

Ariel University

The Faculty of Natural Sciences

**Guidelines
for writing a thesis**

Molecular Biology

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The review process for the thesis is directed by the master's program coordinator.

1.5 The process of publishing the thesis in the library

After obtaining a final grade for the thesis defense, the student is obligated to present a digital copy of the final version of the thesis to the master's program coordinator. The program coordinator will ensure that the print copies are submitted to the university library. The student is required to fill out a thesis deposit form online using their personal site on the university (Meida Ishi) using [form 533](#).

Submitting the print and digital copies of the thesis are requirements for getting the final approval for the master's degree.

1.6 Special Instructions

Dedication

In the event that a student wants to dedicate their thesis to an individual, the dedication can be composed according to the student's preference. The dedication page should be after the inner title page and should not be numbered.

Acknowledgements

The style for writing acknowledgements is open. If a student received a stipend from the university, the acknowledgements must contain the following sentence "I would like to thank Ariel University for the personal stipend that gave me financial support during the course of my research." Students who were supported by stipends sponsored by a donor are required to thank the donor by name in the acknowledgements.

Note: this page will be written only after the review process is completed, meaning it will not be included in initial copies printed for the reviewers.

Table of contents

One should be meticulous to ensure that the section titles in the table of contents correspond to the section titles in the body of the thesis.

Abstract

The abstract should be written using one and a half or double spacing, correlating to the rest of the text.

The abstract should include:

A brief introduction

The aims of the study

The methods used in the study

The main results

Discussion and conclusions



List of addenda

The list of addenda should be listed at the end of the table of contents, the page numbering of the addenda should be continuous with the numbers in the body of the text.



2. The Academic Research Process

2.1 Initial communication with the thesis advisor:

A research student who is accepted to a thesis track, will choose a thesis advisor in their first semester and after approval will build with the advisor the research topic. The student should submit their request for a mentor via their personal webpage and chose the mentor from the list of mentors available [online](#) for students on the thesis track.

After the mentor approves the request, the request must be approved by the head of the program, the dean of the faculty and the dean of the School of Graduate Studies.

2.2 The stages of writing the thesis:

1. The research student will write a research proposal (based on the guidelines that appear in this document and the template that will be presented to the students in the framework of the departmental seminar) and submits this proposal via their personal website online. The departmental committee will approve the proposal or will suggest corrections and a new submission of the proposal.
2. **After receiving approval from the departmental committee and the reviewers for the research proposal, the graduate student can begin to carry out research leading to writing the thesis** (based on the guidelines that appear in this document and the template that will be presented to the students in the framework of the departmental seminar).
3. After the research is carried out and written up, the master's student submits their final copy of their thesis as a single printed copy that is signed by their mentor to the program coordinator. It is the program coordinator's responsibility to submit the printed thesis for approval to the departmental committee.
4. After approval by the departmental committee the student must submit three to four corrected and bound copies and one digital copy.
5. After approval of the thesis, the student will be required to present their research at their departmental seminar on the date assigned by the departmental committee.
6. In parallel the thesis will be submitted to internal or external reviewers. After the reviewers submit their comments, the departmental committee will decide if the student is due to proceed to defending their thesis, and a date will be set for the defense.



7. At the thesis defense the student will be examined by a departmental committee with two reviewers and the student's mentor (the defense usually lasts between one and a half to two hours). At the thesis defense the student will present their work and answer the committee's questions. It is expected that the student will demonstrate proficiency in topics associated with their research and broad knowledge of biology.
8. The student's mark will be given at the end of the exam by the committee members. If the student fails the thesis defense, they will be allowed to be examined one more time within half a year of the date of the first exam. Failing a second time will prevent the student from acquiring the degree.

Comment: The right to proceed to the thesis defense is based on fulfilling all the academic requirements for the master's degree, including obtaining final grades for all the master's courses.

3. Guidelines for Submitting a Research Proposal in the Department of Molecular Biology

3.1 Structure and scope of the research proposal submitted for approval to the departmental committee for master's theses.

3.1.1 General guidelines:

1. The research proposal for the M.Sc. will be written according to the standard format (included below) that is 5-10 pages.
2. The proposal needs to be printed with 1.5 spacing between the lines.
3. The proposal should be written using the Hebrew font David and the English font Times New Roman, size 12 pt and with full justification.
4. The margins of the text should be 2.54 cm (1 inch) on each side.
5. The text should include paragraphs that are tab indented.
6. The Hebrew text should be aligned right and the English text should be aligned left.
7. The pages of the proposal should be numbered.
8. One printed copy of the proposal should be submitted.

