UNIVERSITY OF NEW YORK TIRANA

Faculty of Engineering and Architecture
Fin Project and Dissertation Guidelines or
MSc in Computer Science

Version 3.0

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Final Project and Dissertation
Guidelines for Students and Dissertation Advisors
for the MSc in Computer Science

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Table of Content

1 Introduction: Project Module Aims

(Throughout the document, the following acronyms hold:
DA – Dissertation Advisor: The instructor who acts as the advisor to the project.
PM – Program Manager: The faculty member in charge of the Dissertation program
PD – M.Sc. Program Director
DS – Dissertation
HD – Head of Department
BE – Board of Examiners, the evaluation board composed of DA, PM, PD, and the second assigned assessor of the dissertation).

This module is the concluding project of the MSc program and is conducted towards the end of the program. The module aims to conduct work where students apply new knowledge from their program and work experience. The dissertation must present a piece of work that involves original thinking. The project should emphasize the student's ability to use the various doctrines and techniques acquired during the program, investigate and critically evaluate alternative approaches, and present the results professionally.

The final project and dissertation aim is for a student to develop and demonstrate autonomy in the management and development of realistic projects in the specific chosen specialization, which may have either a research or application orientation. Although new technical skills may be acquired, the project has other aims.

By the end of the project, a student should have demonstrated:

The ability to initiate, plan, manage, and deliver a complete project for a customer or research sponsor.

The ability to investigate and interpret information relevant to the problem.
Originality and independent thinking in the application of knowledge gained.
Critical judgment is needed when evaluating both the student's work and alternatives.
The ability to present the results in a proper, professional manner.

Project outputs include giving interim results describing essential steps of the project and a final dissertation describing the project as a whole. It must be emphasized that the following dissertation is an integral part of the module, and by no means should the writing of the dissertation be viewed as an afterthought of the project (such as how many programmers handle documentation).

2 The Project Subject

The project subjects require the activities to be intellectually demanding and involve the original application of knowledge gained in the specific program and the chosen specialization.

The dissertation subject should relate to the program and specific specialization.

The current specializations of the MSc in Computer Science are:

> MSc in CS (Databases)
> MSc in CS (Software Engineering)
> MSc in CS (Networking)
> MSc in CS (Artificial Intelligence or Theory of Computation)

The dissertation project can also relate to the student's work environment. For example, a project could entail an analytic examination of procedures, work patterns, usage of applications, and efficient methodologies in the office, culminating with a testable professional product or a strategic information system management plan to implement these findings. Thus, the work should advance from mere planning and be implemented, even if only as a feasibility study or a case study, to verify, test and collect user evaluation comments regarding its effectiveness.

Another example is a project to implement (identify, define, analyze, code, test, and evaluate) a computer system that is designed to solve specific trade, office, or community needs, where the system goes beyond the mere programming and testing of an application by providing novel solutions or a combination of several requirements.

Other projects may have a more general focus, such as an investigation and evaluation of methods to address a general problem, such as data security, finding information on the Internet, setting and controlling the human resources of an information technology office, investigating the market using operational research methodology, setting a marketing plan within the industry, etc.

In all cases, however, the work conducted should have the following key characteristics:

Originality in the application of knowledge, together with a practical application of the techniques of research and enquiry.

Generalization: Even when the project has a particular target, the student should address it to make the results potentially applicable in a broader context.
Critical evaluation: Design decisions made by the student during the project should be made in the context of a critical examination of alternatives, and the student should subject their results and conclusions to the same rigorous analysis.

Of course, the project is expected to involve something other than original research to make new scientific discoveries. It should, however, be original work because it applies current knowledge to find solutions to a real problem in the workplace or elsewhere. Thus, a display of scholarly

achievement (in information technology or information management systems) must be present in the work.

This can be a partial-fledged research undertaking. However, it should add some seed of original thinking, innovative approach, or otherwise exciting or beneficial contribution to the field.

The project's outcome takes the form of a written dissertation. A target size of 12000-15000 words is recommended (excluding listings of source code, if present, that should appear as an appendix), yet this can be slightly changed in appropriate cases with the approval of the *DA*.

Guides to choosing a project, identifying its requirements, and writing the proposal are to be found in the textbooks used in the Research Methodology Module component, which is the project's first stage.

A project that is already either finished or close to being finished can serve as something other than the dissertation project, as it must be a new piece of work building on what has been done in the program.

2.1 Project typologies

Students should evaluate their proposals by examining them according to the following criteria:

2.1.1 Applications

1. Most proposals are focused on a product as the outcome rather than the scholarly aims of a dissertation. Sometimes, there is a feeling that the project is a task the student wants/needs to perform for his company, but students should be aware that the demands of a dissertation are different. If the student accomplishes everything proposed, it will likely be much more work than we require in the dissertation project. However, it will still not be satisfactory because many of the required learning outcomes of the module might need to be included.

2. Students need to be open to other possibilities for their dissertations. The exact form the site will take should only be decided upon once all the options have been researched to determine what the best design and implementation strategy might be.

3. The project should demonstrate additional fields of computer science, such as a backend database system that would require software design, implementation, and security considerations, and not just a basic database implementation with its GUI. As another example, if security is intended to be a part of the site, then it should, for example, focus intensely on several security and privacy issues: not just secure payments but the development of a complete security/privacy infrastructure that would allow individual customer details to be protected separately.

4. It is essential to understand that the project's goal is not a website nor any software deliverable but a dissertation demonstrating the student's ability to carry out an intellectually demanding program of work that requires research, planning, innovative thinking, and objective evaluation.

2.1.2 Survey of State-of-the-art

Proposals that are mainly critical literature surveys or the comparative analysis or abstraction and evaluation of systems, regulations, or programs will only be approved in some cases, even if this is accomplished in a scholarly fashion. The project research must comprehensively apply the gathered information, including testing and validation, user feedback, true-life tests, analysis of the results, and conclusions and recommendations. If a project side-tracks into an activity such as a literature survey, it will award a low grade, as this type of activity needs to include more of the ingredients expected in an MSc dissertation. Such an undertaking is usually associated with only one of the components of the project and needs help to stand on its own.

2.1.3 Software and Hardware Requirements

There are other DS project subjects that, in most cases, will not be approved. Unless it can be demonstrated that an exception should be granted and the work represents a substantial departure from the norm, this includes the following: installation of commercial software packages, even if complex (e.g. installation of a new database, OS platform migration, script coding, etc.); upgrading hardware components (e.g. a router, another computing platform, etc.); finding programming solutions or evaluating software packages (e.g. which spam system to install, which DB to adopt, etc.); recommendation of what should be installed in a specific installation that is already well documented and researched (e.g. implementing a distributed installation, general security recommendations). These are regarded as part of the regular day-to-day tasks of systems programming and do not constitute a scholarly undertaking suitable for a master's degree.

2.1.4 Institutional Projects

Institutional and commercial projects (e.g. developing an information-providing database, a web interface for laypeople, etc.) cannot be approved as DS projects in most cases, as they most likely have yet to be conducted according to the DS guidelines. They will likely have been performed according to the methodology of the company that manages them and thus will not comply with the academic requirements of the DS module. Furthermore, it would be tough to identify student's contributions to a large project.

In some instances, it might be possible to construct a suitable DS from an implementation project. Still, much care would need to be taken to identify a student's work and to ensure it has the proper academic content. If this is to be considered, it would be necessary to spell out in advance the student's role in the project; the work must be sufficiently separated from the rest of the team. It should be noted that an implementation project would require substantial work to ensure that DS criteria (research, literature survey, needing to draw general conclusions, etc.) are met and that the project is undertaken within a proper academic context.

