



## **Final Year Project Guidelines**

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## 1. Introduction

The aim of this document is guide students to meet the requirements for the Final Year Project (FYP) study-units offered by the Faculty of ICT. The students should follow the general guidelines together with the specific guidelines related to their respective degree programme found in the Appendices of this document.

**Students should also read the University's official undergraduate regulations.**

## 2. Components of an FYP

Before starting the project, the student needs to submit the research ethics form on the URECA system - <https://www.um.edu.mt/research/ethics/redp-form/frontEnd/>

This section lists the items that a student is expected to deliver during the course of an FYP. This list also includes components that do not necessarily contribute to the final grading of the FYP but still have to be submitted.

- Progress report.
- First draft to supervisor.
- Draft on the Virtual Learning Environment (VLE) platform to check for plagiarism.
- Examination copy on the Virtual Learning Environment platform.
- Review paper.
- 1-page abstract for the Faculty of ICT yearly publication.
- Poster.
- Slides for presentation (if applicable, see appendix).
- Presentation (if applicable, see appendix)
- Hard-bound copies or Soft copy depending on course programme (see appendix).

These deliverables are highlighted and placed on a timeline in the next section.

### 3. Important Milestones

Period (Approximate*)	Milestone	Notes
<i>Previous Year</i>		
April - July	Publishing of FYP Titles and/or Areas of interest.	Titles and areas of interest will be made available to students.
April - July	Student submits title.	After consultation with the potential supervisor, students will submit the title of their preferred FYP or a title and a short proposal according to the requirements of the degree programme (see appendix).
July	Allocation of FYP titles.	Official notification from departmental offices.  The complete list of allocated titles will be made available online.
<i>Beginning of 'FYP Year'</i>		
October	Submission of title and proposal for students choosing an area.	
December	Submission of <b><u>progress report</u></b> .	Student submits a progress report.
April	Submission of <b><u>1-page abstract</u></b> for the Faculty of ICT yearly publication.	
Beginning of April	Final chance to submit requests for changes in Final Year Project titles.	
Beginning of May	Submission of <b><u>first draft</u></b> to supervisor for review.	
Mid-May	Feedback by supervisor on first draft.	
End of May	Students submit their report on the VLE.	
June	Submission of <b><u>review report</u></b> .	
June	Submission of <b><u>slide presentations</u></b> (if required) and <b><u>poster</u></b> .	
June	Presentations and demonstrations (if applicable).	
July	Submission of <b><u>hard bound copies or final soft copy</u></b> of report (see Appendix).	

\* exact dates will be published yearly.

## 4. The Progress Report

### 4.1 Purpose

An ICT Final Year Project requires the submission of a progress report for review and comments by the supervisor and examiners. Students are obliged to produce a report according to the degree programme procedures found in the Appendices. Further work on this study unit can only proceed after due approval of this report.

The main aims of the progress report are:

- To establish a checkpoint between supervisor and student. The problem, methodology and evaluation plan should have been defined by this point.
- Establish a plan of action milestones and as such to ascertain whether the timeline proposed by the student is realistic.
- An opportunity for the supervisor(s) to give feedback to the student.

### 4.2 Format and Expected Content

The Progress Report should mainly consist of a description about work related to the chosen area (literature review) and an expanded proposal of the Final Year Project. In addition, the intention of how to achieve the objectives, as well as a milestone schedule (e.g. start of coding, system design, hardware design and implementation, system testing and verification, start of dissertation writing etc.), should be included.

The format of a progress report will consist of:

- A description of the FYP:
  - An introduction to the area.
  - Motivation for the project.
  - Preliminary background research and literature review.
  - Aims and objectives.
  - Methods and techniques used or planned.
  - The evaluation strategy and technique that is being proposed.
  - A breakdown and description of the deliverables
- Work plan:
  - Identification of the subtasks and their dependencies.
  - Arrangement of these subtasks and dependencies on a timeline/Gantt chart.

The length of the progress report is according to the degree programme guidelines found in the respective Appendix.

## 5. The FYP Report

See the table “Primary FYP Types and Emphasis” at the end of this document.

### 5.1 Proposed Structure

In general, the structure of an FYP report will consist of:

1. Title page.
2. Abstract.
3. Acknowledgements.
4. Table of contents.
5. Other tables and lists, such as list of figures, list of tables and abbreviations.
6. Main content:
  - a. Introduction.
  - b. Background and literature review.
  - c. Specification and design (optional, depends on FYP).
  - d. Implementation (optional, depends on FYP).
  - e. Evaluation (and testing).
  - f. Future work.
  - g. Conclusions.
7. Appendices:
  - a. Including user guides (if necessary), contents of the pen drive (or other digital media), schematic circuit diagrams, PCB or IC layouts, questionnaires, complete data collected or samples, etc.
8. Bibliography and References.

### 5.2 The Introduction Chapter

- Introduce the area and the FYP without assuming that the reader has any special knowledge in the area.
- The aims and goals of the project.
- The approach used.
- Any assumptions.
- A high-level description of the project.
- An overview of the contents of the report.

