L-Università ta' Malta

DEPARTMENT OF APPLIED BIOMEDICAL SCIENCE

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Special Project Guidelines 2025-2027

for students and supervisors

v 1.6 November 2025

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Goals of the special project in the ABS BSc(Hons) course

- To introduce the student to the research process,
- To provide an opportunity for extensive study of a particular topic,
- To develop a research proposal (within the guidelines) following a review of a topic,
- To carry out a laboratory based project becoming familiar with lab based techniques,
- To perform adequate data analysis and discuss results in the light of literature in the field,
- To learn how to communicate research results clearly, both in the written format and as a presentation.

The undergraduate special project need not necessarily contribute additional knowledge to the field and it does not have to be exhaustive. Data generation and data handling should, however, form part of the work. The work carried out, including laboratory work, data analysis and write-up of the project, should be the equivalent of 10 weeks of full-time work.

Project Time-line

14th November 2025	Students choose a project after discussion with potential supervisors
20th February 2026 @ noon	Submit research proposal *As .pdf, emailed to Departmental Secretary: app-biomedsci.healthsci@um.edu.mt*
9th – 13th March 2026	Presentation of research proposal including **Budget request**
27th March 2026	Receive official approval of proposed project
March - April 2026	Submit online research ethics application (URECA form)* *For this submission date, reply from FREC/UREC should be received by end June*
15th May 2026 (latest)	1st draft of literature review given to supervisor
26th June 2026	Submit literature review *Sofy copy only emailed to Departmental Secretary*
16th April 2027 (latest)	1st draft of special project to supervisor
28th May 2027 @ noon	Submit special project *In pdf format emailed to Departmental Secretary:* *app-biomedsci.healthsci@um.edu.mt*
1st - 10th July 2027 *exact dates tbc*	Poster presentation of special projects
October 2027 *email from Dept. secretary*	Submission of corrected dissertation + embargo form if necessary *1 hard bound copy to supervisor and 1 electronic copy to Departmental Secretary* ǂ

* An updated list of the FREC schedule, including deadlines to submit applications can be found at https://www.um.edu.mt/healthsciences/students/researchethics.
The URECA portal can be accessed from:
https://www.um.edu.mt/research/ethics/redp-form/frontEnd/

ǂ Students should check with supervisor regarding the hard bound copy. Some supervisors prefer an electronic copy.

Project titles and allocation of projects

Available project titles and a short description will be submitted by potential supervisors by the end of October. During the first week of November, during research methods, potential supervisors will have the opportunity to outline proposed projects to the class. Following this, students will have until the end of November to approach supervisors to discuss the project in greater detail.

A document with the list of all available titles and supervisor contact details will be uploaded on VLE at the start of November. Each student should number the projects according to their preferences, rename the file to include their name and email it back to the department. The deadline for handing in project preferences will be the first working day of December.

Allocation of projects will be based on merit, using the final average mark for the 2nd year. Each student's expressed preference will be consulted in the order in which the students ranked at the end of 2nd year. Their highest-ranked, still available, project title will be allocated as the special project. Project allocations will be communicated to students and supervisors by the end of the week, after which students should liaise with their supervisor(s) to start working on a research proposal.

The Research Proposal

The role of the student and the role of the supervisor

The research proposal is the assignment for MLS3013 (Research Methods). The supervisor should guide the student on the reading required, however, the student should carry out his/her own literature searches. **The supervisor should make time available to discuss difficulties encountered in interpreting or understanding the literature.**

The supervisor should explain the project being proposed, including the research question being asked, its purpose and the means with which the research question is going to be tackled (the methodology). The student may require the supervisor's guidance to calculate a budget for the project and to establish a work-plan and time-line. It is, however, up to the student to prepare a complete draft of the research proposal and give it to the supervisor for correction at least 1 week before the submission deadline. **The supervisor will go through the research proposal once, correcting as necessary.** Thus, it is up to the student to ensure that the submitted draft is of sufficient quality. Supervisors should return the corrected material to the students allowing sufficient time for the student to carry out the required corrections by the submission deadline.

