



Guidelines for M.Sc. Applied Biology Study Unit BIO5170 'Project in Applied Biology'

*NOTE: These Guidelines are issued by the Department of Biology and are intended to elaborate further on the **General Regulations for University Postgraduate Awards, 2008** and **Bye-laws of 2009 for the Degree of Master of Science – M.Sc. under the auspices of the Faculty of Science**, and to apply them to the MSc Applied Biology as offered by the Department; see also <http://www.um.edu.mt/registrar/regulations/general> and the Bye-laws at <http://www.um.edu.mt/registrar/regulations/faculties/science/msc-bl-2009>*

1. The Department offers a Master of Science course in Applied Biology by taught and research modes of study. Candidates are required to write a dissertation as part of study-unit BIO5170 'Project in Applied Biology', which carries 30 ECTS.

2. Principal supervisor

Each candidate will be supervised in his/her project by a Principal Supervisor, who will be a member of the Department of Biology. Co-supervisors may also be appointed as necessary, on the recommendation of the Head of Department. Co-supervisors need not be members of the Department, or of the University.

3. Board of Examiners

A Board of Examiners (BoE) shall be appointed for each student. Principal Supervisors and co-supervisors shall not be members of the BoE. The Head of the Department of Biology or his/her delegate shall be appointed chairperson of the BoE. If the Head of Department is also the supervisor, he/she shall not be appointed as chairperson.

4. External Examiner

A visiting or non-visiting external examiner will be appointed to assess individual dissertations.

5. Dissertation study-unit

(a) A provisional title of the dissertation and a detailed research proposal shall be submitted to the BoE for approval at the beginning of the second semester. Any subsequent substantial modification in the title or content of the dissertation must be approved by the BoE.

(b) Work on the dissertation shall be undertaken during the third semester of the Course. Candidates must keep regular contact with their Principal Supervisor, who shall provide guidance and advice on a regular basis during the period of study.

(c) In the main, the dissertation should be laboratory and/or field-based i.e. experimental in nature, although in some cases it would be possible for the work to be based on

literature research or on data analysis. The proposed project must be original and of a sufficiently advanced nature and will be carried out by the candidate during the course. The dissertation should demonstrate that the candidate has gained research experience through the project and is able to present and analyse data, draw logical conclusions from the results obtained, and write a scientific report on the work. In each case, the Principal Supervisor is to ensure that all costs for the project will be covered by funds other than those of the Department of Biology.

(d) Four softbound copies of the dissertation are to be submitted to the Department of Biology by the deadline indicated to the candidate, for assessment. Any extensions as permitted by the General Regulations for University Postgraduate Awards 2008 must be applied for to the Faculty Board through the BoE and must be justified.

(e) The candidate will be required to defend his/her dissertation during a *viva voce* examination, which will carry 20% of the total marks. The *viva voce* examination will be attended by the members of the BoE and chaired by the Chairperson of the BoE, normally the Head of Department. The Principal Supervisor shall be invited to attend as an observer during the oral examination. The Principal Supervisor may contribute if invited to do so by the members of the BoE, but must withdraw prior to the final deliberations of the BoE. For further guidelines on the examination procedures see the General Regulations for University Postgraduate Awards, 2008¹ and the University Assessment Regulations, 2009².

(f) Results of examinations will be published only after any corrections deemed necessary by the BoE have been made and after candidates have submitted three hardbound copies to the Department in accordance with the Faculty of Science Bye-laws.

6. Guidelines for the layout of dissertations

(a) The dissertation must be written in English.

(b) The dissertation must be typewritten or printed, using 1.5line spacing, on good quality white paper as follows:

- Size of Paper: A4
- Margins: 4 cm on the left side of the page to allow for binding and 2.5 cm on the right side; 2.5 cm top and bottom with numbering on the bottom of each page.
- Binding: Art vellum or cloth (black): overcast, edges uncut; lettered boldly up back in gold with Degree, Date and Name. The front shall contain the title, author's name and year of publication only. The spine shall contain the dissertation title, author's name, course and year.
- Font size: The main text should normally be 11 point 'Arial' or 12 point 'Times New Roman'. If you need to vary this, the permission of the supervisor and the Chairperson of the BoE must be obtained. Titles and headings will require a slightly larger font. Sometimes legends for figures and tables may require a smaller font size to fit in the page. It is not advisable to reduce the font size for tables and figures but should this be required; this should not be smaller than point 10.