### 5.3 Background and Literature Review

The purpose of the background section is to provide the reader with information that they cannot be expected to know but which they will need in order to fully understand and appreciate the rest of the project.

This section may describe such things as:

- the wider context of the project,
- the anticipated benefits of the system,

- the likely users of the system,
- any theory associated with the project,
- the software/hardware development method(s) used,
- any special diagramming conventions used,
- existing software (or hardware) that is relevant to the system,
- Etc...

Since projects will likely include different kinds of theory, programming language choices, compilers, software/hardware components, APIs, development boards, IC technologies, one cannot always assume that the reader will be familiar with the details of all of them. The student should therefore explain concepts and use references to guide the reader.

The literature review component of the report should include:

- A study in the area of interest, highlighting the strengths and weaknesses of existing methods.
- A review of the state-of-the-art published material in the area.
- A critical analysis of existing material and methods.
- An explanation showing why the literature chosen to review is relevant to the FYP.

#### 5.4 Specification and Design

The purpose of this section is to give the reader a clear picture of the system/artifact/project/work that has been created in the FYP and why it has been created in the way chosen.

Details:

- Any design choices have to be justified (e.g. by discussing the implications of different design choices and then giving reasons for making the choices made).
- Fine details, specifically details of the system (software or hardware) should be left out. Also, any complete rigorous specification is better relegated to an appendix.
- Using diagrams (including but not limited to flowcharts and system level block diagrams) is strongly recommended.
- The design of the project will almost certainly have evolved during development. Focus should be made on the project as it is in its final state but often there are good reasons for describing intermediate states too (e.g. to discuss details of the design method used).



## 5.5 Implementation

The Implementation section is similar to the Specification and Design section in that it describes the system but it does so at a finer level of detail, generally down to the code/theorem/algorithm/circuit/hardware... level. It can also describe any problems that may have arisen during implementation.

- In case of a software development describing of all the code in the system should be avoided as well as large “pieces” of code. Complete source code listings should be put on the accompanying digital media. In case of hardware the system should be divided into sub systems or circuits that may be easily described and analysed.
- One must be especially critical to the operation of the system.
- Mentioning unforeseen problems encountered during implementation and how these for solved.

## 5.6 Testing and / or Evaluation

The testing and / or evaluation component of an FYP is critical.

- One has to make sure and explain why all tests used to evaluate the system are relevant, using evidence from the literature about similar systems, and justifying any deviations from standard approaches;
- Demonstration that system works as intended (or not, as the case may be);
- Include comprehensible summaries of the results of all critical tests that have been made;
- The student must also critically evaluate the system in the light of these tests results, describing its strengths and weaknesses;
- Ideas for improving it can be carried over into the Future Work section;
- Comparison of practical with theoretical results and their interpretation.
- Comparison with published work when available.

## 5.7 Future Work

Whether by the end of the project all the original aims and objectives have been completed or not, there is always scope for future work. Also, the ideas will have evolved during the course of the project beyond the original target. The Future Work section is for expressing these ideas.

## 5.8 Conclusions

The Conclusions section should be a summary of the project and a restatement of its main results, i.e. what has been learnt and what it has achieved. An effective set of conclusions should not introduce new material. Instead it should draw out, summarise, combine and reiterate the main points that have been made in the body of the report and present opinions based on them.

The Conclusions section marks the end of the report proper.

## 5.9 Supporting Structures

A template in Word and LaTeX format is available on:

<https://www.um.edu.mt/ict/students/forms>

This template should be followed as deviation from the template will affect the assessment mark of the report and might result in non-acceptance of the submission.

### 5.9.1 The Title Page

The title page should follow the template.

### 5.9.2 The Abstract

This is a summary of the dissertation. It must be less than 300 words long and fit in one page. It should give enough information to allow a potential reader to decide whether or not the whole report will be of interest to them. It should briefly describe the main features of the work done including the aims and conclusions, brief overview of the results obtained and a critical statement of the success of the approach. It should be both self-contained and self-explanatory.

### 5.9.3 Acknowledgements

This section should be used to record any debt for the use of facilities or help from particular sources. You should mention any organisations that have helped fund the project. Also, for placement students, it would be diplomatic to include the name of the supervisor in the host organisation where the student was placed and any of his or her colleagues who helped you.

### 5.9.4 Appendices

Appendices are repositories for material which the student wishes to include in the report but which would seriously obstruct the flow of ideas put anywhere in the main body. Copies of the final version of any code should be avoided – the code must be available digitally on accompanying media.

Examples of items that could go in appendices are:

- A glossary of terms.
- Fundamental and basic theory.
- Schematic Diagrams and PCB/IC layout snap shots.
- Detailed notes on the programming language chosen or hardware platform used or technology used in an IC environment.
- A user's guide.

*Important notes:*

Students are to submit their FYP report to the Virtual Learning Environment platform. Moreover, the signed declaration of authenticity form (found here: <https://www.um.edu.mt/ict/students/forms>) should be submitted to the departmental administrator by email as detailed in the respective Appendix.