2.1.5 Are Specifications and Design Appropriate?

Several students have proposed an analysis of the limitations of an existing application or a company's work. They suggested that a framework (or model) be developed to improve an application or procedure, basing their research on a review of the application, interviews of company personnel, and literature and product surveys. In most cases, such proposals were not approved, as a project must continue at this point. In suggesting a "working system", a crucial requirement is that some validation through a prototype, a feasibility test, or a case study will be done to demonstrate that the ideas, as expressed in the Specification and the Design, are indeed feasible, were tried, and are of value. The results of running the prototype and user feedback should be included in an "Analysis" chapter. This should be followed by a "Conclusions" chapter and possibly an "Improvements" chapter to verify the project's validity.

A project that comprises essentially a literature survey, personnel interviews, and software evaluation that ends in a specification and a design without any review is nothing more than wishful thinking, as who is to say what the actual value of it is without a test? An abstract design that has yet to be verified could be worse than the system it has tried to improve upon. Thus, fully implementing a complex, untested and unverified proposal might find that the design needs to be fixed, the system needs to function as perceived, or the suggested framework needs to be corrected.

A project cannot end with an untested "framework": it must implement and confirm the proposed design, even if it is only a prototype.

2.1.6 Test and Validation of the Approach

Several proposals rightly show that, in addition to the literature survey, specification, and design, prototypes need to be produced to demonstrate the feasibility of the solution. Such prototypes (or test cases) should be tested, and conclusions should be drawn to substantiate the specifications and refute and amend them. The best way to conduct this validation is to perform the tests with "clients" and record their reaction to whether the "model" is appropriate; otherwise, it is just a theory. The model/application should then be changed based on these tests, or at least a chapter on "Conclusions and Improvements" should be added to the final dissertation.

In summary: "Every project that develops a design, a framework, or a procedure must implement it, test it, report the results and analyze them."

2.2 What the Dissertation must include.

A project will not be accepted as a satisfactory piece of work unless it includes:

- A clear description of the problem to be solved.

- A review of the state-of-the-art literature identifying different models and implementation strategies that can potentially be used.
- A critical evaluation of the possible alternatives.
- Design and justification of a proposed solution.
- Implementation of the proposed solution.
- The source code of a programming project if the project involves developing a system.
- Evaluation of the solution as a prototype, case study, or controlled procedure examination. It should be conducted using test data, test cases, or a control run of the procedures, preferably by testers other than the student.
- Analysis and discussion of the outcome.
- Expansion of the conclusion to a general context
- A documented report along the lines of the template file.

The submitted proposal should indicate how each of these components will be produced.

2.3 Plagiarism and Copyrights

2.3.1 Citations and Plagiarism

Students are expected to use the Harvard system as promoted throughout the program.

The dissertation follows the same citation requirements as the other program modules. Using appropriate citations in the dissertation is more crucial than other prior modules.

Proper credit to other sources should already be present in the proposal, then continue through the specification and design stages. Appropriate citation must be an integral part of the final dissertation report. Failure to adhere to the citation rules, which are simple to follow, will most likely be considered plagiarism.

Each of the two assessors of the dissertation is obliged to inform the academic department of any such suspicion. This might cause the project to be suspended; an explanation will be requested from the student, and this explanation, together with the other evidence taken from the analysis of the dissertation, will be brought to the Board of Examiners when it considers the assessment of the dissertation. The Board has the power to decide what final result should be recorded in the light of the evidence and also to consider whether further action is necessary up to failing the dissertation.

Thus, great care should be exercised when posting the concluding report, as no additional submissions or corrections are allowed after the final draft is submitted. Missing citations and references will not be allowed to be added late to any document.

2.3.2 Copyright

Confidentiality: Students who need to keep their dissertation confidential should include the following sentence on the same page that they make their declaration about plagiarism:

"This dissertation contains material that is confidential and/or commercially sensitive. It is included here on the understanding that this will not be revealed to any person not involved in the assessment process."

2.3.3 Publishing

All documents concerned with the progress of the dissertation during the dissertation process (proposals, monthly reports, specifications, and design) are internal documents submitted to the University for Assessment. They should thus be regarded as coursework assignments belonging to the UNYT rather than the student. In particular, the dissertation is an internal document until after the final assessment, when it becomes public. However, permission from the university is still required should you want to publish it or make other public use (contact your PM)**.**

3 Project Management

A vital dissertation element is a project conducted by a sponsor who defines its principal goals. The sponsor provides an additional level of confidence that the work is worthwhile. Sponsors may be external customers or the *dissertation DA*. The *DA* is a designated instructor who will oversee the project and be responsible for advising the student on all aspects. The *DA* will be the main point of contact for the student and sponsor.

The *DA*'s role is to ensure that the goals are consistent with the academic requirements of the MSc and that the agreed program of work will satisfy the learning outcomes itemized in the first paragraph of this guide. For the MSc, the *DA, rather than the sponsor,* will specify the project's required outcomes.

The dissertation project will be carried out by a single student in most cases, but it is sometimes possible for two students to work together on a joint project. In the latter case, the contributions of the two students must be identified to enable them to be assessed separately. Each student will, of course, complete a separate dissertation.

4 Methodology (Steps, Schedule, and Duration)

The overall duration of the module is **six** months from initiation to submission. The following are steps and considerations towards submitting the final document:

1) Before starting the last module of the M.Sc. program, you must ask for the dissertation topic. You should contact the *PM*. For you to be assigned a *DA*. The request should consist of an abstract describing what you propose to do.

2) Once the request is received and approved, an email will be sent to you showing the appointed DA and the dissertation folder. This is a formal notification that the timeline towards the **Dissertation Deadline has begun** and that you should begin the development of a formal proposal.

3) All correspondence between you and the *DA* should be conducted through email. The first step is to preserve any important prior messages (e.g., the approved proposal).

4) The Research Methodology module is the first stage, requiring you to complete several assignments. Each assignment aims to develop an understanding of the criteria for a successful proposal and dissertation and key research skills.

5) Once the *DA* believes the proposal has reached a stage that will gain academic approval, it is submitted to the PD. who will approve or reject it. The final proposal must be submitted using the form found in 11.1 [b] in Appendix A.

6) Once the proposal has been approved, you should begin developing your project. It should be noted that a fee will be imposed if you want to change your *DA* before the proposal has been approved, and another higher cost will be charged if you decide to change your *DA* after the proposal has been approved. You must submit a request to the *PM* if you change *DA* at these stages. The *PM* will discuss this with your *DA* and the *PD*, and a decision will be made on whether you should be allowed to change.

7) The required dissertation stages should be executed sequentially, and all stages must be completed. Within the MSc Programs, "Project Specification" and "Project Design" components must be completed before the next step can be taken. This occurs before the submission of the "Final Document". These stages will form part of the project's grade.

8) From the start of a project until the final copy of the dissertation is submitted, you must submit a monthly status detailing your progress to the DA.

The report should be submitted on or before the 27th day of each month. Keeping to deadlines and making regular progress reports are aspects of professionalism expected when completing the dissertation. Please submit at least 80% of the required Status Reports to avoid a reduction of the final grade by up to 10 points (out of a hundred), as recommended by the *DA* and the *PM*.