The scope of the Research Proposal

The scope of the research proposal is to provide the evaluators with a written plan of the research project. It should identify the research question which will be tackled; define the samples, instrumentation, research design and procedures to be used; describe the data analysis that will be carried out; and give a budget and a time-frame.

The research proposal should include all of the following sections in this order:

- Brief Abstract
- Statement of the problem
- The Scientific hypothesis (where relevant)
- Background and significance of the problem
- Objectives
- Materials and Methods
- Time-line
- Available facilities
- Budget (a complete costing of the project not just the moneys being requested)
- Ethical Considerations
- References

Title

The title should be clear precise and not very long.

This will be the title of the special project. If it needs to be modified after the submission of the proposal, approval needs to be obtained from Faculty Board. Submit a request through the Departmental Secretary as early as possible.

If the project already has Ethics approval, an email should be sent to the Chairperson and Secretary of the Faculty Research Ethics Committee (FREC) with the old title, the new title, the reason for change in title and a declaration that the study design will not change.

Abstract

The abstract should be not more than 250 words and a single paragraph. It is a summary of the entire proposal including:

- Brief background information on the topic
- Why the research is necessary
- Aims of the study
- Methodology that will be applied

Note: Abstracts should not include references

The abstract will need to be re-written to also include results and conclusions prior to submission of the special project at the end of 4th year.

Statement of the problem

The statement of the problem identifies the variables under investigation and states the research question in clear, specific terms. This section should also outline why it is important to carry out the proposed research.

The Research Hypothesis

The research (or scientific) hypothesis is not a question, it is a statement of what you expect or predict your research outcome to be based on your research question and current scientific evidence. (For example: drug 1 and drug 2 are both used to treat the same condition and it is expected that both drugs have the same efficacy, or drug 1 and drug 2 are both used to treat the

same condition, but drug 1 is expected to have a better efficacy). Your research project will test this hypothesis.

Note: The research hypothesis **<u>should never</u>** be written as H_0 H_1 pair of statements. This applies to all parts of the proposal and the special project.

Background and significance of the problem

This section is an introduction to the topic which sets the context of the research area. It should tie in with the statement of the problem and should contain sufficient detail to allow the reviewer to understand the specific research question which will be tackled during the project.

Objectives

The objectives are a list of what the research is aiming to achieve during the research period.

The aim summarises the overall intention in the project.
The objectives, and there are usually more than one, are the specific steps that will be taken to achieve the aim.

Materials and methods

This section should outline what methodology will be used to answer the research question. This should not include detailed protocols; it is simply an identification of the techniques that will be used. The section must outline in some detail the planned data analysis.

Time-line

This is diagrammatic representation of the work-plan, showing the time-frames within which each part of the project will be completed.
It is recommended that lab work is finalised by the end of the first semester of 4^{th} year to allow enough time for data analysis and writing up of the special project.

Available facilities

The facilities (laboratories, equipment, sample collections, etc.) that need to be used for the research project should be outlined. Permissions to use these from the relevant head of lab/responsible person should be obtained and included as an appendix.

Budget

This section should include a complete costings exercise for the consumables and reagents needed for the project and should indicate the source of funding for each item.
Supervisors should endeavour to obtain funding for their projects. In the event that this is not possible a request should be forwarded by the student to the Head of Department.

Ethical considerations

Before the start of any experiments or data collection, a Research Ethics and Data Protection review should be carried out by filling in the URECA from which can be found by following the appropriate link on the UREC website: https://www.um.edu.mt/research/ethics/redp-form/frontEnd/

This form needs to be filled in by everyone regardless of the project being undertaken. Any research that involves human participants, their tissues or their data needs to be submitted for ethical assessment. Students joining already approved projects also have to fill in the URECA form, stating clearly in Part 1 and Part 3 that this research forms part of an already approved project, giving the approval number.

The REDP Form guides applicants through 3 parts:
Part 1. Applicant and Project details;
Part 2. Self-assessment and Detailed evaluation
Part 3. Submission details.