Assessment will take place on the basis of the contents of the report and any accompanying material submitted on the VLE.

### **5.10 Formatting and Layout**

The student should not change the formatting in the template. The maximum number of pages allowed for submission is listed in the Appendix of the respective degree programme.

## 6. The Review Report (if applicable)

### 6.1 Purpose

The aim of the Review Report, in the form of a 6-page scientific paper, is to demonstrate the skills of the student in condensing the salient and relevant parts of his/her effort in the form of a review, highlighting the road-map of the scientific method that was adopted in tackling the issues that were exposed through the student's background research, (including the background research itself), work carried out, results obtained, and conclusions drawn. This can also serve as a summary of the student's work, as well as to guide the assessment process of the external examiner.

### 6.2 Format and Expected Content

The review report must be written in scientific paper format and should be written in a style similar to that of a professional academic workshop or conference proceedings. The following structure is suggested:

- Abstract.
- Introduction and Background.
- Aims and Objectives.
- Design.
- Implementation.
- Results and Evaluation.
- Conclusions and future work.
- Bibliography.

*Important notes:*

- The student submits the review report to the department administrators by email.

## 7. Article for Faculty of ICT Yearly Publication

### 7.1 Purpose

Students are required to submit an article of their FYP for inclusion in the yearly publication as directed by the Faculty. This publication is presented during the annual Faculty of ICT exhibition and is used by the Faculty as a showcase of its work at conferences and in meetings with external stakeholders.

### 7.2 Format and Expected Content

The article is submitted without any formatting using an online platform developed by the Faculty. The exact word count is communicated to the students in April. The format normally expects one or two images. The content is intended for the general public and therefore the student needs to ensure that the text can be easily understood by this audience.

***Note that this article is different from the abstract in the report as it is intended for a different purpose and audience.***

## **8. The Presentation (if applicable)**

### **8.1 Purpose**

The main purpose of the presentation is to demonstrate the student's ability to summarise and communicate their work and achievements. In addition to this, it is also an opportunity for the student to demonstrate their artifact (if any).

Students will be graded based on the quality of the material they present, their communication skills, adherence to the time requirements of the presentation and demonstrating that they truly understand the FYP area.

### **8.2 Format and Expected Content**

Each project will be allocated a presentation time depending on the degree programme (see Appendix), which will be subdivided as follows:

1. The first part will be allocated to the actual FYP presentation. This part may either consist of a slide presentation or a poster presentation (see Appendix).
2. The second part will consist of questions from the examiners and audience (if present).

For the format and duration of each part consult the respective Appendix.

## 9. The Poster

### 9.1 Purpose

The Poster is intended to present the project at the Faculty of ICT exhibition. The emphasis should be on a visual style of communication with attention given to the, generally, short time span available to the reader.

Although the poster carries no marks, students are obliged to submit the poster before the classification result can be issued.

### 9.2 Format and Expected Content

A template for the poster will be communicated by the Faculty in April.

- The poster should be presented printed on an A1 gloss 190GSM photo paper.
- It should be in portrait.

Posters are expected to be in colour and use a combination of graphics, captions, diagrams and short text notes to describe the FYP as concisely, yet clearly, as possible.

The title of the project, the name of the student as well as that of the supervisor(s) should be clearly visible on the poster.

*Note:*

- *The posters will be displayed during the Faculty of ICT exhibition. A requirement sheet will also be made available to students where they will indicate any resources that they might require to exhibit their project.*

## 10. Final Submission

### 10.1 Soft Copy Submission (all students)

Students need to submit a final version of their report in portable document format (PDF) to the department administrators. This copy will feature in the University Library. It is important that any corrections requested by the Board of Examiners are incorporated in the final version.

### 10.2 Hard Bound Submission (if applicable)

Some of the degree programmes require students to submit hard bound copies of their FYP report:

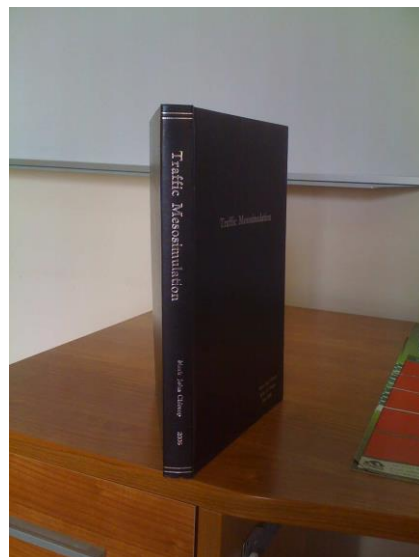
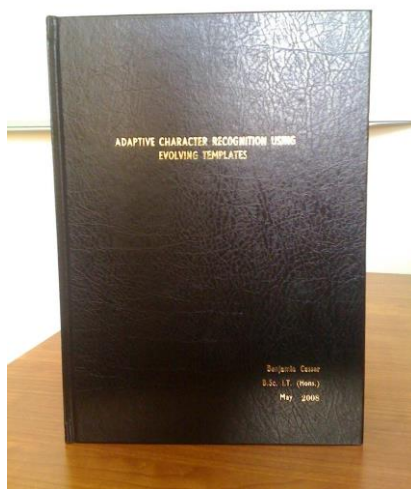
- One for each supervisor (students who are co-supervised must submit an additional copy of their report for the co-supervisor),
- The Departmental archives.