9) You should continue to work with the *DA* throughout the module. The target turnaround time for the *DA's* responses to questions posed by the student is within four days, and ten days for drafts. Experience has shown that work should proceed in well-planned steps, and intermediate results should be shown to the *DA*.

10) Submission of an initial draft should be included in the planning of any dissertation. This will allow you to receive feedback on the completed paper before the deadline. Please allow at least one month for this phase, as it usually requires detailed input from the *DA* and then your revision and re-submission.

11) Submission of the final dissertation document should be made on or before the dissertation deadline. You should be aware that failure to complete the dissertation in time will lead to a penalty for late submission.

12) The dissertation project carries **60** credit points. Writing a dissertation is a creative process that only progresses quickly. You are expected to spend about **600** hours of work on your dissertation.

13) One of the most essential requirements is that the project must be completed as scheduled. The deadline is **six months from the approval date,** as specified in the approval letter, and you will be penalized for late submission. If you cannot meet the requirements, including timely submission of the dissertation, at the first attempt, then the final highest grade that can be awarded is C, and it will be Fail if you are more than one month late.

Extensions will not usually be granted, except in clearly unexpected circumstances beyond student control, such as in cases of real personal/family/medical/work emergencies. The case for an extension must be written with supporting documentation. Such requests should be sent to the *DA,* who will approach the *PM* for approval.

14) Once submission has been made, you will receive an email confirming the receipt of your dissertation. This contains the final acceptance of your dissertation and marks the point at which communication between your *DA* and you should end so that the grading process can begin.

15) Grading will continue for several weeks once the dissertation is complete. However, final grades will be released once the *Board of Examiners (BE)* has met and agreed on a final award. This could mean a wait of several weeks, depending upon the deadline and submission date of the dissertation. Your PM will contact you with official confirmation of the results once the *BE* has decided.

5 Timetable

5.1 First Stage

Stages are sequential, and you cannot proceed to a new stage before completing and being graded on the earlier stage.

If **S** is the start date of the module (date of approval and notification), then the following events should be done during the following **weeks**. It should be noted that while the listed times serve only as approximations, following the recommended timeline will ensure that the project will be finished within the allocated **six** months after the **S** date.

The ongoing work was described in the previous section. This section aims to clarify the timelines involved.

Stage 1 (From **S -1** to **S**): starts with:

 (2) Submitting the proposal for approval.

If the *DA* finds the proposal satisfactory, it will submit it to the *PM* for approval.

This cycle may repeat, with the student submitting new versions until an acceptable proposal has been accepted.

The proposal is expected to be submitted within **four** weeks **(S+4)**.

The proposal can be submitted any time during this period, and there is no need to wait until the Research Methodology Module is finished before submitting it. However, whether the proposal is submitted at the end of the Research Methodology Module or before the completion of the Research Methodology Module, this component must be completed before the student can proceed to the next stage. Research Methodology Module is considered completed when all the interim and final grades of the Research Methodology Module have been finalized and added to the proposal submission.

If the Research Methodology Module component still needs to be finished by the proposal submission date, then a partial record of the interim grades must be included.

Any requests to extend the proposal submission date must be substantiated with justified reasons and sent to the *DA* and the student's PM, who will approach the *PD* for approval.

5.1.1 Research Methodology Module

The Research Methodology module is part of the dissertation and is intended to prepare the student for the dissertation module. Please refer to the syllabus of the Research Methodology module for further details regarding this module.

5.2 The concluding stages

The exact timetable will be agreed upon between the student and the *DA* and reported in the Proposal. The times are given in <u>weeks</u>.

Stage 2. (From **S** to **S+3 (**or **S+6**)): If the proposal was approved during this period but the Research Methodology Module component still needs to be completed, the student will continue with it until completion and then move on to stage 3. If the proposal is not approved within the first three weeks, the student will continue working on it and complete it within six weeks.

Stage 2 is a period in which the objectives of Stage 1 are completed. The Research Methodology module cannot be continued after the **sixth** week. If not finished by **week 6,** it will carry the grade of **Fail**, which might fail the whole project.

Stage 3. (From **S+6** to **S+10**): The ***Project Specification*** document will be sent to the *DA* by e-mail. The *DA* will respond within **seven** (7) days. You can only continue to Stage 4 after the assessment form reflecting a passing grade has been submitted to the folder.

Specification submissions will not be accepted after subsequent project components have been submitted. This might cause the entire project to fail.

Stage 4. (From **S+10** to **S+14**) The ***Project Design*** document is sent to the *DA*, who will respond within **seven** (7) days. The student may progress to Stage 5 only after submitting the assessment form to the folder with a passable grade.

Design submissions will not be accepted after subsequent project components have been submitted. This might cause the entire project to fail.

Stage 5. (From **S+14** to **Final Submission Date** (**S+24)**): Work on the dissertation. In the case of software development, this stage is composed of sub-stages: Build, Test, Implement and Acceptance. The stage ends with the final submission of the Dissertation. The submitted report must be written according to the template file. A complete draft should be sent to the *DA* on **S+20** for ample time for corrections and revisions. The DA will evaluate the final submission, acting as the first assessor and a second assigned assessor.

The student and *DA* should agree upon an appropriate due date for the next stage at each stage of the process, which should be reported in the Status Report.

Students should be aware that the ability to keep to agreed deadlines will be a factor in the assessment of the project. Each project stage will be carried out in full consultation with the *DA*, who should be willing to discuss submitted section drafts before the final delivery date. Students should have their *DA* approve the submitted sections before proceeding to the next section when writing the dissertation. Each stage should also meet the advisor's satisfaction before the next stage is started.

A last draft of the dissertation must be submitted to the *DA* before the final dissertation submission. It should be noted, however, that as this is a student dissertation, the student is expected to demonstrate self-sufficiency. Most of the dissertation will already be known to the dissertation adviser as it was presented to them piece by piece along the way. Thus, the *DA* will usually comment in detail only on a **single** complete last draft before the final submission of the dissertation.

6 The Dissertation package

The DS package's structure and usage differ from the regular modules.

The package consists in:

- *Read_me_checklist: a checklist of the latest versions of the package.*
- *Dissertation Guidelines - the file that you are reading now.*
- *Dissertation Template - the formatting template*
- *DAs and Subjects - a list of instructors and their topics of interest*
- *Proposed Research Projects – a list of research subjects that interest the instructors and are offered to the students.*

- *MSc in CS Dissertation Titles – titles of approved MSc dissertations*
- *Student Honor Code – Acknowledging proper behavior concerning plagiarism, collusion and work of academic value.*

7 The Relationship Advisor-Student

The working relationship between a dissertation student and their *DA* is meaningful.

To ensure that it runs smoothly, the student will:

- Regularly enter the dissertation classroom and communicate regularly with the *DA*.

- Work to complete a proposal within the first four weeks of the specified timeline and a final dissertation by the specified deadline.

- Keep the *DA* informed of all matters relevant to progress, including planned absences.

- Submit regular monthly status through e-mail.

- Send sections of work for review by the *DA* during the dissertation period.

- Normally, submit one complete draft of the whole dissertation to the advisor. Feedback on multiple versions of the entire document will usually not be given.

- Submit the completed dissertation to the classroom for grading after revising it according to the advisor's comments on the entire draft.

- Ensure that all communication takes place in the classroom.

The *DA* will:

- Also ensure that all communication takes place regularly.

- Work with the student to ensure the proposal and final dissertation are timely.

- Respond to the student's requests within **five** days for ordinary communications and **ten** days for reading and responding to drafts.

- Inform the student promptly if, for any reason, these response times will not be met on certain occasions.