As Part 2 is being filled, any question to which the reply is Yes/Unsure will open a further text box. This text box should be used for a detailed explanation of the point in question. Give as much detail as possible; these questions will guide you so that nothing is overlooked during the planning stage. At the end of Part 2, the applicant has to determine whether there is a need to submit the application for ethics review or for records. If YES/Unsure has been ticked for any statement in Part 2, the application needs to go for ethics review by selecting Yes/Unsure as answer to question 22.

The URECA form can be saved and re-accessed from the UREC portal at a later stage to make changes or continue filling in information. Once the form is completed it can be submitted to FREC by selecting Submit. At this point **the application goes to the supervisor for endorsement. The application will be sent on to the FREC secretary only once the supervisor has endorsed it. Unendorsed applications will remain stuck within the system.**

Prior to filling in the online form, the applicants should:

- Read the UM Research Code of Practice: https://www.um.edu.mt/__data/assets/pdf_file/0011/338942/ResearchCodeofPractice.pdf,
- Read the UM Research Ethics Review Procedures: https://www.um.edu.mt/__data/assets/pdf_file/0006/338901/ReserachEthicsReviewProcedures.pdf,
- Refer to the exhaustive Frequently Asked Questions: https://www.um.edu.mt/urec/faq.

The Faculty Research Ethics Committee (FREC) reviews and approve REDP applications on behalf of the University. For projects that deal with special categories of personal data as defined in the GDPR, the URECA form is also referred to the University Research Ethics Committee (UREC-DP) for review and recommendation to the Office of the Data Commissioner. It is the data Commissioner who grants the final approval which is then forwarded to the applicant.

FREC has a list of guidelines, sample information sheets and consent forms which applicants should make use of. These, together with a schedule of FREC meeting dates, including deadlines of submission of REDP forms can be found on the Faculty's website: https://www.um.edu.mt/healthsciences/students/researchethics.

Late applications will not be considered.

Applications should include all necessary supporting documentation as outlined in Part 3 of the URECA form. These include (but are not limited to), Consent forms, Information letters, Questionnaires and Permissions. Note that for already approved projects the only attachment needed is a copy of the prior approval and a letter from the supervisor formally giving the student access to already collected data (if secondary data will be used).
For projects recruiting research subjects from MDH, obtaining all the necessary permission may be a lengthy procedure, thus it is acceptable to submit the URECA form without the final go ahead from MDH-DPO and MDH-CEO. All other permissions need to be obtained prior to submission.

The supervisor should go through the ethics documentation thoroughly since it is the supervisor's responsibility to ensure that the work being carried out follows ethical standards and that the details provided in the URECA form are accurate.
It is the responsibility of both student and supervisor to ensure that the information provided in the form is accurate and the right option (review or records) is selected. FREC and UREC carry out regular audits on applications submitted for records.

Official approvals are sent by email, generally within 30 days of application submission deadline if the only FREC approval is required. If UREC-DP approval is also requited, replies are generally received within 2 months.
If a formal letter of approval is required, the applicant needs to ask FREC for this.

References

The references section should include a reference list which gives the full details of the in-text references used throughout the proposal. References should be complete, relevant, recent and a substantial proportion should be from scientific journals. The referencing style used is the Harvard style adopted by the UM: https://www.um.edu.mt/library/referencingguides. These guidelines are updated regularly. Always check the latest guidelines.

Formatting issues

The research proposal should be up to 8 pages in length (10 pages if the reference list is included), it should be written in double line spacing using standard fonts in text size 11-12 point. Headings and sub-headings may be in a larger font. Margins should be at least 2.5cm, with the exception of the left margin where extra margin width should be allowed for spiral binding.

Sentences should never start with a digit. If a sentence starts with a number, it should be written as text. Appropriate scientific and mathematical symbols should be used throughout. It is recommended that the Insert symbol function in Word is used so that symbols transfer well across word processing platforms.

All tables and figures must be referred to in the text prior to their inclusion in the text. Numbering for figures (and tables) should be consecutive, restarting with each chapter.

