ISE Ref. No.: ISE 5330/5080_2026/03

Institute for Sustainable Energy
University of Malta

Guidelines for Students submitting the M.Sc. in Sustainable Energy Project Dissertation

M.Sc. in Sustainable Energy
ISE 5330 and ISE 5080 Project Dissertations

1. SCOPE

This document is intended as a guideline for prospective M.Sc. in Sustainable Energy students who are preparing for and defending their M.Sc. end of studies project (ISE 5330) or M.Sc. by Research dissertation (ISE 5080).

NOTES: These guidelines shall be read in conjunction with the University's overarching Education Act (Cap. 327), General Regulations for University Postgraduate Awards, 2021, available at https://www.um.edu.mt/media/um/docs/about/governance/regulations/general/GeneralRegulationsforUniversityPostgraduateAwards.pdf and any updates that the University of Malta may issue from time to time.

In case of any discrepancies, the regulations of the University of Malta shall prevail i.e., These Guidelines shall be superseded by any University of Malta regulations that may come into force during the course of their studies.

The Institute for Sustainable Energy of the University of Malta reserves the right to revise and update these guidelines in line with the requirements and recommendations of the Board of Studies.

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2. PREPARATORY STEPS FOR RESEARCH WORK

Before commencing on your dissertation, you should submit a proposal for your research work and obtain an official approval from the Institute. By then, your supervisor and any other co-supervisors must have also been approved.

Following this step, you must also fill up the Research Ethics Form and submit it online to URECA at https://www.um.edu.mt/research/ethics/redp-form/frontEnd/

Further information may be accessed from the link https://www.um.edu.mt/research/ethics/

While you can start working on your dissertation, you should not start your data collection activity until you receive an acknowledgement/approval from the University Research Ethics Committee (UREC) and be given a unique identification number for your application. The Institute for Sustainable Energy falls under the Faculty Research Ethics Committee (FREC) of the Faculty of Engineering.

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3. LAYOUT OF THE DISSERTATION

The following is a model format for the layout of the dissertation. Due to the plethora of topics which may be investigated, some projects may require a different format to the one presented here.

NOTE: A dissertation need not necessarily contain all of the sections listed below. The format should be selected according to the nature of the project.

Defining the dissertation layout is generally the first step in writing the dissertation, as it serves as a plan for the write-up, and should be discussed with the supervisor/s.

It is also recommended that the student shows the individual chapters both as they are compiled and when at an advanced stage to their supervisor/s. This also applies to the <Draft> and <Final> versions of the works and before uploading the works to the University of Malta's Virtual learning Environment (VLE) for checking and eventual submission for examination and following any required corrections that the Examining Board may request.

DECLARATION OF AUTHENTICITY Form

A <*Declaration of Authenticity*> form shall be completed by all students submitting their dissertation/thesis. The <*Declaration of Authenticity*> form shall NOT be bound with the hard copy of the dissertation/thesis, or be included with the electronic version.

The forms are available for download on the Institute's Resources for Students section.

Students shall submit the filled-in form to the Institute's administrative officer. This form will be retained in the student's records file.

A statement mentioning the Ethics Form Registration Number is to be added here as suggested below: "*I declare that I have abided by the University's Research Ethics Review*

*Procedures. Furthermore, the UM Research Ethics and Data Protection (REDP) application ID **ENG-yyyy-nnnnn** covers any research ethics approvals required for this dissertation/thesis".*

Overview of the Dissertation Sections

FRONT MATTER

<Title Page> (1st page)

<Copyright> page (2nd page)

<Abstract> (3rd page)

<Sponsorship Acknowledgement> [if applicable] page (4th page)

<Acknowledgements> (5th page)

<Table of Contents>

<List of Figures> (with the number of the page on which each figure is located)

<List of Tables> (with the number of the page in which each table is located)

<List of Symbols and Abbreviations>

CORE - CHAPTERS

<Introduction> (context of project and objectives)

<Literature Review >

<Theory>

<Equipment> (and design of equipment, circuit design, software design) and/or <Modelling>

<Methods of Testing> / <Procedure>

<Results>

<Discussion of Results>

<Conclusions>

<Suggestions for Future Work>

REFERENCES & BIBLIOGRAPHY

<References> and <Bibliography>

APPENDIX / APPENDICES

<Appendices>

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4. GUIDELINES FOR THE DISSERTATION SECTIONS

FRONT MATTER

The TITLE Page:

The format of the first page, i.e., the <*Title Page*> of the dissertation should be laid out as shown in Appendix A.

The COPYRIGHT Page:

The <*Copyright*> page should include the following text:

"**COPYRIGHT NOTICE:**

- Copyright in text of this dissertation rests with the Author. Copies (by any process) either in full, or of extracts may be made only in accordance with regulations held by the Library of the University of Malta. Details may be obtained from the Librarian. The author's rights in respect of this work are as defined by the Copyright Act (Chapter 415) of the Laws of Malta or as modified by any successive legislation. This page must form part of any such copies made. Further copies (by any process) made in accordance with such instructions may not be made without the permission (in writing) of the Author.