- Inform the *PM*. as soon as the student has submitted the final dissertation.

8 Learning Outcomes of the MSc Program

The expected learning outcomes of the programs are repeated in this section. While they may not all be present in this module, they reflect the program's overall objectives. The *DS* project should demonstrate competency in a number of the outcomes, showing that a student has the following:

1. An understanding of the fundamental terminology, paradigms, and current state of knowledge of the subject of Computer Science.

2. The ability to evaluate current knowledge critically and to apply it effectively as a Computer Science professional.

3. A critical awareness of a broad spectrum of current IT issues and methodologies that allows participation in the design, programming, and implementation of IT systems and the management of development teams and other professionals in the IT industry and in the general management of IT-oriented departments and organisations.
4. In-depth understanding of the practical and technical issues involved in designing, implementing and managing computer systems in at least two specializations.
5. An understanding of and practical experience in effectively transforming operational systems needs and requirements into a work process.

6. Implementing programs in at least one modern programming language.

7. The ability to plan and carry out a significant project, requiring original thought and substantial aspects of research, creative design, and realization, presenting the outcome in a detailed report.

8. An understanding of the importance of teamwork and cooperation in today's IT industry and the essential practical and personal skills required to share knowledge and participate in teams

9. The ability to present and communicate professional concepts to colleagues and clients.

9 Detailed Requirements for the Project

9.1 The Final Project's Proposal

To be done in Stage 1

Approval of the proposal and any necessary completion of the Research Methodology Module are done in Step 2.

The proposal will be submitted using the form in Appendix 11.1 [b]. This should be at most five printed pages of A4/Letter stationery.

This must be agreed to with the *DA*. The proposal is a management document and not a technical document. The same form is used for the Initial Proposal and the Final Proposal. The proposal acts as a "contract" between the student and the *DA*, detailing precisely what should be accomplished

and according to what timetable. It will be used during the assessments to determine if the student has accomplished everything suggested and agreed upon.

Project proposals will have the following structure (and **all fields are a must!)**

Student Name and **Student Number:**

Dissertation Title

Name of the Requested (or already assigned) *DA*

Name of the Program Manager

The program and specialization of the student

The Date of Submission: *If submitting another version of the proposal, please specify the data of the new version.*

The Version Number of the Proposal

Status of the Research Methodology Module:

Project Aims and Objectives: *What the project aims to achieve, its objectives, and why the requirements cannot be met by using an existing solution, if any, is found.*

Project Outline: What will the project consist of?

Literature Survey: *A preliminary literature survey should be included to verify that some research and reading on the subject was done before the proposal was written.*

Scholarly Contributions of the Project: *Specify what you consider to be the original aspects of your project related to scholarly contributions in Information Technology.*

Description of the Deliverables: *What will the content of the project be? What content will be delivered upon completion, and in what form?*

Evaluation Criteria: *Key features and characteristics of the solution, which aspects are essential to the project's success, and how you will assess the extent to which they have been achieved.*

Resource Plan: *The equipment, software, and other materials necessary to complete the project, how they are to be provided, and what the financial costs will be, such as travel.*

Project Plan and Timing: *Anticipated milestones and interim deliverables. A detailed timetable (schedule) of the stages, including the estimated finishing date, is necessary. Stages will be reviewed with the sponsor and DA.*

Risk Assessment: *A description of what obstacles may arise and contingency plans to meet them.*

Quality Assurance: *How will progress on your project be monitored, and how will success at each stage be assessed?*

9.2 Project Specification

To be done in Stage 3:

This stage ensures that there is a clear idea of **what** the project comprises and that there is a well-defined plan showing how the project will progress.

The Specification should be posted as a report in the project folder.
This should be at most five printed pages of A4/Letter stationery. The report may also be presented in around 15 PowerPoint slides.

The *DA* will assess the project specification and return a grade with comments and suggestions within **four** days of the submission. This grade will count for **10%** of the final grade.

The report should be structured as follows:

> **Student Name** and **Student Number:**
>
> **Dissertation Title**
>
> **Module name**
>
> ***Project Aims and Description****: A statement of what the project is about. This should include:*
>
> *Who the project is being done for;*
>
> *What the problems and needs of the sponsor are;*
>
> *What are the project's aims?*
>
> *What is the proposed solution?*
>
> *What will be produced in the project?*
>
> *Any significant modifications to the original proposal*
>
> **Literature Survey:** *This may expand upon what was presented in the proposal and should discuss existing knowledge in the field and the prior knowledge upon which the project is based. It does not have to be as detailed as the literature survey in the final dissertation report, yet it should prove that some research has been done and that reading was done on the subject.*
>
> ***Conduct of the Project****: Proposes how the project will be carried out and should include, where appropriate:*

Background research: What information will be used to understand the problem and its solution?

Data required: what data will be needed for the project and from where it will be obtained.

Any new skills that will be required and how these will be acquired;

The design methods to be used;

The software to be used.

Statement of Deliverables: *This states what will be produced by the project. Sometimes, it may be helpful to identify some deliverables as essential and others as desirable. As appropriate, this will include:*

A description of anticipated documentation content.

A description of anticipated software.

A description of anticipated experiments.

A description of methods for evaluation of the work

Plan*: A timetable of project activities and outputs. This should include internal milestones as well as external assessments and reviews. The plan should state the progress achieved up to the date the plan is written and future activities.*

9.3 Project Design

To be done in Stage 4:

Students should have completed the preliminary research and analysis by this stage of the project and thus have a clear idea of **how** they will achieve their project goals. Typically, this understanding will be recorded using some standard methodology in a design. The purpose of this submission is to present this design.

The project design should be posted as a report in the project folder.
This should be at most five printed pages of A4/Letter stationery. The report may also be presented in around 15 PowerPoint slides.

The *DA* will give a grade for the design. This will be made available within **five** (4) days of the posting. This grade will count for **10%** of the final grade. The report should be structured as follows:

Student Name and **Student Number:**

Dissertation Title

Summary of Proposal: A brief statement of what the project is about, including any necessary changes to the original proposal or Specification based on new information or understanding. A summary of the research and analysis carried out thus far should also be included.

Design: Outline the project design according to the method chosen in the Specification. Although designs will vary according to the needs of particular projects, a typical design of a software implementation will comprise:

A description of the anticipated components of the system and how they are to be organized.

A description of Data structures to be used by the system.

Algorithms to manipulate these Data structures and

A design of the intended interface

For example, if following an object-oriented design method, one might include case diagrams, an interaction chart, the objects to be used in the system, attributes and methods of objects, pseudo-code for the essential methods, and an interface design.

This section might include Data flow diagrams, entity relationship diagrams, entity life histories, pseudo-codes for the key processes, and interface design.

For a project involving the empirical investigation of some hypothesis, one would typically expect to see things such as a statement of the hypotheses to be tested, a description of the test Data to be used, an experiment design, the experiments to be performed, any controls to be used; a description of how the results will be analyzed, including any statistical techniques that will be used; anticipated conclusions; program designs for any software that needs to be developed to generate the test Data or conduct the experiments.

The important thing is that the report clearly shows that a design method has been followed and that the design has been carried out with sufficient attention to detail to inspire confidence that it can be realized, tested, and evaluated in the time remaining for the project.

Review against Plan: progress to date and any necessary changes to plan.

9.4 Dissertation

To be done in Stage 5.

A dissertation document must be submitted at this stage. This should be a complete, scholarly, and critical exposition of your project as a series of chapters in a conventional academic format.