In Chapter 1: Figure 1.1, Figure 1.2 etc… In Chapter 2: Figure 2.1, Figure 2.2 etc…

Tables should be numbered independently of figures.

Each figure should have a figure number, a figure title and a figure legend. Similarly, each table should have a table number, a title and a brief description. Figures and tables should be able to stand alone; their title and description should be enough for the reader to understand the information being presented in the figure or table.

Figure legends should be written below the figure, ensuring they are on the same page.
Table legends should be written above the table, ensuring they are on the same page.

Evaluation of the Research Proposals

The research proposals will be evaluated and marked by the Special Projects sub-committee. The role of the sub-committee is to ensure a suitable and harmonised level of work, keeping in mind ethical considerations, budget, time-constraints and the ultimate goals of the research project.

If deemed necessary, the sub-committee will make recommendations for modifications to the project design to ensure that the proposed work fits within budgetary and time constraints. If recommendations for changes are made, a one-to-one meeting is held with each student explaining these recommendations. A student will not lose marks for any recommendations to alter the level of the project or the work to be carried out.

Marks are given based on the marking scheme. Details of the techniques to be used are not required in the research proposal.

Marking scheme for Special Projects

Abstract (10 marks)
Should be concise and should give a good overview of the statement of the problem and its significance, the aim of the study and the methods and study design that will be used to answer the research question.

Statement of the Problem (10 marks)
The lacuna in the field that is being tackled in the proposed study should be highlighted and explained.

Background and Signficiance of the Problem (25 marks)
This should include a brief overview of the background to this problem. The importance of the problem should be highlighted.

Aim and Objectives (10 marks)
These should be brief and there should be only one or at most two aims

Methods (10 marks)
The study design or approach needs to be described well and mention of the techniques that will be used. Attention needs ot be given to prenalytical variables and the source of the samples if relevant.

Data analysis (5 marks)
Briefly outline the analysis and state which statistical tools will be used to analyse the data.

Timeline, Facilities, Ethics, Budget (15 marks)
These are described to students in Research Methods. In the Ethics section, if relevant, one should highlight important factors such as if written informed consent has been obtained or is going to be obtained, if there is going to be any return of results to research subjects, or if samples are going to be anonymised. Approaches for consent for vulnerable people or children should be stated. Ethics approval numbers already available should be included.
Re Budget one should estimate the entire cost of the study, including materials that will be sponsored or that will be covered through Mater Dei or University. Then one should specify what is covered from where and if any request for funds is being made from University for the project.

Overall presentation (15 marks)
Attention to proper use of abbreviations, appropriate referencing and Reference list, Figure and Table numbers and legends (including the Timeline and Budget table), level of English

Presentation of the Research Proposal

The presentation of the research proposal – which takes place in mid-March – is part of the project evaluation process and may influence the mark of the research proposal. Presentations are expected to be 8 – 9 minutes long with a further 3 – 4 minutes of question time. **Students should go through their presentation, at least once, with their supervisor to ensure that it is clear and can be delivered within the set time-slot.**

References should be added after the text and as a footnote on each respective slide and not as a separate list at the end of the presentation.

The goal of this presentation is to give students the opportunity to show that they have understood the project that is being proposed. It is also an excellent forum for discussion and feedback from other members of the University and the Department of Pathology of Mater Dei Hospital. Changes may be suggested based on this feedback. **Thus, supervisors must be present for this presentation since their feedback may be required.**

Ordering of materials and reagents

Once the research proposal and budget are approved, the student should start collecting the necessary quotes to order the materials required for their project. The University's procedure is to present 3 quotes so that the cheapest option is selected. If there aren't 3 independent suppliers, or there is a valid reason to select something other than the cheapest option, a justification signed by the supervisor should be presented together with the quotes.

For orders through the department, approval needs to be obtained from the Head of Department and the Dean. An email should be sent to the Head of Department requesting approval. The quotes, together with the approval and the student's contact details should be emailed to procurement.healthsci@um.edu.mt (Mr Alfred Stagno Navarra, Room 66, FHS). Mr Stagno Navarra will process the orders and will contact the student once the reagents or materials are delivered.