- Ownership of the right over any original intellectual property which may be contained in or derived from this dissertation is vested in the University of Malta and may not be made available for use by third parties without the written permission of the University, which will prescribe the terms and conditions of any such agreement."

The ABSTRACT Page:

The <*Abstract*> should be limited to one A4 (210 × 297 millimeters) page and should contain a synthesis of the most important aspects of the project. It should have a brief introductory sentence, followed by the aims of the project. The main results and conclusions should then be briefly outlined.

The ACKNOWLEDGEMENTS Page:

This section should contain a brief mention of any persons whom the student wishes to acknowledge and thank. It should be brief and in any case should not be longer than a single page.

The TABLE OF CONTENTS:

All chapter headings and major sub-headings appearing in the text should be listed, together with their corresponding page number. The <*Table of Contents*> should look orderly and should display a logical development of the project; this helps the reader to gain a general overview of the project. Sub-headings of sub-headings should therefore be avoided.

Chapter headings and sub-headings should be numbered sequentially and in a uniform numbering style.

The LIST OF FIGURES and LIST OF TABLES:

All figures and tables should be sequentially listed in order of appearance in a separate <*List of Figures*> and <*List of Tables*> respectively. Both lists should show the respective captions and headers together with the corresponding page numbers.

The LIST OF SYMBOLS (NOMENCLATURE) and ABBREVIATIONS & ACRONYMS:

Any symbols used in equations should be listed in a <*List of Symbols*> or <*Nomenclature*> with a clear indication of the significance of the symbol and of the units used. The system of prefixes and suffixes used, if any, should also be listed.

If a dissertation contains abbreviations and / or acronyms, then a <*List of Abbreviations & Acronyms*> should also be included.

Such lists should display the symbols, abbreviations or acronyms in alphabetical order.

CORE – THE CHAPTERS

The INTRODUCTION and OBJECTIVES:

The introduction is the first chapter of the dissertation. The introduction should serve the purpose of introducing the topic of the project to the reader. It should be general and in a somewhat simple format. There is no need, however, to assume that the reader is completely ignorant of the subject at hand. The student should aim to write to the level of a person with a good knowledge of general sustainable energy principles. This chapter lays down the foundations on which the dissertation will be built and puts the whole work of the student in its proper context. If a project is a continuation of another previous one, this should be clearly stated in this chapter. The chapter should end with a clear statement of the aim and objectives of the project. It is important for the reader to understand what the student was trying to achieve with this project.

Only the main objectives of the project should be mentioned and based on the time-frame of a final-year project, these should be limited to not more than five specific objectives.

The LITERATURE SURVEY:

The Literature Survey or Literature Review is an essential part of the study and the dissertation and should be given due importance. This is not a regurgitation of whole passages from textbooks which serves simply to fill pages and pad the dissertation, but a critical review of the literature on the subject with clear references to recent papers and relevant pages in books. It will describe the work that has been done to date on the subject in hand, as well as discuss the most important results. Cross-correlation of the findings of various researchers is a useful result of a literature survey. The review is effectively the foundation on which the dissertation research is carried out and as such, should be referred to in the discussion.

The THEORY or THEORETICAL BACKGROUND:

If the project requires a detailed description of the theory behind the project, or involves some long derivations of a mathematical nature, it might be useful to put this in a separate chapter. Sometimes it is possible to include this in the Literature Survey (or Literature Review), or the Literature Survey can be included in the chapter on Theory. This all depends on the nature of the

topic and it is up to the author (with the advice of the supervisor) to decide which is the more appropriate.

The EQUIPMENT or DESIGN OF EQUIPMENT and / or MODELLING Chapter:

If the project involved a series of tests using standard equipment, then this chapter will simply list the equipment used including make, type and serial number. It is also acceptable, in this case, to list the equipment in another chapter, such as in the one on Methods of Testing. If the project involved the development of some specific equipment or an auxiliary piece of equipment which has been used significantly in the project, then the chapter should include a detailed description of the equipment with accompanying drawings and plates. If the project is solely about the design and construction of a specific piece of equipment, then this chapter is always required; indeed, in this case, it may be necessary to split the description over two or more chapters.

In the case of projects involving modelling and simulations (as opposed to just experiments), this chapter should also provide a detailed description of the developed models accompanied by how they were implemented within the relevant software tools. Any assumptions or limitations to the work being carried out should be detailed towards the end of this section.

The METHODOLOGY, METHODS OF TESTING or EXPERIMENTAL PROCEDURE Chapter:

The methodology used in carrying out the experiments and / or simulations should be presented here in detail. This chapter has to be written in such a way that anyone wishing to repeat the tests and/or simulations has all the information necessary to do so. Any standards used should always be clearly stated and figures and flowcharts showing methods and procedures are generally plentiful here. This chapter should be written in a logical format rather than a chronological one. Any limitations to the processes used or methods applied should be detailed towards the end of this section.

