**Guidelines for Writing a Doctoral Research Proposal, Progress Reports, and Final Report** **Submission of Reports**

* The submission of reports is the responsibility of both the student and the direct supervisor. It is mandatory to adhere to the deadlines specified below.
* Each student must meet with the members of the accompanying committee at least three times during the degree at the junctures described below (research proposal, progress report, summary report).
1. **Instructions for writing the Doctoral Research Proposal**

**Establishing the Supervisory Committee for Ph.D. Students**

Establishment of the Ph.D. student’s **Supervisory Committee** is the responsibility of the head of the school's doctoral committee.

The Supervisory Committee should serve as a professional and independent advisory body that examines the research plan, objectives, experimental design, and how these aspects align with the research questions.

The Supervisory Committee will monitor the student's progress during the research, provide advice, suggestions, and help prioritize work to enable the student to complete a successful and significant academic body of work.

The committee will be available at all stages of the research to assist the student, and will meet with the student at least three times according to the rules explained below.

**Research Proposal for Ph.D. Students**

According to the regulations for research students, the student must submit a research plan within **12 months** from the date of acceptance as a research student (Phase A). If an extension beyond 12 months is needed, approval must be obtained from the school's doctoral committee with a detailed explanation for the reason of the request for an extension. Once the proposal has been submitted, the student will have a meeting with their Supervisory Committee to discuss and approve the research plan. (Detailed guidelines for writing the research plan are provided below in this document).

The main goal of phase A of the Ph.D. (up to and including submission of the research proposal) is to demonstrate the ability to formulate and carry out a research plan (including proposing appropriate research approaches, tools, methods, and timelines) that will lead the student to the achievements required to earn a doctoral degree, which includes a unique contribution to advancing knowledge and understanding in the researched field. This contribution could be the description of phenomena or processes not described before, answering open questions in the researched field, or developing and improving techniques to obtain results that could not be achieved through known methods.

The research proposal text should be a maximum of 10 pages long, written with 1.5 line spacing and 12-point font, not including the cover page, references, and diagrams supporting the proposal. Diagrams supporting the proposal should not exceed 5 pages and should be included at the end of the document. Alternatively, diagrams can be embedded in the text, in which case the proposal can be a maximum of 15 pages long (if the diagrams occupy a full 5 pages).

Adherence to scientific writing conventions for the life sciences is required. Each piece of information should reference its scientific source, **using the author-year citation method.**

The proposal should include the following sections:

* 1. **The Cover Page**: Should include the title in Hebrew and English, submission date, student's name, supervisor's name, and the supervisor's signature.
	2. **The Abstract:** Should include an introduction, objectives, methodology (description of implementation stages), and preliminary results. There is no need to include literature references in the abstract or to detail the full scientific names of organisms if they have common names. The Abstract should be approximately 250 words and is included in the 10 pages limit of the proposal text.
	3. **The Introduction:** Should include a concise literature review, presentation of the researched problem, and justification for researching it. In writing the literature review, the student must demonstrate familiarity with the researched field. However, the review should emphasize the information on which the research objectives will be based. It is crucial that the Introduction present the context into which the research fits, justify the research problem, and explicitly state the knowledge gap to be filled.
	4. **The Research Objectives and hypothesis**: should be presented in the form of questions arising from the existing knowledge as highlighted in the literature review. Usually, this involves presenting a central problem directly related to the title of the research topic, and several subsidiary questions stemming from it.
	5. **Approach - Description of Implementation Stages**: should detail the research process to be performed by the student. The implementation stages must align with the research questions and the research objectives. The time required for each stage should be assessed, and can be summarized in a table (optional) at the end of the document. Considerations about the planning rationale, sequence of planned work, and key points should be included.
	6. **Preliminary Results**: should present the student's achievements. It serves to demonstrate the development of an experimental system that can answer the research questions. Here, difficulties encountered and their potential implications for the continuation of the research should be detailed. The preliminary results section can be presented separately or as part of the Approach/Implementation Stages section.

If the student presents preliminary results that have not yet been published, this should be stated explicitly under the title "Preliminary Results".

* 1. **Materials and Methods**: should be succinct, preferably not exceeding one page. It should include:
		1. Description of the materials/organisms/systems to be used for research. Where relevant, detail the sources, such as "special strains, transformants, plasmids or mutants available in our laboratory (or) to be received from...".
		2. Types of experiments and their scope, such as "in vivo or in vitro experiments, field experiments, laboratory experiments at... sites over... growing seasons with... repetitions", and so on.
		3. The main research tools to be used. It is advisable to rely as much as possible on previous publications, such as "bacteria will be grown as detailed by...", "solutions according to...", "commercial kit...", etc. It should be noted that if the development of methods or research approaches are included in the “Research Objectives” or “Methodology” sections, they should not be repeated here. Similarly, considerations for choosing between alternative research methods belong in the “Methodology” section.
	2. **Research Location**: should note if some of the research will be conducted outside of the Faculty on the Tel Aviv University campus, either within the country or abroad. This includes: observations or field experiments conducted elsewhere, as well as tests or experiments performed by the student in laboratories of fellow researchers at other institutions.
	3. **References**: should list the sources cited in the research proposal and should be formatted according to standard scientific writing conventions as in scientific journals. Consistency in the structure of the list is important.
	4. **Ethical and Safety Aspects**: should note any research involving animals, human subjects, hazardous materials or organisms that pose a biological risk. Permissions received for the work and the safety measures taken should be listed.
	5. **Timeline and Tasks**: A table or Gantt chart should lay out the experiments, their planned order, the purpose of each experiment, and the time frame in which it is expected to be conducted.
	6. **Risks and Solutions**: Challenges/difficulties that may arise during the research should be mentioned, along with alternative plans in case one of the research objectives is not achieved.
1. **Instructions for writing a Progress Report (InterimReport)**

