critical evaluation of the methods, analysis and results. Reliability and uncertainties are rigorously assessed, competing or alternative interpretations are critically evaluated, and conclusions are appropriately qualified. Future work follows insightfully from the findings and limitations.
4. Quality and usefulness of data presentation. **- Attention to detail with legends, tables, captions, symbols, equations, etc.** **- clarity in conveying the message.**	No report submitted	Data presentation is very poor or inappropriate. Figures, tables or equations do little to support understanding of the results. No attention to detail in formatting.	Some useful data presentation is included, but important elements are unclear, poorly labelled, inadequately explained or weakly connected to the text. Poor attention to detail in formatting. e.g. Figures and tables presented with no description in the main text.	Figures, tables and equations generally support the presentation of results, although some could be clearer, better selected or better integrated with the discussion. Lack of consistency in formatting.	Data are presented clearly and appropriately. Figures, tables and equations are well selected, labelled and discussed, and effectively support understanding of the results.	Data presentation is highly effective and concise. Figures, tables and equations are carefully selected and designed to highlight important results and strengthen the scientific argument.	Exceptional data presentation. Visual and mathematical elements communicate complex results with outstanding clarity and insight, are fully integrated with the scientific argument, and materially enhance understanding of the work.

5. Quality and quantity of research beyond that taught in core modules. (Research can be maths, coding, modelling, statistical analysis, applications, all related to physics)	No report submitted	Level of all material is well below 4th year. No elements/activities are beyond purely taught material.	Level and/or amount of content shows some engagement beyond core taught material.	Reasonable amount of content beyond taught core.	Good quality and/or quantity of content beyond core taught material.	Very good quality and quantity of content beyond core taught material, showing clear evidence of new skills/content learned.	Exceptional quality and quantity of content beyond core taught material. Really engaging in novel research.
6. Situate the project and its findings critically in the context of relevant literature. References should be appropriate, relevant, credible, and consistently cited.	No engagement with relevant literature.	Very limited engagement with literature. Sources are poorly chosen or of questionable relevance, with little connection to the project.	Limited engagement with relevant literature. Some sources are inappropriate or poorly connected to the project, with limited use of literature to support the scientific argument.	Appropriate literature is used to provide context for the project and/or discuss the findings. Sources are generally relevant, although engagement is mainly descriptive. Citation and formatting may be inconsistent.	Good engagement with relevant, appropriate literature to motivate the research and interpret the findings. Sources are well chosen and generally used effectively to support the scientific argument. References are consistently cited and formatted.	Strong and critical engagement with high-quality, relevant literature. The literature is used effectively to establish the research context, justify the approach and critically interpret the findings. References are appropriately selected and consistently cited.	Outstanding critical engagement with the literature throughout. Sources are selected with excellent scientific judgement and integrated into a sophisticated discussion of the research context, findings, limitations and alternative interpretations. Referencing is professional and consistent.

MSc Research Project Marking Criteria **Presentation** **Marked by Supervisor and Assessor 1** **All criteria weighted equally**

Talks should be aimed at a physics audience (but not expert in your field) and last 20 minutes, followed by 5 minutes Q&A.

Criteria	No evidence 0	Unsatisfactory 30	Almost 45	Acceptable 55	Good 65	Excellent 75	Exemplary 85
1. Clarity, accessibility and effectiveness of slides	No slides or agreed alternative supporting materials are provided where these are required.	Slides are largely unreadable, inaccessible, irrelevant or so poorly organised that the important information cannot be identified.	Some relevant information is shown, but excessive text, unclear layout, small text, weak contrast, poorly labelled figures or blurred visuals frequently make the material difficult to interpret.	Slides are mostly clear and relevant. Most important information can be identified, although there are some problems with text density, layout, labelling, legibility or accessibility.	Slides are clear, consistently legible and appropriately organised. Text and visuals support the message, and figures are adequately labelled and explained.	Slides are very effectively selected and organised. Visual hierarchy, concise text and clearly explained figures direct attention to the main findings and strengthen audience understanding.	Slides communicate complex information with exceptional clarity and efficiency. They are highly accessible to the intended audience and make a substantial contribution to understanding the argument and take-home message.
2. Communicate clearly at a suitable pace	No communication (e.g. no audio, captions, or agreed alternative)	The presentation is very difficult to understand. The principal message cannot be followed consistently because of unclear explanation, organisation, or pacing.	Parts of the presentation are understandable, but inconsistent clarity, pacing, or explanation frequently makes it difficult to follow.	The presentation is mostly understandable and delivered at a generally suitable pace. Some explanations, transitions or emphases are unclear, but the main message can be followed.	Communication is clear throughout. The pace, explanations and supporting materials enable the intended audience to follow the presentation, and important information is appropriately emphasised.	Consistently clear and audience focused. Deliberate choices in explanation, emphasis, examples, or the delivery sustained attention; which resulted in strengthening the understanding of the main message.	Communication is exceptionally effective and inclusive. The presentation creates a strong intellectual connection with the audience, makes complex ideas readily understandable and sustains attention by using carefully chosen