Associated media must to be included with the supervisor's and departmental copies ONLY.

Hard Bound Copies covers should be black with gold writing (see examples below).

The template for the title page and spine can be found here:

<https://www.um.edu.mt/ict/students/forms>





## 11. Primary FYP Types and Emphasis

Primary Focus	Characteristics	Challenges	FYP Emphasis	Examples
Implementation Centric	<ul style="list-style-type: none"> <li>Complex algorithms, not well understood or require refinement.</li> <li>Systematic exploration of implementation issues.</li> </ul>	<ul style="list-style-type: none"> <li>Understanding the solution, difficulties, subtleties and explaining them clearly.</li> </ul>	<ul style="list-style-type: none"> <li>Implementation chapter.</li> </ul>	<ul style="list-style-type: none"> <li>Implementation efficiency.</li> <li>Non-blocking data structures.</li> </ul>
Design Centric	<ul style="list-style-type: none"> <li>Design “elegance”.</li> <li>Apparently trivial but complex underneath.</li> <li>Based on existing work.</li> </ul>	<ul style="list-style-type: none"> <li>Understanding pitfalls and shortcomings of existing solutions.</li> <li>Simplification, improvement, analysing and formalising.</li> </ul>	<ul style="list-style-type: none"> <li>Design and background.</li> </ul>	<ul style="list-style-type: none"> <li>Refactoring a library.</li> <li>Formalising an existing solution.</li> <li>Designing a communication protocol.</li> </ul>
Proof of Concept	<ul style="list-style-type: none"> <li>Novelty.</li> <li>Unclear aims when starting off.</li> <li>First attempt at solving a problem.</li> <li>Exploratory.</li> </ul>	<ul style="list-style-type: none"> <li>Defining problems.</li> <li>Identifying what does not work.</li> <li>Partial solutions suffice.</li> </ul>	<ul style="list-style-type: none"> <li>Literature review to defend novelty.</li> <li>Problem specification.</li> </ul>	<ul style="list-style-type: none"> <li>Merging two novel technologies.</li> <li>Use of an algorithm to solve some application (the algorithm need not be novel, but the application of the algorithm to that domain is).</li> </ul>
Application/Client Centric	<ul style="list-style-type: none"> <li>Clear development path (although might need refinement after initial stages).</li> <li>Extensive amount of work.</li> <li>Involves a human element (a client).</li> <li>Evolving Specifications</li> </ul>	<ul style="list-style-type: none"> <li>Complete solutions.</li> <li>Polished and documented development.</li> <li>Managing specs in flux</li> </ul>	<ul style="list-style-type: none"> <li>Selection of development process.</li> <li>Explaining decisions.</li> <li>Documenting development process so that it can be audited.</li> </ul>	<ul style="list-style-type: none"> <li>Project-management systems/ extensions.</li> <li>Client-driven projects (ones that involve collaboration with non-technical staff)</li> </ul>
Theoretical	<ul style="list-style-type: none"> <li>Explore a problem through theoretical aspects.</li> </ul>	<ul style="list-style-type: none"> <li>Define the problem.</li> <li>Use tools to prove the theory</li> </ul>	<ul style="list-style-type: none"> <li>Emphasis on the proof or mathematical analysis.</li> </ul>	<ul style="list-style-type: none"> <li>Formal methods.</li> <li>Mathematical model and optimisation.</li> </ul>

## **12. APPENDIX 1 - B.Sc.(Hons.) in Computer Engineering**

### **12.1 Area/title selection**

In the previous year, supervisors submit a list of areas of interest, and students select an area. After supervisors and areas are allocated, the student can consult with their supervisors, and then submit a title and abstract in the beginning of the final year, which is then to be approved by the Board of Studies.

### **12.2 The Progress Report**

The progress report should be a maximum of 5 pages long.

### **12.3 The FYP Report**

The maximum number of pages is 45 pages. The page count should start from the first page of Chapter 1 and end on the last page of the concluding chapter, while excluding the list of References and the Appendices.

Any circuit diagrams should be drawn using standard symbols for components, ground, etc. Pictures of components should not be used instead of symbols.

While the FYP report template allows both IEEE style and Harvard style citations and references, the IEEE style has to be used for the CE degree.

### **12.4 The Review Report**

No review report is to be submitted.

### **12.5 The Presentation**

The total allocated time for the presentation is 20 minutes.

- The first 10 minutes are allocated to the slide presentation.
- The final 10 minutes are allocated to questions from the examiners, as well as any other member of the audience.