3.1.2 Required components for the research proposal:

1. A title page which includes the title of the project in English and Hebrew, the department name, name of the student, the student's ID number and the name of the mentor for the work.
2. An abstract including the description of the topic and the methods that will be used with a length of about ten lines.
3. An introduction which contains a detailed description of the research question. It should relate to the current literature and body of research with citations and



emphasize open questions and the novelty of the research and its contribution to science.

4. The aim of the research and its importance.
5. A description of the methodology that will be used.
6. Preliminary results.
7. A short research plan including a timeline.
8. References must include academic articles that are published in journals.
Articles from the research groups associated with the research proposal are recommended.

Note: It is important that the proposal includes mathematical functions, illustrations or pictures. It is important to format them according to the accepted format. There is a file attached with the accepted format, it is very important to keep to the standard format and not deviate from them.

3.1.3 The structure of the proposal:

1. Abstract
2. Introduction
3. Methodology
4. Preliminary results
5. Research plan and timeline

	Topic	Starting date	Ending date
1.	Literature Survey	15.11	1.12
2.	Planning	1.12	1.1
3.	Construction	1.1	15.1
4.	Experiments	15.4	15.5
5.	Completion		1.8

6. References

A list of books, articles, reports, patents that are referred to in the previous sections in the order that they appeared in the research proposal. The following format should be used:

1. R. V. L. Hartley: "Transmission of information", Bell Syst. Tech. J. 7, (1928) 535-563
2. R. Hartley: "Modulation System", US Patent 1,666,206, April 1928
3. Y. Pinhasi: "Physical foundations of electronic communications", (Amichay, 2006) ISBN 978-965-7376-08-9



Sample title page for Research proposal

אוניברסיטת אריאל בשומרון

הצעת מחקר (תזה) לתואר שני

Name of Student in Hebrew

Name of student in English

ID Number

Research topic in Hebrew

Research Topic in English

מנחים (Names of mentors in Hebrew)

Hebrew date

English Date



4. Instructions and Guidelines for Submitting a Master's Thesis in the Department of Molecular Biology

4.1 General Guidelines

At the time when the Master's thesis is submitted it is the responsibility of the student to verify that they are registered as a student in Ariel University in the year of submission. A student whose completion date for the degree is the end of a specific academic year, must complete all the requirements for the degree until the day before the new academic year begins including courses, completion of the thesis and the thesis defense. A student who only completes their degree requirements after the next academic year has started will be charged tuition as per university regulations. In order to prevent being charged tuition for an addition year it is recommended that students submit their master's thesis for approval to the departmental committee about four months before the start of the next academic year in order to allow for revisions if necessary. Grading the thesis and the thesis defense will be carried out within ninety days of the date when the thesis is submitted to the department after the approval of the mentor/s.

4.2 The thesis defense

The thesis defense occurs after the thesis is submitted. The student will be tested orally in front of a thesis committee, who will be appointed by the head of their program and approved by the head of the thesis committee. At the defense the student should present their results and should show broad knowledge of the practical obstacles that they faced in their research project and all other materials that are determined by the head of their program. The right to a thesis defense is on the condition that all of the degree requirements have been fulfilled including getting final grades on all courses required for the master's degree and registration for study in the year when the master's defense occurs.

The final grade for the thesis is according to the parameters set by the department:.