The Literature Review

The role of the student and the role of the supervisor

The literature review is the assignment for MLS3014 (Literature Review). The supervisor should guide the student about what literature to look up or what search terms to use for the literature search, however, the student should carry out his/her own literature searches. The supervisor should make time available to discuss any difficulties encountered. It is, however, up to the student to prepare a complete draft of the literature review and give it to the supervisor for correction by the date stipulated in the Time-line section of this document. **The supervisor is expected to go through the literature review once, and provide feedback to the student and suggestions for improvement.** Supervisors should return the corrected material to the students allowing sufficient time for the student to carry out the required corrections by the submission deadline.
Should a student not hand in the literature review to the supervisor by the set date, the supervisor may if he/she does not have sufficient time to go through it and recommend changes write to the head of the department informing of this.

The literature review will eventually form Chapter 1 of the Special Project. It should be written as one chapter with appropriately numbered sub-sections as necessary. Since this will form Chapter 1 of the special project, the numbering of subsections should be 1.1, 1.2 etc.

Formatting and Referencing

The sections for the Literature Review are as follows:

- Title Page
- Abstract
- Table of contents
- List of tables
- List of figures
- List of abbreviations
- Introduction
- References

Page numbering up to the end of the List of abbreviations should use roman numerals (i, ii, iii, etc). Each section should start on a new page.
The pages of text making up the Literature Review and References should use arabic numerals (1, 2, 3, 4, etc). Numbering of sections and sub-sections should be limited to the Literature Review text. The literature review should be between 20 and 22 pages, not including the reference list and large figures.

Formatting and Referencing should follow the same guidelines as for the Research Proposal.
It is strongly recommended that the Styles option in word is used for headings and sub-headings as well as for Figure and Table legends. This will ensure that the same style is used throughout and it will make possible the use of the Table of Contents option in word to automatically build and update the Table of contents, the List of figures and the List of tables.
The use of a reference management software, will ensure that all in-text references are included in the final reference list (regardless of last minute changes) and that the format of the references

follow the UM guidelines for the Harvard style. The University offers the use of RefWorks. The University approved Harvard style is listed as Harvard British Standard on RefWorks.

Content

The Literature review should be exhaustive and should include both historical as well as recent literature. It introduces the topic of the research project and reviews available literature. References should be to primary sources and not to references which refer to earlier sources. It is an overview or existing studies related to the topic providing ideas and helping the researcher focus on a topic and define the research problem. It is a tool to review research strategies that may be appropriate to use in the study and provides a justification for further research in the area. This Chapter should conclude with a bullet list of Objectives.

Evaluation of the Literature Review

The literature reviews will be evaluated and marked by Faculty-approved board of examiners which includes the supervisor and the examiner. The board of examiners also includes a chairperson who acts as a moderator if needed. The assessment criteria to be used are outlined in the relevant section in this document.

If deemed necessary, the board of examiners will make recommendations for modifications and/or corrections which need to be carried out before the submission of the Special Project. The Literature Review will not be re-evaluated as part of the Special Project.

The Special Project

Data collection

The laboratory work is typically expected to take place between October and January of the fourth year. Sample collection may start before, and students may make arrangements to carry out their research work in the summer if they so wish and their supervisor agrees. The number of hours that a student should spend on the research project is the equivalent of 10 weeks of full-time work (around 400 hours). This includes time for analysis of data and writing up.

The role of the student and the role of the supervisor

The student is expected to carry out the bulk of the laboratory work that will form part of the research project under the direct supervision of the supervisor or appointed laboratory personnel. Appropriate training, including training on health and safety issues and appropriate handling of equipment and reagents, should be provided prior to the start of laboratory work.

It is strongly recommended that data collection/laboratory work is finalised by the end of January. The student is should then carry out data analysis based on discussions with the supervisor. A statistician should be consulted if there is need. **The supervisor should meet regularly with the student to ensure that the student understands the implications of the research results, and to guide the student on how to relate the findings to available literature on the topic.** The supervisor should also provide suggestions on the mode of data analysis and mode of presentation of results.