All presentations are to be conducted on a machine provided in the presentation area. No other machines will be allowed for the presentation. It is very important for students to submit their slides by the submission deadline. It is recommended that the presentation is reviewed by the supervisor before submission.

### **12.6 Final Submission**

Only a soft copy of the final submission is required. No hard bound copies are to be submitted.

## **13. APPENDIX 2 - B.Sc.(Hons.) Computing Science & B.Sc.(Hons.) Computing Science Joint Degrees**

### **13.1 Project Selection**

The BoS will publish a list of research areas and associated supervisors, typically mid-way through Semester 2. Students are encouraged to speak to supervisors whose area they'd like to work with and submit a request to work with that supervisor on the form provided. Once allocated, students will be required to submit a one-page project proposal by the first day of Semester 1 in their final year of study. This proposal should include a clear definition of the problem to be tackled, and suitable references of existing work in the area.

### **13.2 The Progress Report**

The progress report would typically be 5 to 7 pages long.

### **13.3 The FYP Report**

The maximum number of pages is 35 pages. The page count starts from the first page of Chapter 1 and ends on the last page of the concluding chapter, while excluding the list of References and the Appendices.

While the FYP report template allows both IEEE style and Harvard style citations and references, the IEEE style has to be used for the CS degree.

### **13.4 The Presentation**

No viva is required by default in the CS degree. In some cases, the Board of Examiners will request a presentation to be held in order to clear up any queries about a specific project.

## **14. APPENDIX 3 - BSc IT in Artificial Intelligence**

### **14.1 The Progress Report - Format and Expected Content**

The Progress Report should consist of 2 main components:

- A work-in-progress paper (max. 6 pages) that provides a clear description of the Aims and Objectives, a description about work related to the chosen area (literature review), and a description of the proposed solution as well as an evaluation plan.
- A work plan (e.g. In the form of a Gantt Chart) (1 page) that describes the plan for the remaining months – start of coding, system design and implementation, evaluation, start of dissertation writing etc.

The work-in-progress paper must be written in scientific paper format and should be written in a style similar to that of a professional academic workshop or conference proceedings. Template available [here](#). The following structure is suggested:

- Abstract
- Introduction – Introduction to the area, motivation for the project, and a defense of why the problem is non-trivial.
- Aims and Objectives.
- Background research and Literature review.
- Proposed Solution – Methods and techniques used or planned.
- Evaluation Plan – The evaluation strategy and techniques that is being proposed.
- Conclusions including expected outcomes and difficulties/challenges.
- Bibliography.

The work-in-progress paper should not be longer than six (6) pages.

The work-plan should be a single page that describes:

- Identification of the subtasks and their dependencies.
- Arrangement of these subtasks and dependencies on a timeline/Gantt Chart.

### **14.2 The FYP Report - Formatting and Layout**

Maximum length: The recommended number of pages for the dissertation write-up is 35 pages. The maximum number of pages is 40 excluding the list of References and the Appendices..

Template is the same as recommended by the faculty at this site.

You are strongly advised to use latex2e to type your dissertation document using the template provided by the department. New chapters should always start on a new page. Note that Page 1 of the dissertation should be the first page of the Chapter 1 (the Introduction chapter).

The numbers of pages within the dissertation may be distributed as follows:

- |                                |          |
|--------------------------------|----------|
| 1. Introduction                | 4 pages  |
| 2. Background                  | 3 pages  |
| 3. Literature Review           | 7 pages  |
| 4. Methodology                 | 10 pages |
| 5. Evaluation                  | 8 pages  |
| 6. Conclusions and Future Work | 3 pages  |

### **14.3 The Viva Voce (Oral Examination)**

#### **Purpose**

The main purpose of the viva voce is to demonstrate the student's ability to summarise and communicate their work and achievements. In addition to this, it is also an opportunity for the student to demonstrate their artifact (if any).

Students will be graded based on the quality of the material they present, their communication skills, adherence to the time requirements of the presentation and demonstrating that they truly understand the FYP area.

#### **Format and Expected Content**

Each project will be allocated 30 minutes of presentation time, which will be subdivided as follows:

The first part (5 minutes) will be allocated to the actual FYP presentation. It consists of a poster presentation whereby the students will give an overview of the research performed.

The second part (5 minutes) consists of a demonstration of the artifact, or visualization of the obtained results developed as part of the research. In the case that the student does not have a demo to show, these can be used to present the obtained results. A short video can also be used as part of the demonstration.

The third part will consist of questions from the examiner(s).

Students will be informed of the format and duration of each part according to departmental procedures and the examiners' requirements.

In the case that the student does not have a demo to present, the second part can only be used to present (a visualisation of) the obtained results. This means that the student can specify, for a number of cases, what input was provided and present a visualisation of the obtained output.

For the demonstration, students are encouraged to use a short video (2-3 minutes) that show-cases their work. Students that use such a video are kindly asked to send their video to their supervisor/s after the oral examination.