							communication methods.
3. Convey the message appropriate to a general physics audience: context, research activities, project results and implications	No presentation	Structure is very incoherent. Essential elements are absent, substantially incorrect or do not appropriately represent the project undertaken.	Some structure and relevant scientific content are present, but are significant omissions, inaccuracies or problems with the technical level.	Reasonable structure and broadly accurate account of the project. Most elements are included and the principal message is understandable, although some of the content is insufficiently explained.	Scientifically accurate and logically structured account. Context, activities or methods, results and implications are clearly connected and appropriate for a general physics audience.	Scientifically rigorous, very clear and coherent account of the project. Technical information is carefully selected and explained, with a clear and memorable scientific message.	Exceptionally well-constructed and scientifically rigorous account of the research undertaken. Integrates context, approach, evidence, interpretation and implications into a compelling and intellectually coherent argument with a clear and lasting take-home message.
4. Keep to time and use the allocated time effectively	No presentation	A presentation is attempted, but its duration is so limited or excessive that a coherent account is not delivered, a substantial part is missing, or it continues well beyond the allocated period despite clear prompts.	Much too short or too long. (< 12 mins or unable to wrap up even when prompted after the 20 mins). The timing impairs the communication of the project.	A little too short or too long. (< 15 mins or not wrapping up succinctly after 20 mins.). Most of the essential content is communicated.	+/- 2.5 mins. The main sections are completed, although some material may be slightly rushed, extended or insufficiently prioritised.	+/- 1 min. Time is very well managed, appropriate emphasis is given to each section, and the presentation reaches a clear conclusion.	+/- 30 sec. Complex material is carefully prioritised, transitions are efficient and the conclusion is concise and well supported.
5. Respond effectively to questions.	No response to questions including agreed	Very poor responses. Incorrect or	Reasonable attempt to respond, but the	Reasonable answers, that largely address the question and	Good answers, addressing the question, appropriate to	High-quality accurate answers, that are well supported. They	Responses demonstrate exceptional depth of understanding

	alternative format.	unrelated to the questions.	understanding of the topic is weak.	are appropriate to audience.	the audience. Limitations or uncertainty are acknowledged where appropriate.	demonstrate strong understanding and provide appropriate interpretation or evaluation.	and intellectual independence. They integrate evidence, recognise limitations, consider alternative interpretations and develop insightful implications.

MSc Research Project Marking Criteria **Viva** **Marked by Assessor 1, with supervisor in attendance** **All criteria equally weighted**

The viva will last about 30 minutes.

Criteria	No evidence 0	Unsatisfactory 30	Almost 45	Acceptable 55	Good 65	Excellent 75	Exemplary 85
1. Justify the rationale, methods and conclusions of your project.	Not able to answer any questions.	Not able to explain the project clearly, even when prompted.	Able to explain what was done and found, but not to articulate the reasons for it.	Able to explain the work undertaken, and some of the reasons for choices. Can clearly state the conclusions drawn.	Clear explanation of the research undertaken. Able to explain the reasons for the methods used and conclusions drawn.	Excellent explanation of the research undertaken, evidencing good understanding of conclusions. Able to discuss the merits of different techniques and justify the approach chosen.	Exceptional clarity and logic in explaining the research undertaken, evidencing great understanding of the implications of results. Able to discuss the relative merits of different techniques and justify the approaches chosen. Takes ownership.
2. Describe aspects in detail to evidence that you undertook the work.	Not able to answer any questions.	Descriptions so poor that it is doubted they undertook the work themselves.	Able to describe in general terms, but not detail.	Able to describe all techniques that were asked about satisfactorily.	Able to describe all techniques that were asked about in good detail.	Gives very clear account, to show deep understanding of what was done.	Exceptional level of knowledge about the techniques employed.
3. Answer questions that take a wider approach on the usefulness of your methods and/or results.	Not able to answer any questions.	Only describes actions completed; lacks analysis, reflection, or insights.	Some idea of project results being useful elsewhere.	Able to respond about how their project may have relevance elsewhere.	Good understanding of areas where their project work may have relevance.	Able to respond in detail about the wider context of their project.	Exceptional understanding of the wider field and how their research may have relevance to others.

For all assessments: Marks higher than 85% for individual criteria can be awarded in exceptional cases, where the student's work goes beyond the "Exemplary" criteria. This requires the member of staff who is assessing to make a case in writing. This will be considered holistically by the project team.