The RESULTS:

The results of the experimental tests and / or simulations carried out should be presented here in an orderly and logical way. Tables and graphs should be well captioned as references to these will be made often in the body text. When presenting results in this way do not discuss them,

but explain where they came from.

Sometimes it is desirable to present results and to discuss them immediately as they are presented. In this case, it should be clearly indicated that this chapter includes the "Discussion" part and should therefore be called <*Results and Discussion*>.

The DISCUSSION OF RESULTS:

This chapter is a very important part of the dissertation. All the results that were generated through the experimental tests and / or simulations will be discussed here. The discussion should be objective and to the point. The rules of technical writing should be followed scrupulously. Comparison between the student's results and those published elsewhere as referenced in the Literature Review should be made in this chapter, together with any constructive criticism of previous work.

If experimental testing and / or simulation outputs had yielded negative results, they should also be presented and discussed and possible reasons and explanations for these being negative should be put forward. Very often, negative results can be as valuable as positive ones.

The CONCLUSIONS:

All the conclusions that the student can draw from the work carried out should be listed in this chapter. The most important come first. Parts of the discussion (from the previous chapter) should not be repeated in the <*Conclusions*>, which should be presented concisely and in a straightforward manner. This chapter is in fact, very often, rather short.

The SUGGESTIONS FOR FUTURE WORK Chapter:

Based on the conclusions, the student should suggest what further work can be done in the future, i.e., what can be built on what has been done. There is no need for the student to say that that is what one would have liked to do had there been more time; this is taken for granted.

REFERENCES & BIBLIOGRAPHY

The REFERENCES:

The dissertation must include a numbered list of references and an optional bibliography list. These are to be included just before the Appendices, as explained in the <*Layout of the Dissertation*> section.

References to published work should be listed in the order in which they are mentioned in the text, or in alphabetical order. It is important however, that only one system is used in any one dissertation, i.e., whichever system is chosen must then be adhered to.

All references listed must be mentioned in the text. Where material not mentioned in the text is to be listed, it should appear in a separate section <*Bibliography*> in alphabetical order of authors' surnames (see separate section on <*Bibliography*>). Care should be taken to ensure that references are accurate and complete with the title of the paper in addition to the source and full citation descriptors. References should not be given in footnotes. Personal communications should not be included in the list of references but may be mentioned in the text. The format for references is based upon the IEEE standard. This uses a number in square brackets within the text to refer to specific references. For example, "*The system was tested by using the Tesla Test [4]. Smith and Brown [3] discuss the variety of errors associated with this test. Other researchers have addressed the same problem using different points of view [1], [5], [10]-[15].*"

Mention of a reference in the text should be without initials or titles of the author, thus: "*Smith and Brown [3] discuss…*".

Extended extracts from printed publications, including previous dissertations, is not allowed, even if referenced.

Further information on the IEEE format for the list of references, which typically includes different types of publications, may be sourced online.

The BIBLIOGRAHY:

The Bibliography and References are two different things. A Bibliography is a list of books that were read and consulted to obtain general knowledge about the subject matter. On the other hand, references relate to specific items of information that were found in the literature and used

in the preparation of the dissertation. Hence, a whole book cannot normally be a reference; it is more likely to be listed in the Bibliography. The reference would be a specific page or number of pages in a book, which contain information relevant to the particular point being made in the student's write-up.

APPENDICES

APPENDICES:

The inclusion of one or more appendices is optional and usually not recommended. However, if required, an appendix would include material which is supplementary to the work, but not key to the understanding of the main text.

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5. LENGTH OF DISSERTATION / THESIS AND PAGE NUMBERING

The length of the dissertation / thesis will be comprised as follows:

Section	Study Unit / Mode	Description	Page / Word Limits	Page Numbering Style
FRONT MATTER	**ISE 5330 & ISE 5080 PT & FT**	*<Declaration>* *<Abstract>* *<Acknowledgments>* *<Table of Contents>* *<List of Figures>* *<List of Tables>* *<Abbreviations & Notation>*	No page limit	Roman numerals. E.g., I, II,…IX, etc.

CORE I	**ISE 5330 - PT & FT**	From the *<Introduction>* to *<Future Work>* sections.	Up to a maximum of 25,000 words as stipulated by the University of Malta Bye Laws	Arabic numerals. E.g., 1, 2, 3,…20, etc.
CORE II	**ISE 5080 - PT & FT**	From the *<Introduction>* to *<Future Work>* sections.	Up to a maximum of 50,000 words as stipulated by the University of Malta Bye Laws.	Arabic numerals. E.g., 1, 2, 3,…20, etc.
REFERENCES			No page limit.	
APPENDICES	**ISE 5330 - PT & FT**		Not more than 20 pages, including any figures.	
	ISE 5080 - PT & FT		Not more than 60 pages, including any figures.	

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6. STYLE OF WRITING

All writing should be objective, formal and impersonal (with the exception of the <Acknowledgements> section in which the author might wish to write '*I would like to thank*…', etc.). Abbreviations, with the exception of those that are in common English usage, should be spelt out in full when used for the first time in the text.