¹ https://www.um.edu.mt/_data/assets/pdf_file/0013/10831/Postgraduate_Harmonised_Regulations.pdf

² https://www.um.edu.mt/_data/assets/pdf_file/0010/24868/Assessment_Regulations.pdf

- (c) The length of the dissertation should be not more than 25,000 words, inclusive of tables, figures, figure legends, acknowledgements, references and appendices.
- (d) The dissertation must include a title page, an abstract and a contents page. The title page must include the title, author and month/year when submitted, the candidate's Principal Supervisor and Co-supervisors (where applicable), and the words: "*A dissertation submitted to the Faculty of Science, University of Malta, in part fulfilment of the degree of Master of Science*" printed at the bottom of the page. Furthermore, the dissertation should include a statement of authenticity signed by the candidate. The following statements should be included at the start of the dissertation:

- I. A declaration of authenticity to be signed by the candidate. Such statement should read as follows:

I, the undersigned, declare that this dissertation is my own original work, except as acknowledged in the text, and that it was carried out under the supervision of XXXXXX. I have clearly indicated where I have used the published or unpublished work of others and I have provided the source of such work. I have acknowledged all main sources of help, and where the work was done jointly with others, I have specified what I have contributed and what has been contributed by others. Any conclusions, suggestions or assumptions are mine unless otherwise stated or attributed.

Signature

..... NAME IN CAPITAL LETTERS

DATE.....

- II. A declaration on ethics compliance to be signed by the candidate. Such statement should read as follows:

I declare that I have abided by the University's Research Ethics Review Procedures.

Signature

..... NAME IN CAPITAL LETTERS

DATE.....

- III. A declaration on supervision to be signed by the supervisor(s). Such statement should read as follows:

The undersigned confirms that this dissertation has been undertaken under my supervision and that I approve of its submission for final assessment by the Board of Examiners.

Signature

..... NAME IN CAPITAL LETTERS

DATE.....

- (e) The candidate may submit separately, or as an appendix to the dissertation, any printed contributions to the advancement of the subject published independently or conjointly.
- (f) The text should be preceded by a short abstract (of no more than 300 words) and should then normally proceed to sections of Contents, Acknowledgements, Introduction, Material and Methods, Results, Discussion, References, and Appendices.
- (g) All pages should be numbered consecutively in Arabic numerals including tables and figures.
- (h) Tables and figures must be referred to in the text and normally inserted immediately after where they are first mentioned in the text.
- (i) Tables, figures and other illustrations (which must be referred to and labelled as 'Figures') should be properly labelled and the accompanying legends should fully and concisely describe the contents without reference to the text.
- (j) The reference system used in the dissertation should be that recommended by the American Psychological Association (APA).
- (k) The reference list should include all literature quoted in the text. This should be in alphabetical order by authors' name, and include all information necessary to enable the reader to locate the source of the literature cited.
- (l) References in the text should be in full on first mention, e.g. (Brown, Smith and William, 1990), subsequently abbreviated to (Brown *et al.*, 1990). Where a source has more than three authors, use of *et al.* at first citation is permitted.
- (m) Units of measurements, symbols and abbreviations should be consistent. The SI system should be used and where this is not possible, the SI equivalent should be given.
- (n) The responsibility for accuracy in references and spelling lies with the candidate. In particular, candidates should take great care in spelling scientific names correctly. The rules of botanical, zoological and microbiological nomenclature should be scrupulously followed.
- (o) If raw data are presented these should be presented in appendices, which may be in digital format provided that full details of the content of any digital appendices, the software programs used to create them and how these may be accessed, is given in the form of hard copy text in the dissertation itself.
- (p) Photographs (prints) should be of good quality and have appropriate lettering or symbols, which should be described in the legend; a scale should be included particularly in the case of photomicrographs. Good quality black and white or colour photocopies or computer print-outs are acceptable. Photographs are referred to and labeled as 'Figures'.
- (q) In some cases it may not be possible to follow the above norms due to the nature of the work. In such instances candidates should seek the express permission of their Principal Supervisor and of the Chairperson of their BoE.

Appendix: Dissertation title-page template

A preliminary study of the identification of Myxozoa through DNA barcodes.

Mathilde M. Quattromani Dalmas

A dissertation presented to the Faculty of Science in part fulfilment of the requirements for the Degree of Master of Science at the University of Malta

Supervisor: Dr Melchior H. Tagliaferro Deguara

Additional supervisor: Dr Camilla-Ann De Faro

Department of Biology, University of Malta

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