Students are expected to write the methods, results and discussion chapters following the guidelines given during Research Methods and following the formatting issues described in this guide. A draft of the completed work should be given to the supervisor by the date given in the Time-line section of this guide. **The supervisor is expected to read and correct the material once.** The submitted material needs to be the student's work not the supervisor's work.

Should any difficulties arise during project execution, the head of department or the Special Projects sub-committee should be informed immediately.
If for some reason the student cannot meet the submission deadline, the student should inform the head of department, in writing, and through the supervisor, giving an explanation why and extension is required and the duration of the extension. Extensions need to be approved by Faculty Board.

Formatting and Referencing

The sections for the Special Project are as follows:

- Title Page
- Signature Page
- Dedications
- Acknowledgements
- Abstract
- Table of contents
- List of tables
- List of figures
- List of abbreviations
- Introduction (including Research question, Research hypothesis and Aims and Objectives)
- Methods
- Results
- Discussion
- References
- Appendices (only if required)

Page numbering up to the end of the List of abbreviations should use roman numerals (i, ii, iii, etc). Each section should start on a new page.
The pages of text making up the 4 chapters of the Special Project, References and any Appendices should use arabic numerals (1, 2, 3, 4, etc). Numbering of sections and sub-sections should be prefaced by 1. for the Introduction, 2. for the Methods chapter, 3. for the Results and 4. for the Discussion. The Special Project should be not more than 80 pages in length or 10,000 words. This does not include the reference list and appendices.

Formatting and Referencing should follow the same guidelines as for the Research Proposal.
It is strongly recommended that the Styles option in word is used for headings and sub-headings as well as for Figure and Table legends. This will ensure that the same style is used throughout and it will make possible the use of the Table of Contents option in word to automatically build and update the Table of contents, the List of figures and the List of tables.

The use of a reference management software will ensure that all in-text references are included in the final reference list (regardless of last-minute changes) and that the format of the references follow the UM guidelines for the Harvard style.

As per university guidelines, an electronic copy of the final version of the dissertation will be submitted to the library for upload to the UM's institutional repository OAR@UM. The text of any material uploaded to OAR will be accessible through the library webportal. Thus, it is important to discuss with your supervisor whether your work needs to be embargoed, possibly to allow publication in a scientific journal.

The guidelines for preparation of the Electronic Thesis/Dissertation can be found here: https://www.um.edu.mt/library/etd/etdstudents/
The embargo form (if needed) can be found here: https://www.um.edu.mt/library/etd/faqs/
This needs to be submitted at least 1 month before the submission of the final ETD.

Preamble

The title page should have the full title of the Special Project, the name of the student and the month and year of submission, the name of the Faculty and the name of the degree sought. The name of the supervisor should also be included. The crest of the University of Malta should not be included.

An original signed copy of the **Authenticity and Research Ethics Form** must be submitted with the Special Project. The appropriate form for undergraduate students should be downloaded from the Faculty's website: https://www.um.edu.mt/healthsciences/students/dissertation. In line with GDPR requirements, the signed declaration form **should not be bound to the Special Project**, but either emailed as a separate PDF document upon submission of the soft copy of the Special Project, or as a loose sheet of paper submitted with the final hard bound copy of the Special Project.

The Abstract should include the text submitted at time of proposal suitably updated to include results and the conclusions. This should be a single paragraph of around 250 words, but never longer than 1 page in double line spacing. Any abbreviations used must be written in full. The abstract should not contain any references.

The Table of Contents should include only the sections which come after. Together with the Lists of tables, figures and abbreviations, the Table of contents should be updated to include material from all 4 chapters, references and appendices.

Chapter 1: Literature Review

The Literature Review will not be re-evaluated as part of the Special Project since it is the same material submitted for MLS3014. However, the student must carry out all corrections recommended by the examiners before the submission of the Special Project. **The supervisor will check that corrections have been carried out.**

The Research Hypothesis

The research or scientific hypothesis (also called the research hypothesis) is a specific and succinct statement about the expected outcome of your study. Hypothesis statements need to be specific, clear and testable; it needs to outline what is being tested and the expected outcome. (For example:

drug 1 and drug 2 are both used to treat the same condition and it is expected that both drugs have the same efficacy, or drug 1 and drug 2 are both used to treat the same condition, but drug 1 is expected to have a better efficacy).