Symbols for units and chemical formulae are not abbreviations and should not be used as such. Most abbreviations have capital letters, but some of the more commonly used ones have lower-case letters with full stops, such as: d.c., b.m.e.p., e.m.f., r.m.s., i.d., o.d. The abbreviation "%" can be used in tables but use of the words "per cent" are preferred in the main body of the text.

Words used in an unusual sense may be enclosed within single quotation marks when first mentioned. Sentences should not start with a number expressed in figures or with an abbreviation. These should be written in full.

Politically incorrect, sexist and racist language is not admissible, e.g., the use of he/she. For instance, the following is not favoured: *"The role played by the machine operator in this task is of prime importance. He ensures that…"*. Making use of the third person would avoid this. Alternatively, one can use the word "*s/he*" or "they".

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7. TABLES AND FIGURES

In any one dissertation, tables and figures should either be presented in the text or at the end of each chapter. A dissertation should not have a mixture of both styles. If laid horizontally on the page (landscape style), they must be printed with the top towards the spine and not vice-versa. Tables and figures should be mentioned in the main text, and no section of the dissertation should be a sequence of images and tables without explanatory text. Tables and figures should be numbered consecutively in the order in which they are mentioned in the text, and all should be captioned appropriately.

Titles of tables should be positioned above the tables while captions of figures are placed below the figures. Figures and tables copied from other sources should be acknowledged by

quoting the source as a reference. All figures and tables must be referenced at least once in the text. They should never be placed on a page earlier than the reference to them. All axes of graphs must be labelled with the name of the variable and the units in which that variable is being expressed, unless of course it is a dimensionless variable.

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8. UNITS AND SYMBOLS

Units should be consistent and in accordance with the *International System of Units* (SI). Equations should be written in a clear format and should not be written as part of the line text. Any equation which is used should be numbered for clear referencing within the main text. For example:

$$E_\lambda = \frac{2\pi hc^2}{\lambda^5} \cdot \frac{1}{e^{\frac{hc}{\lambda kT}-1}} \tag{1}$$

The symbol for a physical quantity should be a single letter of the Latin or Greek alphabet. An exception to this rule has been made for certain dimensionless groups for which the internationally agreed symbols consist of two letters, the first a capital and the second lower-case. Such two-letter symbols should be enclosed within parenthesis, at least in equations where ambiguities might otherwise arise. For example:

$$Nu = 0.023\ (Re)\ 0.8\ (Pr)\ 0.4 \tag{2}$$

$$Nu = 0.023\ (Re)(Re)1.n\ (Pr)\ 1.n \tag{3}$$

Symbols may be modified by subscripts and superscripts. It is recommended that normally, only one symbol should be chosen for any one physical quantity and if necessary, be amplified by subscript (or superscript). Subscripts to subscripts (and superscripts to superscripts) should be avoided.

To facilitate the reading of long numbers, the digits should be grouped in threes about the decimal point, but no commas should be used.

When the decimal point is placed before the first digit of a number, a zero should always

be placed before the decimal point.

Numbers should be rounded up to the nearest number of places that make sense, i.e., that are within the accuracy of the measurement or calculation in question.

The multiplication sign between numbers should not be a letter "x", but the appropriate "times" symbol in the equation editor of the word/text processing software being used. The same applies to the minus sign, which should not simply be a hyphen.

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9. PAGE FORMAT AND PRINTING QUALITY

Text should be printed with a font size of 12 pt., Times New Roman or a *Serif* font, in one-and-a-half (1.5) line spacing.

The spiral bound examinable version should be printed single-sided.

Page margins should be at least 25 mm Top, Bottom and Right Hand Side, and 37 mm on the Left Hand Side to allow for binding.

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10. UPLOADING THE DISSERATION / THESIS TO THE UNIVERSITY OF MALTA'S VIRTUAL LEARNING ENVIRONMENT (VLE)

A Virtual Learning Environment (VLE) area will be created specifically for the dissertation / thesis. This is named <*PG Dissertations*> with the appropriate Study Unit Code.

This VLE area shall have <*Draft Submission*> and <*Final Submission*> upload areas prepared specifically for each student's dissertation / thesis.

Students are advised to familiarize themselves with the VLE area created for their dissertation at an early stage in their research.

The DRAFT Submission Upload Area:

When their write-up is at an advanced stage, students are advised to upload a draft version of their chapters to the <*DRAFT Submission*> upload area. They can upload each draft chapter to

TurnitIn, which is the UM's approved plagiarism checking software, only ONCE. A Turnitin originality report will be generated, and students and supervisor/s will be able to view the originality reports for the chapters. At this stage, students should make any corrections to their work as appropriate. See separate section on plagiarism (Section 11).

The FINAL Submission Upload Area:

Students are to upload the FINAL version of their dissertation / thesis in the <*FINAL Submission*> upload area. The final electronic version should be uploaded to Turnitin in Portable Document Format (*.pdf) by the announced date of submission.