The official pages on the ICT website also strictly require that all demonstrations are to be conducted on a machine belonging to the student. It is the responsibility of the student to ensure that their demonstrations are functioning before their actual allocated presentation time slot. In cases when students require departmental machines and resources for their demonstrations, the department will do its best to satisfy these requests. However, it still remains the responsibility of the student to ensure the correct functioning of their demonstration.

#### **14.4 Research Ethics and Data Protection Issues**

All students working on dissertations are Principal Investigators. All Principal Investigators are required to familiarise themselves with the University's Research Code of Practice. In addition, all Principal Investigators must complete the Research Ethics and Data Protection (REDP) Form.

The Code of Practice and the REDP Form are available online at <https://www.um.edu.mt/urec>. Upon starting your research, prior to performing any data collection, you are required to complete the online form (<https://www.um.edu.mt/urec/onlineforms>). The online form contains 4 parts:

1. Applicant and project details – need to be provided by everyone;
2. Self-assessment checklist – helps you to determine if you need further research ethics evaluation;
3. Detailed evaluation – shown only if one or more issues have emerged from your self-assessment checklist; and
4. Submission details.

The third part (Detailed Evaluation) will be displayed only in cases where issues have emerged from the self-assessment checklist. Within this part, the principal investigators must elaborate further on the flagged issues and wait for the approval from the Faculty Research Ethics committee (FREC) before starting any data collection. In cases where no issues emerge from the self-assessment part, principal investigators need only to submit the form via email to FREC on the address [research-ethics.ict@um.edu.mt](mailto:research-ethics.ict@um.edu.mt) (for filing and audit purposes) and may proceed with the data collection.

It should be noted that FREC approvals may take up to 1 month. Therefore it is recommended that you submit your application by 31st October (latest). Note that the FREC forms you submit must be reviewed and approved by your supervisor.

If, in the course of your research, you are using data/know-how/or material that needs to be protected; that requires permission from a third-party to use; and permission is granted through a contract of employment/promise of employment, a confidentiality agreement, and/or an intellectual property agreement, kindly note that: i) you must make the University aware of this agreement (through your supervisor), and ii) normally the University must also be a signatory to the agreement otherwise you risk being in breach of your agreement with the third-party when you have supervisions and/or submit your dissertation for assessment. If in doubt, ask your supervisor.

### 14.5 Miscellaneous

1. The FYP report should be submitted together with a digital medium which should contain:
  - a. A soft copy of the report and review paper in PDF format.
  - b. Any source code, system diagrams, etc. related to any artifact that has been developed.
  - c. Executable versions of the artifact (if any).
2. Acceptable digital media are 'USB pen drives'.
3. With the exception of excerpts to illustrate algorithms, design and capabilities, full source code should not be printed in the report.

## 15. APPENDIX 4 – B.Sc. IT (Hons.) in Computing and Business

### Important Notice

All CB FYP students are asked to note the following clarifications and instructions with respect to the Final Year Project deliverables. These include the FYP Report, the Review Paper, the Poster, the Presentation, and the article for the Faculty Exhibition booklet.

This appendix is an addendum to the Faculty of ICT FYP Guidelines and takes precedence over those guidelines.

### 15.1 Progress Report

**In the first semester of the third year, you start work in earnest on your Final Year Project (FYP). You must submit a Progress Report in January as per the CIS FYP Calendar.**

The Progress report should contain the sections below and should not exceed 3 pages.

- A description of the project
  - introduction to the area
  - scope and motivation behind the project
  - brief overview of the main literature in the area
  - aims and objectives to be achieved in the FYP
  - a list of deliverables including the artefact
  - methods to be used (methodology) and the evaluation strategy of expected results
- A work plan identifying subtasks/dependencies and a timeline (or Gantt chart) (requirement from main guidelines section 4.2)

### 15.2 FYP Report

The FYP report is a full description of the work done within the FYP. It includes such parts as an introduction, background, literature review and other chapters explaining the design, construction, and evaluation of an artefact. There are different types of artefacts possible, please refer to the Primary FYP Types section in the main Guidelines.

### 15.3 Word and Page Count

The dissertation submission size is the maximum allowable size of a submitted Final Year Project report measured as the number pages. The maximum number of pages is forty (40) pages.

The page count limit does not include the following:

- front / title pages,
- dedication,
- acknowledgements,



- page count declaration,
- declaration of authenticity,
- abstract,
- table of contents,
- table of figures,
- list of tables,
- glossary,
- list of abbreviations,
- references,
- appendices,
- bibliography,
- annexes.

In exceptional cases, up to 20 extra pages may be accepted, but this requires supervisor approval and the Head of Department's approval. These requests should be sent to BoS chair at least three weeks before submission.

Failing this, students are given a maximum of 3 (three) working days in which to submit changes. If the FYP report, with the changes applied, is not submitted on time, a 10 (ten) percent penalty will be applied to the final awarded mark. If the final submission does not conform to the maximum word and page limits, it may not be accepted for marking.

## 15.4 Formatting

The main text – Chapter 1 to the last Chapter are to be assigned Arabic numerals starting from 1 on Page 1 of Chapter 1.