Chapter 2: Methods

The Methods chapter should state clearly where the research was carried out, the source of the samples used and describe any sample collections used for the work. The Ethics approval number should be clearly stated. The Methods should include a dedicated section on data analysis.

Each protocol should be explained clearly and should start with a description of the principle of the techniques and a justification as to why this specific method was chosen. If the method is already published, it should be appropriately cited and any modifications described.
Methods are written in continuous text, not as bulleted lists.

Buffer compositions, volumes used and specialised equipment should be clearly stated. The manufacturer's name and country of origin should be given for important or unusual materials and equipment.

Chapter 3: Results

Results should be presented in a clear and logical manner. Raw data should not be included. Tables and Figures should be used to represent or summarise results. Lists should not be used, but the information should be incorporated in the text. The results chapter should simply state the result without any interpretation.

Data analysis and statistical results form part of this chapter. All statistical results must indicate variability, confidence intervals or error. Present numerical results using decimal places justified by the preciseness of the instrument used.

Tables and Figures should be inserted as close as possible after the text that refers to them. They must be tied to the narrative and should not repeat information already given in the text. Tables and Figures should stand alone without reference to the text or other Tables and Figures.

Chapter 4: Discussion

This chapter should be written as a single section without any sub-headings. The scope of this chapter is to interpret the results in the context of the research project and current knowledge. It is important that the results are not repeated in this chapter except for a brief introduction of the findings of the study at the very start of the chapter.

The discussion should explain the research findings without explaining away negative findings. Negative findings are in themselves important results. The limitations of the study and recommended future work should also be presented.

Appendices

Appendices should only be included if strictly necessary. They should not be used to include copious amounts of raw data.

Evaluation of the Special Project

The supervisor and the examiner will mark the research project according to the marking scheme at the end of this document. The written special project accounts for 90% of the mark. The Special Project sub-committee will moderate marks for harmonisation purposes.

If deemed necessary, the board of examiners will make recommendations for modifications and/or corrections which need to be carried out before the final submission of the Special Project as hardbound copies and/or CDs as directed by the departmental secretary. Embargo forms (if deemed necessary) should be submitted with the CDs.

Presentation of the Special Project

The special project will be presented to the members of staff and the external examiner as a poster presentation. The schedule for the presentations will be published in March. **The supervisor, examiner and chairperson are expected to be present for the presentation together with the external examiner.** The purpose of the presentation is to clarify any issues which the examiners may have raised and to determine the level of understanding of the student. A mark is given during the presentation which accounts for the remaining 10% of the marks for this study unit. The external examiner is involved in this process.

The student is expected to prepare a poster following the size and formatting guidelines outlined in this document. **The supervisor should go through the material in the poster and hold a mock presentation for the student.**

Poster Guidelines

The posters need to be of maximum A0 size in landscape format; the size of the boards is 118.9 cm wide x 84.1 cm high. Posters may be slightly smaller, but anything bigger will not fit on the boards.

Students are free to design their own layout and colour schemes. The important points are:

- The less text the better: use images/graphs/pictures instead of text wherever possible
- Every figure/table should have a number, title and legend
- Do not include an abstract
- An introduction, Aims and Scientific hypothesis, Methods, Results and Discussion sections are mandatory. The Results and Discussion can be one section
- Font size for the text should be minimum 28; figure legends can be in font 18. The title should be in a larger font
- The student is the only author
- The introduction needs to be succinct (avoid excessive historical detail)
- The methods should be named and only the critical information given. There is no space for detailed protocols
- Do not include H_0 and H_1 hypotheses
- References in a poster can use the Vancouver style which is a number format explained here: https://www.um.edu.mt/__data/assets/pdf_file/0008/353663/Vancouver_Guide.pdf

Posters should be print on plain paper - there is no need for lamination. Lamination will be considerably more expensive and the magnets struggle to hold the heavier material in place.