The file-name of the final electronic version in should be named: <*Name_Surname_Year of Submission.pdf*>, for example: <*maria_borg_2026.pdf*>.

Students can upload the dissertation / thesis more than once until the announced due date.

A Turnitin originality report for the submission will be generated. In this case, the originality report is only accessible by the supervisor/s and examiners.

NOTE: The FINAL electronic version should be IDENTICAL to any printed, spiral-bound copies submitted for examination (see Section 12).

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11. PLAGIARISM

Plagiarism refers to the act of copying other people's work and presenting it as one's own. This is nothing short than theft of intellectual property, and is to be condemned in the strongest terms possible. Students caught plagiarizing other people's work will be severely penalized, and this may lead to failure of the study unit.

Please consult The University's *"Plagiarism and Collusion, Guidelines for Students, Academics, Faculties, Institutes, Centres"*, which can be found on the University's website at: https://www.um.edu.mt/media/um/docs/schools/doctoralschool/PlagiarismandCollusionGuidelines.pdf

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12. REQUESTING AN EXTENSION TO THE DURATION OF THE DISSRTATION

In case that a student requires an extension to the deadline of the dissertation/thesis submission, an extension application form must be submitted **at least 6 weeks before the deadline**. The form may be accessed from the link: https://www.um.edu.mt/media/um/docs/directorates/registrar/policiesproceduresguidelinesandforms/policiesproceduresandguidelines/attendancemodechange/processingstudentrequestforms/requestextensionofstudiessuspension/extensionformPG.pdf

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13. NUMBER OF BOUND COPIES

Before the oral examination, each student must enquire with the Institute's Secretary as to the number of spiral-bound copies to be printed for the examiners. Usually, the student submits three (3) printed and spiral-bound copies and one (1) electronic version in Portable Document Format (pdf). All should be identical. The electronic version (pdf) should have also been uploaded to the appropriate upload areas through the University's Virtual Learning Environment (VLE) portal by the announced due date for submission.

Normally, one of the spiral-bound copies is for the Chairperson and two are for the Examiners. In cases where there is more than one supervisor, the student may be requested to hand in a spiral-bound copy for each of the supervisors. It is the responsibility of the student to check with the Institute's secretary to see if hard copies are needed. Some supervisors may not require one at this stage, given that it is a draft version.

Following the oral examination of the dissertation, every student should first carry out any required corrections and get the approval of the supervisor for all changes made. Once finalized, the student is requested to submit a minimum of three copies of the dissertation printed and hard-bound. One is the official copy to be presented to the Institute for Sustainable Energy's administrator for safe keeping at the Institute. The second copy is for the supervisor and a third copy is for the student.

In the case of projects sponsored by Industry, a fourth copy is required to be presented to

the firm that sponsored the project.

In cases where there is more than one supervisor, the student must hand in a hard-bound copy for each of the supervisors, if requested.

A final clean electronic copy of the dissertation has to be submitted to the Institute's administrator.

Instructions on how to present this dissertation can be found on:
http://www.um.edu.mt/library/dissertations#instructions.

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14. BINDING

The dissertation should be bound in NAVY BLUE-coloured Tablerene Bookcloth covered front and back millboards appropriate to A4 paper size (293 mm x 206 mm). All pages are to be sewn and glued. A Left Hand Side margin of about 37 mm must be retained when typing the dissertation to allow for binding. The hard bound dissertation should be exactly in the same format as the spiral-bound version, however, it should be printed double-sided.

The surname and initials, short version of title, degree and year (e.g., BORG M., short version of title, M.Sc., 2026) should be printed in 6 mm upright gilt lettering on the spine of the dissertation, reading from top to bottom of the spine. The surname is to begin 37 mm from top and the year of completion is to end at 50 mm from bottom.

The title of the dissertation should be printed in the middle of the front board using 6 mm high BLOCK CAPITAL gilt lettering. Refer to the cover template in Appendix D of these guidelines.

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15. SUBMISSION DATES

The latest dates for submitting the Synopsis and the "regulation" bound copy of the dissertation are communicated by the Institute's administrator from year to year.

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16. SOFTWARE-BASED PROJECTS

In the case of software-based projects, students must also deliver on a portable storage device such as USB, DVD or CD, the complete set of all developed models and performed simulations, together with a user manual explaining the operation of the software used. These should be delivered to the supervisor separately from the hard-bound copy of the dissertation.

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17. THE SYNOPSIS

The Synopsis is a brief report outlining the work carried out during the project. Two copies of the Synopsis are required. The main purpose of the Synopsis is to enable the External Examiner and / or the Chairperson to obtain a good overall picture of the Dissertation without having to read it in full. The Chairperson can allocate their mark based upon the Synopsis and on the oral presentation. They will not usually read the dissertation.

The External Examiner reads the Synopsis before coming to Malta, so that on arrival, they can quickly glimpse through each dissertation, reading carefully only those passages that enable them to form a correct opinion of the worth of the dissertation.