All pages before Chapter 1 must be assigned Roman numerals (except the front title page).

All pages after the last Chapter must be assigned Arabic numerals continuing from the last page of the last Chapter.

Paper size must be A4. Students are instructed to use the formatting, layouts, styles, fonts, and font sizes as indicated in the templates – do not change these. Do not include any text smaller than 11pt. This applies also to captions and text in tables, diagrams, and figures. The 11pt font size does not apply to superscripts and subscripts in equations, mathematical content, or quoted source code.

A template in Word and LaTeX format is provided by the Faculty at:

<https://www.um.edu.mt/ict/students/forms>

For referencing, please use the referencing style as provided in the Word or LaTeX template.

*Should you have any further queries regarding referencing, please refer to your supervisor.*

## 15.5 Important Note

All submissions will be in PDF format through the VLE.

A separate area will be created in the VLE for the submission of binaries (code, data, source code, etc.).

A separate area will also be created in the VLE for uploading completed and signed declaration forms.

The hard-bound copies of the FYP report, any related media, the printed and signed declaration forms and the printed poster will be submitted together after the viva voce.

**Please note that hard-bound copies are not required for the Department, the Faculty, and the Library. Students must liaise with their supervisors on any other hard-bound copies that are for personal use.**

## 15.6 Exhibition Booklet Article

A single page article is required for the faculty's project exhibition booklet. A draft must be sent to the supervisor for any possible recommendations. Faculty office will provide guidelines for submission. This article is distinct from the main FYP abstract.

The article is submitted directly to the Faculty Office via an online form, the link to which will be provided.

## 15.7 The Review paper

### Submission

The submission of the review paper should be done as a single PDF file by the deadline indicated on the CIS FYP Calendar, through the designated VLE Turnitin activity. This is a 6-page scientific paper whose structure is specified in the main FYP Guidelines.

Multiple uploads are allowed up to the submission deadline. A draft Turnitin submission will be created in the VLE.

### Format

Word or LaTeX A4 templates are available at:

<https://www.ieee.org/conferences/publishing/templates.html>

You are instructed to use the formatting, layouts, styles, fonts and font sizes as indicated in the templates – do not change these.

Diagrams, tables and images (colour or black & white) are allowed.

The maximum number of pages is six (6). This is a strict requirement. Any page/s after the sixth page will be disregarded and will not be assessed.

All the material, including title, abstract, main content, bibliography, reference list, appendices and any other elements, must fit into the 6-page limit.

## **Review Paper Content**

For suggested content of Review Paper refer to the FYP Guidelines section about the Review Report.

## **15.8 The Poster**

### **Format**

The poster must be A1 size. The font size must not be smaller than size 24pt. The latest poster template may be downloaded from the following resources:

[https://www.um.edu.mt/media/um/docs/faculties/ict/cis/Poster\\_Template1B.Sc.IT.CB.pptx](https://www.um.edu.mt/media/um/docs/faculties/ict/cis/Poster_Template1B.Sc.IT.CB.pptx)

### **Content**

For suggested content of the Poster refer to FYP Guidelines. It is recommended that 2 or 3 references are cited and listed in the poster. The poster must be printed on glossy paper. You might have to submit the poster through the VLE and have the FYP viva voce online. The physically printed poster will then be submitted after the viva together with the final soft (PDF) copies of the FYP report and the associated binaries.

### **Submission**

Submission of the printed A1 Poster by the date stipulated in the CIS FYP Calendar must be submitted to the departmental offices. A PDF copy of the poster is also to be sent through Turnitin in the VLE.

Although the poster carries no marks, students are obliged to submit the poster in terms of Regulation 79 of the General Regulations for University Undergraduate Awards, 2004. Students who fail to submit the poster may not be permitted to graduate.

**The poster will be used for the FICT FYP Projects Exhibition.**

## **15.9 Viva and Presentation**

The FYP viva/presentation are usually scheduled in the fourth week of June or the first week of July. The exact dates will be fixed when the exam schedule is announced. The purpose is to demonstrate the student's ability to summarise and verbally describe their achievements.

Students will give a 10-minute presentation using slides – either in persona or else online in line with directives from the Department of Health. Presentation software is needed to create such slides. The examiners will then spend around 10 minutes asking questions. Students may prepare, if they prefer, another deck of slides they can use when answering questions from the examiners. Students may also be asked to give a demonstration of their work.

The supervisor/s may attend as observer/s.

After the presentation and the questions, the student, and the supervisor/s, will be asked to leave the room (or the online session) for the examiners to deliberate.

The dress code for the viva/presentations is smart casual. This applies to vivas & presentations held on campus or online.

#### **15.10 Requests for FYP Extensions and Change of FYP Titles.**

Student requests for the above must be made on the designated forms and submitted to Admin by email.

Forms must be submitted in good time for subsequent consideration and approval by the Board of Studies, Faculty Board, and Senate.

Forms for such requests should be not submitted later than the 29th March 2024.