Plagiarism

Plagiarism is a serious offence and may lead to disciplinary action by the University. The University has appropriate documentation to help students avoid plagiarism which can be found on the Faculty's website: https://www.um.edu.mt/healthsciences/students/howtoavoidplagiarism. Students should read these guidelines prior to the start of writing the Research Proposal, Literature Review or Special Project.

Assessment criteria

Presentation

Work is presented neatly and concisely, with good grammar used throughout. Only necessary figures and tables are to be included and these must be appropriately numbered, have a title and legend and are referred to in the text.

Literature Review

The literature review is exhaustive but concise. The research question underlying the project is clearly presented and addressed, and placed within the context of findings from previous studies. The need to undertake the study and the aims of the project are identified and stated clearly.

Materials and methods

Details of the methodology used to collect data are complete. Principles and/or mechanisms underlying the procedures used are explained well, as is the methodology underlying statistical treatment of data. Attention to sample size has been given. Variations from standard methods are explained and justified. Appropriate ethical standards have been kept, and the necessary ethical approvals obtained.

Results

Results are presented clearly and concisely. Graphical presentations are clear and legends to all figures and tables are included. Voluminous raw data should be included as an appendix (if strictly necessary) and not as part of this chapter. Statistical tests used are appropriate. Statistical analysis is well-described and allows verification of results.

Discussion/Conclusions

The findings are discussed objectively in the light of the question/hypothesis being tested. The student explains how hypotheses were supported by data and if not supported explains why not and gives alternative explanations. Relevance of results to theories and existing knowledge and previous research is discussed. Personal opinions are justified and distinguished from data or facts, the latter being properly referenced. General implications made based on specific results of the study are justified. Limitations of the study are explained and suggestions for improvement are made. This chapter should also include proposals for further research, if the need for these is

identified during the course of the study. Current references are included. Sources are compared when possible and important ones are discussed.

Referencing

References are complete and relevant. Referencing style is consistent. Overall, references are recent, a substantial proportion of which are from scientific journals. The referencing style used is the Harvard style adopted by the UM: https://www.um.edu.mt/library/referencingguides.

Marking scheme for Special Projects

When examining a dissertation, a mark should be given to the various sections as follows:

Methods /25
Results /35
Discussion /30
Presentation /10

Examiners shall express the student's performance as a percentage mark and as a grade as per the new General Regulations (Regulation 36) as indicated in the following list:

% Mark Range	Grade
90 – 100	A+
80 – 89	A
75 – 79	B+
70 – 74	B
60 – 69	C+
55 – 59	C
50 – 54	D+
45 – 49	D
0 – 44	F
Temporary grade for Incomplete work due to **justifiable reasons**	I

A+ **Work of exceptional quality**
Exceptional performance showing a comprehensive understanding and application of the subject matter. Evidence of extensive additional reading/research/work.

A **Work of excellent quality**
Superior performance showing a comprehensive understanding of the subject matter. Evidence of considerable additional reading/research/work.

B+ **Work of very good quality**
Performance is typified by a very good working knowledge of the subject matter. Evidence of a fair amount of reading/research/work.

B **Work of good quality**
Above average performance with a working knowledge of the subject matter. Evidence of some reading/research/work.

C+ **Work of average quality**

Considerable by incomplete understanding of the subject matter. Evidence of little additional reading/research/work.

C **Work of fair quality**
Basic understanding of the subject matter. No evidence of additional reading/research/work.

D+ **Work of rather low quality**
Minimal understanding of the subject matter with no evidence of additional reading/research/work.

D **Marginal Pass**
Marginal performance, barely sufficient preparation for subsequent courses in the same area.

F **Unsatisfactory, failing work**

The following classification banding scheme applies when assessing a special project:

> 80%	First Class Honours
70 - 79%	Second Class Honours (Upper Division)
55 - 69%	Second Class Honours (Lower Division)
45 - 54 %	Third Class Honours