Refer to template documents in Appendix B. Further guidance on the Synopsis may be found in Appendix C.

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18. THE ORAL PRESENTATION OR *VIVA VOCE*

Every student is expected to make an oral presentation or *viva voce*, of the project on a date communicated by the Institute's administrator.

Typically, for ISE 5330, this will be sometime in April for Full-time students, or in July for Part-time students. Months may vary depending on the University's academic calendar and on other circumstances.

In the case of M.Sc. by Research (ISE 5080) the *viva voce* will be held on a date communicated by the Institute's administrator. Months may vary depending on the University's academic calendar and on other circumstances.

The presentation is assessed by a Board of Examiners convened specifically for the examination process.

The presentation is assessed by the student's assigned Chairperson, two examiners and the external examiner, and the mark for the presentation forms part of the final mark for the project. The Supervisor may attend the presentation, but is not allowed to participate in the discussion, except in cases where the Supervisor is addressed directly by the Chairperson of the board.

Note: It is important that students learn to keep to the allotted time. To do this, it may be necessary to leave out some material. Furthermore, if running out of time, the student should avoid the temptation of speeding up the presentation to squeeze in everything they planned to say. Rather, the student should continue at the right pace, cut short some of the presentation material and concentrate only on the most important items. The student should plan the talk and allow sufficient time for discussion of results and conclusions.

Each final year project presentation shall ideally be of 15 minutes, but should not exceed 30 minutes.

In the case of **ISE 5330**, time dedicated to questions shall be of at least 15 minutes. In the case of **ISE 5080**, time allocated for questions may be longer.

Some form of visual aids is essential to liven up the presentation and make it more interesting. Typically, a projectable presentation consisting of a number of slides will be prepared. The slides should loosely follow the same sequence as followed in the project dissertation. The number of slides to present should be considered carefully. It is not necessary to have all the results on the slides; there may not be enough time to show everything. Lettering on these slides has to be very large, not less than Arial font, size 28, otherwise it cannot be read clearly. Tables and Figures can have a smaller font which should NOT be less than Arial font, size 16. In fact, it is better to err on the larger size than on the smaller size. The student should avoid placing too much information on one slide, and specifically, they should avoid jumping from one slide to another without the necessary reference / explanation.

The presentation is to be made completely and only in English. As regards the actual presentation, students should introduce the topic very briefly and then go straight to what work

they have done and what results they have obtained.

They should avoid giving a lecture on the subject of their dissertation.

Students are advised to clarify with the Institute's administrator the equipment and software requirements for the oral presentation. It is the student's responsibility to ensure that any electronic devices used for their presentation is configured to work correctly with the equipment available at the venue designated for the oral examination.

It is advisable for the student to arrive in advance of the time of commencement for the oral examination to allow for setting up and checking the correct operation of any presentation aids to be used during the oral presentation session.

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19. METHOD OF ASSESSMENT

Marks are given by the Chairperson and the two examiners. The Examiners' understanding of the project will come almost entirely from reading the synopsis and the dissertation, although the presentation and the ability of the student to answer satisfactorily any arising questions will also form part of the Examiners' marks.

The External Examiner does not contribute to the marking of the project, but expresses their views on the student's project during the Board of Examiners' meeting and these comments are taken into consideration during the grading process. It is to be appreciated that the External Examiner is normally rather short on time, and cannot possibly read all the dissertations in detail. Hence, the importance of the Synopsis.

The final dissertation mark is based upon the mark of the Chairperson and the two Examiners as per the following weighting:

30% by the Chairperson

35% by Examiner 1

35% by Examiner 2

The distribution of marks by the Chairperson and the Examiners is generally as follows:

Quality and aptness of Abstract	5 Marks
Literature Survey	20 Marks
Methodology	20 Marks
Analysis of Results	20 Marks
Conclusions Reached	15 Marks
Quality of Write-up and Presentation	5 Marks
Oral Presentation (Viva Voce) and Defence	15 Marks
	TOTAL 100

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END OF DOCUMENT

Appendix A

A.1 Title Page Sample – ISE 5330

UNIVERSITY OF MALTA

Institute for Sustainable Energy

M.Sc. Dissertation

// **DESIGN OF A NOVEL THERMO–PHOTOVOLTAIC CELL FOR USE IN OFFSHORE SYSTEMS** //

by

// Maria A. Borg //

A dissertation submitted in partial fulfilment of the requirements of the award of Masters of Science in Sustainable Energy

A.2 Title Page Sample – ISE 5080

UNIVERSITY OF MALTA

Institute for Sustainable Energy

M.Sc. by Research Thesis

// DESIGN OF A NOVEL THERMO–PHOTOVOLTAIC CELL FOR USE IN OFFSHORE SYSTEMS //

by

// Maria A. Borg //

A dissertation submitted in fulfilment of the requirements of the award of Masters of Science by Research in Sustainable Energy

Appendix B

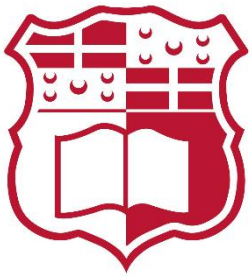
B.1 Synopsis Sample Front Page – ISE 5330