All FYP requests must be endorsed by the principal supervisor.

## 16. APPENDIX 5 – B.Sc. IT (Hons.) in Software Development

### Important Notice

All SD FYP students are asked to note the following clarifications and instructions with respect to the Final Year Project deliverables. These include the FYP Report, the Poster, the Presentation, and the abstract for the Faculty Exhibition booklet.

This appendix is an addendum to the Faculty of ICT FYP Guidelines and takes precedence over those guidelines.

### 16.1 Progress Report

In the first semester of the third year, you start work in earnest on your Final Year Project (FYP). You must submit a Progress Report in January as per the CIS FYP Calendar.

The Progress report should contain the sections below and should not exceed 3 pages.

- A description of the project
  - introduction to the area
  - scope and motivation behind the project
  - brief overview of the main literature in the area
  - aims and objectives to be achieved in the FYP
  - a list of deliverables including the artefact
  - methods to be used (methodology) and the evaluation strategy of expected results
- A work plan identifying subtasks/dependencies and a timeline (or Gantt chart) (requirement from main guidelines section 4.2)

### 16.2 FYP Report

The FYP report is a full description of the work done within the FYP. It includes such parts as an introduction, background, literature review and other chapters explaining the design, construction, and evaluation of an artefact. There are different types of artefacts possible, please refer to the Primary FYP Types section in the main Guidelines.

### 16.3 Word and Page Count

The dissertation submission size is the maximum allowable size of a submitted Final Year Project report measured as the number pages. The maximum number of pages is forty (40) pages.

The page count limit does not include the following:

- front / title pages,
- dedication,
- acknowledgements,
- page count declaration,

- declaration of authenticity,
- abstract,
- table of contents,
- table of figures,
- list of tables,
- glossary,
- list of abbreviations,
- references,
- appendices, bibliography,
- annexes.

In exceptional cases, up to 20 extra pages may be accepted, but this requires supervisor approval and the Head of Department's approval. These requests should be sent to BoS chair at least three weeks before submission.

Failing this, students are given a maximum of 3 (three) working days in which to submit changes. If the FYP report, with the changes applied, is not submitted on time, a 10 (ten) percent penalty will be applied to the final awarded mark. If the final submission does not conform to the maximum word and page limits, it may not be accepted for marking.

## 16.4 Formatting

The main text – Chapter 1 to the last Chapter are to be assigned Arabic numerals starting from 1 on Page 1 of Chapter 1.

All pages before Chapter 1 must be assigned Roman numerals (except the front title page).

All pages after the last Chapter must be assigned Arabic numerals continuing from the last page of the last Chapter.

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Do not include any text smaller than 11pt. This applies also to captions and text in tables, diagrams, and figures. The 11pt font size does not apply to superscripts and subscripts in equations, mathematical content, or quoted source code.

Templates in Word and LaTeX format are provided by the Faculty at:

<https://www.um.edu.mt/ict/students/forms>

For referencing, please use the referencing style as provided in the Word or LaTeX template.

*Should you have any further queries regarding referencing, please refer to your supervisor.*

## 16.5 Important Note

All submissions will be in PDF format through the VLE.

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## 16.6 Exhibition Booklet Abstract

A single page abstract is required for the faculty's project exhibition booklet. A draft must be sent to the supervisor for any possible recommendations. Faculty office will provide guidelines for submission. This abstract is distinct from the main FYP abstract.

The abstract is submitted directly to the Faculty Office.

## 16.7 The Poster

### Format

The poster must be A1 size. The font size must not be smaller than size 24pt. The latest poster template may be downloaded from the following resources:

<https://www.um.edu.mt/ict/students/undergraduate/ict3911-fypinsoftwaredevelopment>

### Content

For suggested content of the Poster refer to FYP Guidelines. It is recommended that 2 or 3 references are cited and listed in the poster. The poster must be printed on glossy paper. You might have to submit the poster through the VLE and have the FYP viva voce online. The physically printed poster will then be submitted after the viva together with the final soft (PDF) copies of the FYP report and the associated binaries.

### Submission

Submission of the printed A1 Poster by the date stipulated in the CIS FYP Calendar must be submitted to the departmental offices. A PDF copy of the poster is also to be sent through Turnitin in the VLE.

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Students will give a 10-minute presentation using slides – either *in persona*, or else, if necessary online in line with directives from the Department of Health. Presentation software is needed to create such slides. After the presentation, the examiners will then spend around 10 minutes asking questions. Students may prepare, if they prefer, another deck of slides that they can use when answering questions from the examiners. Students may be also asked to give a demonstration of their work.

The supervisor/s may attend as observer/s.

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The dress code for the viva/presentations is smart casual. This applies to vivas & presentations held on campus or online.

### **16.9 Requests for FYP Extensions and Change of FYP Title.**

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Forms must be submitted in good time for subsequent consideration and approval by the Board of Studies, Faculty Board, and Senate.

Forms for such requests should be not submitted later than the 29th March 2024.

FYP requests must be endorsed by the principal supervisor.