The final dissertation submission for evaluation can be submitted as a Microsoft WORD, postscript, or PDF document. The preferred format for the submission is. DOC, using the WORD text editor. The pages' dimensions should conform to the A4/Letter format. A template is provided for the proper formatting of the dissertation. However, the dissertation

will finally be produced in hard-copy form as a public document lodged at the University, so it must be laid out with this in mind.

Upon acceptance of the final version of the dissertation, the DA, acting as the first assessor, will check it using the **Turnitin program** to verify its authenticity before informing it of its availability in the student's folder.

This will count for 70% of the final grade and will be marked by **two** staff members from the Department of Computer Science, one being the *DA* (now acting as the first assessor) and the second being another staff member who will usually not have been involved with the project.

The dissertation must be self-contained and contain a complete record of the work carried out. Material included in the specification and design presentations can be repeated here. A target size of **12000-15000** words is recommended, but this can be <u>slightly</u> modified in appropriate cases with the agreement of the *DA*. Appendices, if justified, will not be included in the maximum, but examiners will not normally be expected to read appendices in detail. The first assessor will also check the word count. The dissertation content is at the student's discretion and will depend on the nature of the project, but for a typical project, the following elements of the dissertation are expected.

(<u>Structure and formatting guidelines are elaborated in the **template.dot** file</u>)

Cover Page: *a one-page cover containing the dissertation's title and your name.*

Abstract: *a one-page summary of the project as a whole. This <u>must</u> be included in all projects.*

Certificate Statement*: certifies that the dissertation consists of your product.*

Acknowledgements: *There are two parts to the acknowledgements. The first one, which must be included, should cite the person or the organization that supplied the information for the dissertation. You should specify the project's domain, the context in which it was performed, the environment where it was conducted, and any help you received. The second optional part might include any further acknowledgements you want.*

Table of Contents, List of Tables, and **List of Figures**

*Next comes the "body" of the dissertation, which **must** be written in past tense, third person singular style and include:*

Introduction: *This will give a brief overview of the project, why it was done, what problem it addressed, and the approach taken.*

Background and Review of Literature*: An analysis of the literature that deals with the subject of the project. It should include the theory (academic) and, if relevant, the implementation (industry). This is a collection of the sources that supported and led the projects. The comparative analysis and the synthesis of the literature into a coherent exposition are of paramount importance.*

Theory: *a description of the assumptions and theories employed to acquire the necessary information and skills to carry out the project. You must demonstrate that your work has been*

based on a complete and up-to-date understanding of relevant knowledge and adequately cited in the recognized academic manner.

Analysis and Design: *Documentation of the analysis and design; while the organization should be similar to the design presentation, full detail of the design is required. All design documentation should be supplied (possibly as an appendix).*

Methods and Realization: *How the design was implemented. Changes were made to the design during the implementation. How was the Data collected? How was the implementation tested? Code listings, screenshots, and test runs will appear as appendices.*

Results and Evaluation: *Description and evaluation of the results. These may include, where appropriate, feedback from test groups, users and the project sponsor.*

Conclusions: *A summary of the project as a whole, examining the outcome of the aims identified in the introduction. A critical review of the strengths and weaknesses of the project was carried out. A discussion of possible applications and extensions of the work should conclude this chapter.*

References Cited: *a properly cited list of books, articles, and other materials consulted during the project and/or referred to in the dissertation. You* ***must*** *use the Harvard method of citation.*

A dissertation using a different citation format will not be accepted and will be returned to the author to be corrected*.*

It should be noted that although the Internet can provide valuable information, the student must understand the difference between a credible source that might exist on the net and a non-credible source. Many research papers are freely available on the Web. A helpful guide to the quality of the material found on the Internet is that it usually has a citation (e.g., an electronic or print journal) apart from just the Web address.

Sometimes, it is challenging to separate trusted references from the large volume of low-level material on the Internet. Because of this, it is highly recommended that more reliable resources be used, such as electronic libraries.

A list of references that quotes only Websites implies that no serious effort was made to search for other worthwhile resources and most probably will lower the final grade.

Appendices: *Appendices are meant to contain detailed material required for completeness, but they are too detailed to include in the main body of the text. They might typically contain a complete code listing, details of test data, screenshots of sample runs, a user guide, and complete design diagrams or similar material. Still, they should not be used to increase the number of pages in the body of the dissertation itself.*

The *DA* reviews the dissertation manuscript whenever the student or *DA* deems such review proper. One purpose of these reviews is to help the student improve the standard of presentation. Candidates are recommended to take the utmost care at this final stage of their work. The standard of presentation is one of the criteria by which the dissertation is judged, and unsatisfactory presentation may be grounds for awarding a lower grade or referring the dissertation for re-submission.

10 Assessment

All the components of the project (the specification, design, and dissertation) will be assessed in

terms of their having met:

- The proposal, which should be considered the "contract" between the student and the *DA, details exactly what should be accomplished and what timetable should be followed*.
- The project's learning outcomes are identified in this document's introduction.
- The specific planned project outcomes and evaluation criteria are identified in the project proposal.

The Specification and Design stages contribute 15% towards the final grade.

Failure to submit at least **80%** of the required Status Reports may reduce the final grade by up to ten points, as the DA and the Program Manager recommended.

The assessments will be done using standard proformas (see 11.3 Appendix C – Proformas for Assessment of the Project Stages) (Seymour, 2005) (Lavitts, 2005). Students should study it to understand the criteria used in evaluating the dissertation. The first two proformas (specification and design) are used to provide feedback to the student, while the last one (dissertation) is not disclosed.

The *DA* will immediately send the specification and design proformas to the student.

Once the student has submitted the final draft to the *DA* and the *DA* is satisfied with the final draft (after verifying the word count and checking the document using the **Turnitin** application), a message will be sent to the Head of the Department informing him about the existence of the draft in the subfolder.

A second assessor will be assigned to evaluate the draft. The student will be informed who the second assessor is. At this point, the relationship between the DA and the student is void, as the *DA* becomes the first assessor. At this point, no further communication can exist between the student and *DA* about the dissertation, but only as the Dissertation Advisor's new role of the first assessor.

As part of this process, the second assessor, and sometimes the *DA* (acting as the first assessor) as well, might ask the student to answer a few questions, the aim of which is to clarify the work presented and to assess the student's depth of understanding of it. This dialogue should not usually take more than one week at the most. The DA will tell the student to expect this. A date when the questions will be posted should be coordinated with the student, and the responses should be given within **one** week.

In cases where the project produced a feasibility study or a prototype, the software should be available if required, either as a package to be shipped upon the request of the assessors, be demonstrated through a remote execution on the student's machine or, if these options are not possible (due to special resource requirements), as a detailed and convincing part of the report.

Thus, when software outputs are a significant part of the work, the assessors must demonstrate them in some form. The student should include the source code of a programming project. If not included, it might be requested explicitly by the *DA* and/or the assessor. In these cases, it must be uploaded to the folder as a separate shipment or as an appendix to the dissertation.

The assessors will attempt to return all final assessments within **ten** days.

The dissertation will thus be assessed independently by the two assessors, who will each provide a grade for the dissertation. Each assessor's grade will have equal weight in forming the final grade. If the two assessors present a widely different assessment of the project (if the grades differ by two or more grades), then two separate grades may be posted, with an explanation of what the point of disagreement is. They will be invited to discuss their assessments and attempt to reach an agreed outcome. If the two assessors cannot resolve the disagreement, the Director of M.Sc. will nominate a third assessor. The third assessor will then complete a separate analysis, and the three reports will be presented to the *Board of Examiners (BE)* to arrive at the final decision.