UNIVERSITY OF MALTA

Institute for Sustainable Energy

MASTERS IN SUSTAINABLE ENERGY

M.Sc. Dissertation



// Project Title // (Times New Roman, Size 14, Black, Bold and centered)

by

// Student Name and Surname // (Times New Roman, Size 12, centered)

A synopsis submitted in partial fulfilment of the requirements
of the award of Masters in Sustainable Energy of the University
of Malta

// Month //202X

B.2 Synopsis Sample Front Page – ISE 5080

UNIVERSITY OF MALTA

Institute for Sustainable Energy

MASTERS BY RESEARCH IN SUSTAINABLE ENERGY

M.Sc. Thesis

// Project Title // (Times New Roman, Size 14, Black, Bold and centered)

by

// Student Name/s and Surname // (Times New Roman, Size 12, centered)

A synopsis submitted in fulfilment of the requirements of the award of Masters in Sustainable Energy of the University of Malta

// Month //202X

Appendix C

SYNOPSIS Sample

Project Title

Abstract: The abstract should be a brief description of the scope of the dissertation (maximum 150 words). Define all symbols used in the abstract. Do not cite references in the abstract. Times New Roman, size 10. Abstract is to span both columns.

Keywords: Up to a maximum of six key words or phrases in alphabetical order, separated by commas. Use British spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field are eligible. Times New Roman, size 9

NOMENCLATURE

A nomenclature is required for the synopsis when symbols, abbreviations and acronyms are used. SI units should be used and ordered alphabetically.

<Symbol>	<Definition>, <(unit)>
υ	Kinematic viscosity, (N s m^{-2})
ρ	Density of water, (kg m^{-3})
P	Pressure, (N m^{-2})

1. INTRODUCTION

This is normally the first section in the main body of the text. This section and all subsequent sections and sub-sections should be numbered manually. Automatic numbering systems must not be used. State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

2. HEADING

All main headings should be in bold capitals, each Section may then have sub-headings.

2.1. SUB-HEADING

Sub-headings should be numbered and typed in capitals, but not in bold.

2.1.1. Further Subsidiary Heading

Sub-sections may be further divided up as above. Subsidiary headings should use mixed upper/lower case as above (but not in bold). Divide your synopsis into clearly defined and numbered sections. Subsections should be numbered 1.1 (then 1.1.1, 1.1.2, ...), 1.2, etc. (the abstract is not included in section numbering).

Use this numbering also for internal cross-referencing: do not just refer to 'the text'. Any subsection may be given a brief heading. Each heading should appear on its own separate line.

3. MANUSCRIPT FORMAT CONVENTIONS

3.1. NUMBER OF PAGES

The synopsis is not to exceed 7 pages. Front title page does not form part of the 7 page limit.

3.2. FONT

The font to be used is Times New Roman, size 10.

3.3. PAGE SETUP

The final manuscript should use the style used in this template on A4 paper. Use this document as a template if you are using Microsoft Word. Otherwise, use this document as an instruction set.

3.4. LINE AND PARAGRAPH SPACING

Single line spacing. No space before and no spacing after the paragraph setting.

Single line return before and after any heading or sub-heading.

Single line spacing between paragraphs.

3.5. MARGINS

Margins as follows:

Top	2.5 cm
Bottom	2.5 cm
Left	1.7 cm
Right	1.7 cm
Gutter	0.5 cm
Header	1 cm
Footer	1 cm

Note that the margins have been mirrored.

3.3. HEADER AND FOOTER

3.3.1. Header

Project title, Times New Roman, size 10, italic, centred.

3.3.2. Footer

Page numbered as, Page X of 7, Times New Roman, size 10, italic, right justified, manual input of page number.

3.4. FIGURES

3.4.1. General Guidelines

There should be no more than 15 graphs/tables/diagrams/ illustrations/photographs per synopsis.

All figures should be consecutively numbered and clearly referenced in the text. Captions should be typed underneath each figure, Times New Roman, size 9, e.g. **Figure 1:** [Description].

Figures may be positioned in the main body of the text. Text within figures should be of a size to allow legibility even if reduced.

3.4.2. Figure Format

Figures should normally be produced electronically, in JPEG, GIF, Bitmap or TIFF formats, and inserted in to the text.

3.5. LISTS

Bullets should be used for lists, and not numbers.

3.6. MATHEMATICS AND EQUATIONS

All mathematical symbols should be in italics, with subscripts and super scripts in normal font. Each equation should be given a number, e.g. (1), flush with the right margin. Refered to "(1)," not "Eq. (1)" or "equation (1)," except at the beginning of a sentence: "Equation (1) is ... ."

$$R_u = K_w L^2 W \sigma_c \qquad (1)$$

3.7. TABLES

Tables should be centred in the column. All Tables should be captioned. Captions should be written in Times New Roman, size 9, centred. Caption should use mixed upper/lower case, e.g. **Table 1:** [Description]. Tables should be numbered consecutively in accordance with their appearance in the text, Place footnotes to tables below the table body and indicate them with superscript lowercase letters. Avoid vertical rules. Be sparing in the use of tables and ensure that the data presented in tables does not duplicate results described anywhere in the text.