**Submission of the Progress Report**

The progress report that was signed by the Ph.D. supervisor/s, should be submitted no later than **one and a half years after the approval of the doctoral research plan directly to the** Supervisory Committee members and **to the Smolarz Family Graduate School secretariat Mrs. Ilona Chasid, email: ilonac@tauex.tau.ac.il**. It is the responsibility of the student and the supervisor to ensure that the progress report is submitted on time. The student will meet with their supervisory committee to present their research progress.

**Content of the Progress Report**

The Progress Report should include the following sections in this order:

* 1. Cover page.
	2. Abstract (up to 250 words).
	3. Original research objectives and a brief explanation of changes from the original plan (if any).
	4. Results for the report period.
	5. Future work plan.
	6. List of references.
	7. Illustrations, graphs, diagrams, and tables to support the results.
	8. Appendices, such as list of publications arising from the research work, including those in preparation, bioRxiv or under review. List of conferences /meetings where the student presented data that was generated during the research.

No introduction is needed as the previous report including the introduction should be submitted separately. Sections 3-5 described above should be about 5 pages, written in 1.5 line spacing and 12-point font.

Illustrations, graphs, diagrams, and tables should appear after the list of references, numbered according to their order of appearance in the written report, with each figure and table having a brief legend.

The student must state the original research objectives and how they have been met or modified based on research progress. Additional experiments that reach beyond the original objectives should be noted. The Progress Report should present the results and explain how they contribute to the research.

Please note: If there are deviations from the results presented in the research proposal, the student must explain them. There is no need to present results already shown in the previous report. The previous report must be submitted to the committee to give an overall impression of the progress.

1. **Instructions for writing the Final Report**

The Final Report, must be signed by the supervisor/s, and then submitted **directly to the** Supervisory Committee members and **to the Smolarz Family Graduate School secretariat, Mrs. Ilona Chasid, email:** **ilonac@tauex.tau.ac.il** , no later than **four and a half years** after being accepted into the doctoral program. It is the responsibility of the student and the supervisor to ensure that the final report is submitted on time. The final report prepares the student for writing the thesis and will be used to determine if the student is ready to submit their thesis for a doctoral degree. According to the faculty's doctoral committee instructions, a meeting will be held between the student and the Supervisory Committee, after which the Supervisory Committee will decide whether the thesis work is ready to be submitted.

The final report should include the following sections in this order:

1. Cover page.
2. Abstract (up to 250 words).
3. Original research objectives and a brief explanation of changes from the original plan (if any).
4. Results and summary of key findings in the research work, ideally divided into subsections as they will appear in the thesis.
5. List of references.
6. Illustrations, graphs, diagrams, and tables to support the results.
7. Appendices, such as list of publications arising from the research work, including those in preparation, bioRxiv or under review. List of conferences /meetings where the student presented data that was generated during the research.

There is no need for an introduction. The length of the report in sections 3-4 described above should not exceed 5 pages, written in 1.5 line spacing and 12-point font. Illustrations, graphs, diagrams, and tables should appear after the list of references, numbered according to their order of appearance in the report, with each figure and table having a brief legend. Illustrations, graphs, diagrams, and tables that are not described in the results section should not be included. The list of references should be prepared as explained in the departmental guidelines for writing a research plan. The report submission process is detailed in section D. The Final report should be submitted together with a copy of the last Progress Report to provide the committee with an overall impression of progress made.

1. **Report Submission Process**

**Submission of Research Proposal, Progress Report, and Final Report**

* + Importantly, all reports should be *approved and signed by the student’s supervisor/s* prior to submitting them.
	+ The Research Proposal, Progress Report, and Final Report should be submitted **directly to the** Supervisory Committee members **to the Smolarz Family Graduate School secretariat Mrs. Ilona Chasid, email: ilonac@tauex.tau.ac.il**.
	+ The student is directly responsible for coordinating the dates of all meetings with the Supervisory Committee.
	+ The School administrative coordinator of graduate students must be updated on the date of the Supervisory Committee meeting along with a copy of each report.
	+ Following submission of each document, the student must present and defend their research orally, either in a physical meeting or a Zoom meeting that includes the student and all members of the Supervisory Committee.
	+ It is important to be consistent for the title of the student’s Proposal, Progress and Final Report. **If the title has changed, it should be stated explicitly along with the rationale for the change, in the final committee report. The title change requires approval from the Supervisory Committee.**

The submission process, as detailed in this section, is crucial for successful and timely completion of the doctoral process. It requires that **the student** be proactive in arranging meetings, submitting reports on time, and ensuring that they meet all criteria and standards set by the committee and the institution.