The whole process will be monitored by the university academic personnel to resolve differences when necessary and to guarantee that the dissertation is written in an acceptable level of English according to the university's requirements. University rules do not allow the use of (human) editors to correct the English of a dissertation.

An essential component of the grade is the project's timely completion within the agreed-upon duration.

The dissertation proforma used by the assessors is included in Appendix C. Dissertation grades will **not** be returned to the student at this stage but, together with the grades for the specification and design, will be used to produce a preliminary overall grade for the dissertation. All the components of this grade and the assessors' reports will be made available to the BE, which will agree on the final grade. The Board can give greater weight to one or another after reviewing all the evidence, especially in cases where the two assessors disagree.

The Program Manager will release the final overall grade to the student only after the meeting of the Board of Examiners.

The *PM* will send the student a message with the UNYT graduation contact details, confirmation of the dissertation grade, and an explanation of UNYT's involvement in the graduation and associated processes. Additionally, the student will be advised of permission to publish the dissertation online.

If the Board decides upon a failing grade, the student will be informed by the Program Manager, along with the reasons why a failing grade was given and a list of instructions on how to proceed from this point. The student has the option of repeating the dissertation once. This will be considered a "second sitting" of the module.

The BoE meets **four** times a year, and it takes time to assess the dissertation and prepare the results for the Board. Thus, if you submit your final dissertation even a few days after the assessors have wrapped up the modules for the Board, you will need to wait until the next graduation

ceremony, which could be as long as **six** months, to have your degree! As the submission deadlines approach to be done in time for these two meetings, you will most likely be approached by your DA and PM, who will urge you to submit your final dissertation file in time.

A passing grade is required for the MSc degree to be awarded. However, a student who fails to obtain a passing grade will be given one opportunity to rewrite and resubmit a dissertation for re-examination.

For a Checklist of Dissertation evaluation criteria, please see Appendix D and the evaluation Proformas in Appendix C.

The module uses a scale of six grades to assess the components of work:

A*, A: Distinction grades (truly exceptional work).
B, C: Pass grades.
D: Compensable Fail.
F: Fail

Each assessment component will be graded using the standard MSc grade descriptors, i.e., assessors should attempt to assign grades which most closely correspond to the description in the following table.

Grade	Description	Key features
Outstanding (A*)	**Outstanding work.** Factually almost faultless; directed; logical; comprehensive coverage of topic; robust evidence of reading/research outside the material presented in the program; substantial elements of originality and independent thought; very professionally written.	**<u>Distinction:</u>** **Originality. Well-directed independent thought. Truly exceptional.**
Excellent (A)	**Excellent work.** Logical; enlightening; originality of thought or approach; good coverage of topic; clear, in-depth understanding of the material; good evidence of outside reading/research; very well written and directed.	
Very Good (B)	**Very Good work.** Logical; thorough; factually sound (no serious errors); good understanding of the material; evidence of outside reading/research; exercise of critical judgment; some originality of thought or approach; beautifully written and directed.	**<u>Pass:</u>** **It is correct and complete.**

Good (C)	**Good work**. It was a worthy effort but an undistinguished outcome. That is correct but possibly missing essential points. Primarily derived from material delivered in the program but with some evidence of outside reading/research and some evidence of critical judgment. Some areas for improvement in expression/ presentation.	**Competence: Critical judgment.**
Marginal Fail (D)	**Inadequate work**. Incomplete coverage of topic; evidence of poor understanding of material; Poor presentation; lack of coherent argument.	**Compensable Fail. Significant weaknesses, but severe effort.**
Fail (F)	**Unsatisfactory work.** Serious omissions; significant errors/ misconceptions; poorly directed at targets; evidence of inadequate effort.	**Fail. Little or no achievement of learning outcomes**

11 Appendices

11.1 Appendix A – Guidelines for Dissertation Management

11.1 [a] The initial application

'My Dissertation'

Guidelines for Using Dissertation Management

Application Form –When students are ready to begin, they must complete the dissertation Application Form. This form has sections on project aims and the outline, which must be filled out, ensuring that students enter the dissertation process with a clear idea of what they will do.

The application requires the following fields to be completed:

1) *Proposed Dissertation Title* – A brief working title.
2) *Module Area* – At least two modules with content represented within the proposed dissertation's context.

3) ***Requested DA*** – A minimum of two and a maximum of three instructors that the student would like to support them through the dissertation.
4) ***Project Aims*** – A summary of the dissertation aims and goals.
5) ***Project Outline*** – Maximum 200 words detailing the dissertation's aims.

The student has to send the application to the program manager, who will approve or reject the application based on whether it provides the information necessary for potential advisors to decide if they will accept the student.

Once the application is approved, the "Requested Dissertation Advisors" will be contacted by email to enquire if they wish to accept the topic. The student and the advisor will be notified by email and advised of the next steps.

Monthly Report – A student uses the monthly report to give feedback on the dissertation's progress. This can be used to confirm that everything is progressing as planned or to highlight issues and challenges that have disrupted the dissertation's progress. The monthly report should be sent to the DA and the PM to ensure that academic and administrative support is available when required.

Monthly Reports are required on the 27th of each month.

Students will be asked to report on the following aspects of their dissertation:

1) Is the deadline still a realistic target?
2) Has regular contact been maintained with the Advisor?
3) Has all correspondence taken place within the class?
4) What has been achieved in the last month?
5) Are there any complications?
6) Is the plan staying the same?
7) On what date are we to expect the next submission?

In addition to these questions, students can raise any other issues they wish to bring to the attention of their *DA* or *PM*. It should be noted that whilst this reporting function is outside the class, all other communications should occur or be documented thoroughly within the classroom.

Upon submitting the student's monthly report, the DA must read through the report and confirm whether they agree with it or deny the content. At this point, the advisor will email the student directly with feedback. The advisor must also confirm the student's "phase" in the dissertation process. This will be used to help monitor the student's progress more thoroughly.

The Program Manager will be alerted to reports expressing issues/problems at various stages throughout the Monthly Report process. Again, this is done to understand a student's progress better and help maximize the desired outcome (successful completion).

Dissertation Submission – This forms the final declaration from the student that they have submitted a version of the dissertation that they wish to be graded. Sending the declaration also provides an official date of submission, which can be verified against the official deadline set at

the beginning of the dissertation process. Once this declaration has been submitted, the student should end communication with the *DA* unless told otherwise.

Administration staff will confirm the presence of a gradable dissertation within the class. Confirmation of receipt of the dissertation will be emailed to the student at this point. This receipt email forms the endpoint of the dissertation process from the student's perspective.

Grading of the dissertation by the advisor will proceed, and a second assessor will also be assigned to grade the student's submission. Once assigned, the second assessor will access the student's progress card and classroom and proceed to grade as usual.

Guidelines & Sample Materials – In addition to the reporting tools described above, the Dissertation Package includes:

1) *Guidelines* – These documents are designed to give the student a basic understanding of the dissertation requirements.
2) *DAs* – A complete list of all available *DAs* and their backgrounds and areas of interest.
3) *Sample Materials* – Several templates and lists of previously approved project titles are included. These materials will help develop a student's understanding of the dissertation requirements within the application, development, and submission phases.

Students should refer back to these pages rather than store them locally to ensure they have the latest information.