Do not include captions as part of the tables.

Large tables may span both columns.

3.8. FOOTNOTES

Footnotes should be used sparingly. Number them consecutively throughout the synopsis, using superscript numbers. Many word processors build footnotes into the text and this feature may be used. Should this not be the case, indicate the position of footnotes in the text and present the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

4. SYNOPSIS HEADINGS

The main body description of the synopsis is dependent on the type of project to be undertaken. The main sections that may be considered for inclusion in the text may be either some or all of the following elements, such as: methodology, theory and calculations.

Texts covering results, discussions and conclusions are seen to be essential components of the synopsis.

4.1. METHODOLOGY, THEORY AND CALCULATIONS

Provide sufficient detail to allow the work to be reproduced. Methods already published should be indicated by a reference, only relevant modifications should be described.

A Theory section should extend, not repeat, the background to the synopsis already dealt with in the introduction and lay the foundation for further work. In contrast, a Calculation section represents a practical development from a theoretical basis.

4.2. RESULTS

Results should be clear and concise.

4.3. DISCUSSION

This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature.

4.4. CONCLUSIONS

The main body of the text must end with the conclusions of the synopsis

4.5. FURTHER WORK

To include recommendations for further work.

5. ACKNOWLEDGEMENTS

A brief acknowledgements may be added.

6. REFERENCES

References are in Times New Roman, size 8. No line spacing between the references. Indicate references by number(s) in square brackets in line with the text and numbered consecutively.

The actual authors can be referred to, but the reference number(s) must always be given. E.g.'..... as demonstrated [3, 6]. Barnaby and Jones [8] obtained a different result ....' Multiple references are each numbered within the same brackets [1-3].

Do not use "Ref. [3]" or "reference [3]" except at the beginning of a sentence: "Reference [3] shows ...."

A complete list given at the end of the synopsis.

6.1. CITATION IN TEXT

Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full.

6.2. REFERENCES

Reference to a Journal Publication

[1] J. van der Geer, J.A.J. Hanraads, R.A. Lupton, The art of writing a scientific article, J. Sci. Commun. 163 (2010), pp 51–59.

[2] W. Froude, On the Rolling of Ships, Transactions of RINA, Volume n, pp x-y, 1861.

[3] R. W. Lucky, Automatic equalization for digital communication, *Bell Syst. Tech. J.*, vol. 44, no. 4, pp. 547–588, Apr. 1965.

[4] D. E. Farrow and E. O. Tuck, Further studies on stern wavemaking, J. Austal Math. Society, vol. 36, pp. 424-437, 1995.

Reference to a Book

[5] W. Strunk Jr., E.B. White, The Elements of Style, fourth ed., Longman, New York, 2000.

[6] M. Young, The Technical Writers Handbook. Mill Valley, CA: University Science, 1989.

Reference to a Chapter in an Edited Book

[7] G.R. Mettam, L.B. Adams, How to prepare an electronic version of your article, in: B.S. Jones, R.Z. Smith (Eds.), Introduction to the Electronic Age, E-Publishing Inc., New York, 2009, pp. 281–304.

[8] G. O. Young, Synthetic structure of industrial plastics (Book style with paper title and editor), in Plastics, 2nd ed. vol. 3, J. Peters, Ed. New York: McGraw-Hill, 1964, pp. 15–64.

Web References

As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

[9] G. Xu, Marine Plywood - Melamine Plywood, Alibaba.com. [Online] Foshan City Nanhai Goonwa Wood Industry Co., Ltd. http://gd-goonwa.en.alibaba.com/product/223714735-200625440/marine_plywood_melamine_plywood_.html. [Cited: February 27, 2011.]

Unpublished Results and Private Communications

Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

[10] B. Smith, An approach to graphs of linear forms (Unpublished work style), unpublished.

[11] E. H. Miller, A note on reflector arrays (Periodical style—Accepted for publication), IEEE Trans. Antennas Propagat., In Press.

[12] J. Betts, Faculty of Engineering, Private Communication, June 2013.

[13] J. Kaufman, Rocky Mountain Research Lab., Boulder, CO, Private Communication, May 1995.

7. APPENDICES

Use of an appendix is not suggested, however if considered essential then it is to be included in the 7 page limit. If there is more than one appendix, the appendices must be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: (A.1), (A.2), etc.; in a subsequent appendix, (B.1) and so on. Similarly for tables and figures: Table A.1; Figure A.1, etc.

Appendix D

D.1 Front Cover Sample – ISE 5330

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Institute for Sustainable Energy

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M.Sc. Dissertation

M.Sc. in Sustainable Energy January (or June) /202X

D.2 Front Cover Sample – ISE 5080

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M.Sc. by Research // Month //202X