96-100 With high honors

90-95 With honors

85-89 Very good



75-85 Good

65-74 Pass

Less than 65- Fail

4.3 Guidelines for writing the thesis

1. The thesis should be printed double spaced with wide margins (2.5 cm on each side) on A4 size paper. The bibliography, comments and citations should be printed with 1.5 spacing. The font size should be consistent throughout the whole thesis including the bibliography. Recommended fonts include: Times New Roman, David or Ariel. The text should be written using 12 pt. font.
2. The scope of the thesis is between 50-100 pages, not to exceed 100 pages (or 50 double sided pages).
3. The thesis should include two cover pages on the front and back of the thesis with titles in both English and Hebrew on the cover page and on the inner cover pages. The mentor's signature should appear on the cover pages. The logo of the university should not be added to the cover pages (examples of cover pages are attached; these cover pages should be printed without the university logo).
4. After the title pages an optional page with acknowledgements and a dedication can appear. If the student received a stipend, they should add the following sentence on the page of acknowledgements "I would like to thank Ariel University for the personal stipend that gave me financial support during the course of my research." If the student received a fellowship that was sponsored by a donor, the student must thank the donor by name in the acknowledgements.
5. The abstract should be one to one and a half pages. It should include a brief introduction to the field, the aims of the study, the methods used in the study, the main results and the discussion and conclusions of the research. The Hebrew abstract should appear on the last page of the thesis and include the same content as the English one.
6. The table of contents should list the chapters, sections and subsections of the thesis. The table of contents should be generated by the computer and not manually. After the table of contents there should be a numbered list of figures and tables which includes descriptions of each figure or table. There should also be a list of abbreviations. The remaining elements of the table of contents those that are necessary for the thesis. The guidelines for the order of the elements of the thesis can be found below.



7. The bibliography should be written according to academic standards. A bibliography program should be used (such as Endnote or Ref Manager). In the body of the text the bibliography should be referenced by a number that relates to the order it appears in the bibliography. The format of the bibliography can be according to one of the accepted formats found in scientific journals as long as it includes the following elements: names of the authors, name of the article, name of the journal, year of publication, volume number, pages. Here are two examples:

1. Adachi, Y., Yoshikawa, Y., and Sakurai, H. 2007. Antidiabetic zinc(II)-N-acetyl-L-cysteine complex: evaluations of in vitro insulinomimetic and in vivo blood glucose-lowering activities. *Biofactors* 29:213-223.
2. Adachi Y, Yoshikawa Y, Sakurai H. Antidiabetic zinc(II)-N-acetyl-L-cysteine complex: evaluations of in vitro insulinomimetic and in vivo blood glucose-lowering activities. *Biofactors*. 2007; 29(4): 213-23.

Structure of the thesis:

Cover Page

Inner cover page

Dedication

Acknowledgements (If the student received a stipend, they should add the following sentence on the page of acknowledgements "I would like to thank Ariel University for the personal stipend that gave me financial support during the course of my research.")

If the student received a fellowship that was sponsored by a donor, the student must thank the donor by name in the acknowledgements.)

Table of contents

Abstract

List of figures

List of tables

List of abbreviations (written as a table)

Introduction (emphasizing the importance and aims of the research)

Methods

Results

Discussion

Bibliography

Addenda

English abstract

Inner cover page in Hebrew

Cover page in Hebrew



8. One should be careful that the thesis is properly written and consistent including the wording, grammar and spelling according to what is commonly accepted in the professional literature. A thesis that does not stand up to these accepted criteria will be returned to the student without approval. Furthermore, one should perform proper editing of the text and define styles for heading and text and maintain consistency throughout the thesis.
9. Any deviation from the accepted protocol requires pre-approval from the departmental committee for master's degrees. Approval of the committee will be granted in exceptional cases in light of a justified recommendation from the student's mentor and the head of the program, before the thesis has been submitted for defense.
10. After the mentor approves the thesis, one unbound copy of the thesis should be submitted to the coordinator of the program for master's degrees in order to obtain approval from the head of the program. Additionally, the student should submit the form for approval for thesis submission.
11. Once the head of the program grants their approval, the student should submit three bound copies of the thesis, that have been signed by their mentor, these copies will be sent to the reviewers (four copies if there are two mentors).
12. The date of the thesis defense will be coordinated to accommodate the members of the committee and the student. The date will be set after the committee deems that the thesis is appropriate for a master's.

Note: Approval for completion of the master's degree will not be granted until the master's thesis is submitted according to protocol.



אוניברסיטת אריאל בשומרון

הפקולטה למדעי הטבע

[Title of the thesis (in Hebrew)]

חיבור זה מוגש כחלק מהדרישות לקבלת התואר "מוסמך האוניברסיטה" (M.Sc.) (M.A.)
במחלקה לביולוגיה מולקולרית

על ידי:

[Name of the student (in Hebrew)]

העבודה הוכנה בהדרכתו\הדרכתם של [Name of the mentor/s (in Hebrew)]

[Hebrew and English date]