11.1 [b] The submitted proposal

<div align="center">

Submitted Project's Proposal
(Version 1.0)

</div>

The application must be submitted using the following form and should be four to five pages long at most! The file format to be used for submission is Microsoft WORD. Please do not submit a PDF file as it does not lend itself to easy insertions of comments if needed.

<div align="center">

All fields are a must!

</div>

For further details, please see the Detailed Requirements for the Project section.

Name of Student and [*and*** Student Number]:**

Project Title:

Submission Date:

Version Number of the Proposal:

Requested or Assigned Dissertation Advisor:

The program and specialization <u>(a must)</u> **of the student:**

Module Folder Number (A complete and accurate number is a must!)**:**

Status of the Research Methodology Module element:
(Which seminars have been completed, and what grades have been awarded? They are to be filled in by the <u>DA.</u>)

Interim grades on the (**O-F**) scale:

Seminar #	O	G	M P	F
1				
2				
3				
4				
5				
6				

Final grade for the RMT stage on the (**A*-F**) scale: _____

Sponsor's Details:

Sponsor's Background:

Sponsor's Agreement:

(Has the person you requested agreed to sponsor the project? Please note that quoting the agreement will suffice at this stage. When the proposal is approved and there is an external sponsor, a document signed by the sponsor agreeing to the project must be sent to the PM before the start of the project – see Appendix B – Sponsor Agreement.)

The Project Aims and Objectives:

Project Outline (*Please describe briefly in about 200 words***):**

Literature Survey / Resources List *(A preliminary survey and/or initial resource list)***:**

Scholarly Contributions of the Project *(Please specify the aspects of what you consider to be the original scholarly contributions of your project.)***:**

Description of the Deliverables:

Evaluation Criteria:

Resource Plan:

Project Plan and Timing (*Detailed timetable of the stages, including the Research Methodology Module element and estimated finishing date.*)**:**

Risk Assessment:

Quality Assurance:

11.2 Appendix C - Proformas for assessment of the project stages

The project has five deliverables and four interim grade assessments combined for the final grade.

[a] The Final Proposal, which does not carry any grade.

[b] The assigned instructor graded the Research Methodology Module, and the grade was emailed to the student.

[c] The DA grades the Specification, with the grade being disclosed to the student and recorded on the assessment form, which is emailed to him.

[d] The DA grades the Design, with the grade being disclosed to the student and recorded on the assessment form, which is emailed to him.

[e] The Dissertation will be graded separately by the *DA* and the second assessor. The combined grade is **not** disclosed to the student. This form will be posted to the Correspondence folder only after the two assessors have reviewed this part of the work.

The last form ([e]) should also be sent to the *PD*.

The suggested format for submitting the Proposal, the Specification, the Design and the draft of the Dissertation is MS WORD. The final submission - for evaluation - of the Dissertation could be submitted as an MS WORD, postscript or PDF document. However, the dissertation will finally be produced in hard-copy form as a public document lodged at the University, so it must be laid out with this in mind.

[a] Project Proposal

There is no assessment involved in the Proposal. Its acceptance indicates that the student can proceed to the next stage.

[b] Research Methodology Module: Assessment Form
(Version 1.0)

This form, including the grade, is subject to the Assessment Forms as described in the M.Sc. program specification. Please refer to the section that treats the Research Methodology Module.

[c] Project Specifications: Assessment Form
(Version 1.0)

Student name:

Dissertation title:

Module (folder) number:

DA **name:**

Date of submission:

Grade awarded (A*-F):

If a grade of A or A* is granted, what are the exceptional features of the work that lead to this recommendation?

The unsatisfactory features must be identified if a grade of D or F is granted.

Specific Assessment Features: The *DA* should use the categories below to form a grade profile of the Specifications. The final grade will be a judgment made by the Dissertation

Advisor, guided by this profile and not a weighted or averaged grade.

#	Category	A*	A	B	C	D	F
1	Correctly formatted and of reasonable length						
2	Logically developed and well-written						
3	Topics covered in depth.						
4	A clear understanding of what the project involved						
5	Thought has been given to design/analysis methods to be used.						
6	All aspects of the project are addressed.						
7	There is a project plan with proper milestones.						
8	The project appears feasible in the time available.						
9	The project has enough content and originality for an MSc.						

Additional Comments:

[d] Project Design: Assessment Form

(Version 1.0)

Student name:

Dissertation title:

Module (folder) number:

DA **name:**

Date of submission:

Grade awarded (A*-F):

If a grade of A or A* is granted, What are the exceptional features of the work that led to this recommendation?
If a grade of D or F is granted, the unsatisfactory features must be identified.

Specific Assessment Features: The *DA* should use the categories below to form a grade profile for the design. The overall grade awarded will be a judgment made by the

dissertation Advisor, guided by this profile, and not a weighted or averaged grade.

#	Category	A*	A	B	C	D	F
1	Correctly formatted and of reasonable length						
2	Logically developed and well-written						
3	Topics covered in depth.						
4	A clear understanding of what the project involves						
5	Appropriate design methods have been used.						
6	The design presented for all relevant aspects of the project						
7	Implementation of the design appears feasible in the time available.						
8	Progress against Plan						
9	The project has enough content and originality for an MSc.						

Additional Comments:

[e] Project Dissertation: Assessment Form
(Version 1.0)

Assessment of Postgraduate Project with a Product	
Student:	**Banner ID:**
Supervisor/Second Marker:	

The project should demonstrate the following qualities which are expected of a master's level project.
Much of your study at this level is at, or informed by, the forefront of your academic discipline. Your project should reflect this and show originality in the application of knowledge, and your understanding of how the boundaries of knowledge are advanced through research. The project will demonstrate your ability to deal with complex issues both systematically and creatively, and your originality in tackling and solving problems that arise. It will also reflect the qualities needed for employment in circumstances requiring sound judgement, personal responsibility, and initiative, in complex and unpredictable professional environments.

The final project should exhibit the following characteristics for the final grade. Both the report and the presentation form a holistic project view and contribute to the criteria stated in the Assessment Sheets

Marks	Grade	
≥ 90%	**Excellent**	**Meets all criteria. Shows a significant amount of critical analysis and exhibits an excellent understanding of the relevant issues. The product meets the requirements.**
≥ 80%	**Very Good**	**Meets almost all of the criteria. Demonstrates clear awareness and exposition of the relevant issues with a high standard of critical analysis. The product meets the requirements.**
70–79%	**Good**	**Meets most of the criteria. The analysis and design use the appropriate frameworks but may include minor errors. The product meets most of the requirements.**
60-69%	**Fair**	**The essential criteria are present but are mainly factual and descriptive. The analysis and design use the appropriate frameworks but may have several errors. The product meets most of the requirements.**
50-59%	**Pass**	**Some of the criteria are present. It establishes a few relevant points but needs to be more superficial, confusing the issues. The analysis and design use the proper frameworks but may have several errors. The product meets the essential functional requirements.**
≤ 49	**Fail**	**More evidence of the given criteria and a grasp of analysis are needed. Does not show self-direction or originality in problem-solving or a critical self-evaluation of the project process. The product meets very few of the product requirements.**

Overall assessment of the project report and demonstration:

Final Mark (%)

Have you held a demonstration for this project? Yes/No

Does this project meet the requirements for BCS? Yes/No
Does the report meet the presentation criteria? Yes/No
Word length: 10,000-15,000. Structure of report proper. Harvard Referencing was used. Proper use of spelling, punctuation, grammar, and syntax. Figures and diagrams are appropriately labelled and referenced. If not, this should be reflected in the final feedback and a contributory factor in your project assessment.
Each of the following four sections nominally carries equal weight, and the list of things to consider under each heading is indicative. These may vary depending on the project's aims and goals.

1. Understanding of the Problem Domain

This section assesses the student's ability to identify and investigate a suitable problem and follow an appropriate project methodology to solve the problem.

- Identified an area to research or investigate and a problem to be solved.
- Demonstrated understanding of the problem domain
- Shown how project objectives were formed, and project planning took place.
- Discussed the research or investigation within the context of the project.
- Critical evaluation (of the appropriateness) of the current thinking in the research area
- Compare similar products and systems.
- Selected suitable criteria for the development of products and ideas.
- Chosen the right tools for modelling and development.
- Production of requirements specification/client brief of suitable complexity
- Identified any legal, social, ethical and professional issues that are relevant to the project

Excellent	Very Good	Good	Fair	Pass	Fail
Report					
Demonstration					

2. Development of products and ideas

This section assesses the level of development and the student's competency within the context of the chosen topic area.

- Demonstrated complexity in the design and implementation of the product.
- Discussed the development process.
- shown that several alternative approaches have been considered.
- Explained the reasons for selecting a particular solution.
- Demonstrated changes in the project plan.
- Resolution of relevant legal, social, ethical or professional issues

Excellent	Very Good	Good	Fair	Pass	Fail
Report					
Demonstration					

3. Product build and evaluation

This section assesses the student's ability to present their completed work and discuss issues of quality, usability, etc.

	Excellent	Very Good	Good	Fair	Pass	Fail
• Demonstrated technical ability in building the product. • Demonstrated the full scope of the product developed. • Showed that the product has been tested and evaluated appropriately. • Discussed the quality of the product, including original aims and criteria. • Demonstrated the usability and appropriateness of the product for the problem domain. • Identified where and how improvement can be made	**Report**					
	Demonstration					

4. Conclusions and critical review
This section assesses students' ability to be critical of their work and show reflective thinking.

	Excellent	Very Good	Good	Fair	Pass	Fail
• Demonstrated critical thinking in writing up the project. • Discussed lessons learnt whilst completing the project. • Identified any problems encountered and discussed how they were tackled. • Identified mistakes made and lessons learnt. • Reflected on how the project plan changed during the development. • Made suggestions as to how the work can be improved. • Identified how the project might be taken further.	**Report**					
	Demonstration					

11.3 Appendix D: Checklist of Dissertation Evaluation Criteria

Introduction.

You will be assessed using the general grading descriptors applied to the general learning outcomes of the dissertation and the specific goals of your project. To help you know whether your dissertation will meet the requirements for the MSc, the following checklist of assessment criteria may be helpful.

What follows is for general guidance only.

Criterion One: Construction of a principled basis for enquiry.

a) **What** is the purpose of the dissertation? For example, to explore a hypothesis, to review, etc.
b) **How** have you approached the dissertation? For example, have you worked using one or a combination of methods and sources, including a literature search, survey/questionnaire, interviews, historical background, analysis, review, assessment, or evaluation?
c) **Why** is/are the method(s) you have chosen the best for your purpose?

Criterion Two: Construction of a suitable literature base.

a) **What** is the relevant literature for this dissertation? This might include academic writings, official governmental documentation, and work-based and personal professional material.
b) **Why** do you believe the sources used are relevant and proper?
c) **How** do you intend to use the literature? For example, to clarify the theory, to reflect critically upon the theory in a specific professional context, to show gaps, deficiencies, or inconsistencies in the literature, etc.

NOTE:
1. **Remember** the advice given to you about citation and bibliography.

2. **Plagiarism** means a **failure**, so acknowledge your sources.
3. Always make clear the **status** of any opinion or fact you introduce. For example, are you quoting somebody who has conducted empirical research or was merely expressing an opinion?

Criterion Three: Identification and use of critical concepts and general principles

a) Have you **signalled** to the reader what these are and where they come from? (e.g., academic writings, governmental publications, action research.)
b) Have you **used** them to construct an argument? (e.g., by analyzing a survey or piece of writing to show what concepts appear from it and what they mean.)

Criterion Four: How key concepts and general principles relate to evidence.

a) Have you **connected** ideas and evidence? (Either evidence from your reading or empirical evidence that you have collected.)
b) Can you **justify** the conclusions you have drawn?
c) Can you **explain** why and where evidence does or does not support your conclusions?
d) Have you made any **claims** which cannot be justified?

Criterion Five: Ability to relate specific learning to global, where proper.

a) Is your work **coherent**? For example, have you drawn together different pieces of evidence or different arguments and shown how they do or do not relate to one another?
b) Have you clarified the broader context in which your dissertation belongs? For example, the socio-political context/the relationship between one professional role and another/the relationship between one theory and others.
c) Can you **apply** the conclusions drawn from the study of a particular case to the broader context?

Criterion Six: Development of a clear and coherent style, including the use of argument and use of pertinent examples.

a) Is your **meaning** clear?
b) Can others follow the **structure** of the dissertation?
c) Are your **arguments** supported?

Criterion Seven: Independent enquiry and thought.

Do you provide evidence of your thinking in your writing? For example, do you:

a) **Explain** why you believe the title to be necessary or significant.
b) **acknowledge** your ideas, questions, data collection, and conclusions.

c) **Indicate** how your approaches and thinking differ from or are similar to those of other authors.

Criterion Eight: Critical analysis and synthesis.

a) **Having** applied the methods, you chose (criterion one), have you analysed the emerging information?
b) **Does** your analysis provide a comparative analysis between, for example, the past and present, theory and practice, or the nature or strength of the evidence?
c) **Can** you point to any crucial factors? For example, how can we decide on socio-educational outcomes?
d) **Have** you shown how different theories or ideas may or may not be combined to form a coherent view or body of opinion?

Criterion Nine: Ability to propose recommendations for policy and/or practice.

a) **Does** your dissertation arrive at supported conclusions related to your agreed area of professional study?
b) **Do** you make recommendations for policy or practice which are securely grounded in the study you have undertaken?

11.4 Appendix E – Formatting of the Dissertation final draft

The dissertation must be formatted according to the supplied MS WORD (DS Template. dot) or Latex template, an integral part of the Dissertation Package.

Apart from being a template, the document includes instructions on how to write the dissertation. Please study it at an early stage.

The final document may be submitted as a Microsoft's WORD, Tex. postscript or PDF document. The preferred format for the submission is. DOC or. TEX. Page size should conform to the A4/Letter format. More instructions are found in the DS template.

The dissertation will finally be produced in hard-copy form as a public document to be kept at the UNYT, so it must be laid out with this in mind.

   References

(Brook, 1995) Brooks, Frederick P, Jr. (1995), The Mythical Man-Month (Anniversary Edition with Four New Chapters), Addison-Wesley, Reading Massachusetts

(Seymour, 1995) Seymour Diane, Learning Outcomes and Assessment: developing assessment criteria for Masters-level dissertations, in
 http://www.brookes.ac.uk/publications/bejlt/volume1issue2/academic/seymour.html

(Lovitts, 2005) Lovitts, Barbara E., How to Grade a Dissertation, in

http://www.aaup.org/publications/Academe/2005/05nd/05ndlovi.htm

Note. Our Dissertations' assessment proforma are based on the works of Dianae Seymour and Barbara Lovitts. The assessment criteria have been appropriately tailored to meet the needs of the Albanian context.

{End of the DS Guidelines document}