

Written Prelim Proposal Submission & Approval Checklist

☐ **At least 6 weeks prior to the exam: Written Proposal Format Check.**

- Students submit the written proposal as a PDF file to the DGSA for **format approval**.
- Once approved, the student will receive a copy of the **Prelim Exam Cover Sheet** for the Written Proposal. The Cover Sheet should be included with the Written Proposal when it is distributed electronically to each member of the supervisory committee.

Non-adherence to the formatting guidelines will require a revision before the document is approved for submission to the Prelim Committee.

☐ **At least 4 weeks prior to the scheduled exam and with approval of the written format from the BGSO: Written Proposal Submission to Committee.**

- Students should upload **into T3** their Written Proposal and updated CV
- Students should distribute their Written Proposal with Cover Sheet **by email** directly to the faculty.

☐ **1 week after submission of the Written Proposal to the Committee: Student Receives Written Proposal Approval or Requests for Revision.**

- Ask Committee Chair for requested revisions from committee members, if they haven't already contacted you. Each Committee member either votes to Approve the document or Request Revisions. Approvals/Requests for Revisions will be assembled by the Prelim Committee Chair (see Cover Sheet), who will then contact the student with requested revisions.

☐ **At least 1 week prior to the Oral Exam: Revised Written Proposal Due to Committee.**

- If the proposal Requires Revisions: The student should confer with the Committee Chair regarding the Committee's specific revision requests and, depending on the number of revisions, either:
 - Complete minor revisions in 2 weeks and submit a Revised Proposal to all Committee Members **by email and submit in T3** at least 1 week prior to the Oral Exam.
 - Take more time to prepare a revised Proposal if the requested revisions are extensive. In this case, the Oral Exam can be delayed/rescheduled, but *must still be completed by February 1st*.

Written Format of the Prelim Exam Proposal Document

The goals of the written portion of the prelim exam are as follows:

- 1) To demonstrate proficiency in the student's field of interest with respect to understanding pertinent literature, applying appropriate techniques, posing incisive questions or hypotheses, and designing experiments to address them.
- 2) To familiarize the student with preparing a formal, peer-reviewed research grant proposal.

The following guidelines and requirements will help students write a clear, well-supported proposal that highlights their ability to identify and explain important problems and design approaches to solve them.

General Prelim Exam Information:

- Use 11-point *Arial, Georgia, Helvetica or Palatino Linotype font, single space with at least 0.50-inch margins on ALL sides*. Figures, charts, tables, figure legends, and footnotes may be smaller in size but must be legible.
- Follow all page limits: 17 pages total excluding References, with specific page limits for each of the subsections listed below.
- The wording of the proposal should originate from the student and should not come from previously written proposals or manuscripts.
- **Role of the Thesis Advisor:** The Thesis Advisor is encouraged to participate in the preparation and editing of the Written Proposal. Students are urged to ask their Advisor to read the Proposal and make suggestions to improve the document's style, language and clarity prior to distributing to the committee. The Advisor may also provide assistance to assure that the Proposal conforms to the format and style guidelines. Such participation will increase the probability that the proposal will be acceptable to the committee and minimize revisions.
- Students must submit the written proposal to the BGSO for a **format check at least 6 weeks prior to Prelim Exam date** (2 weeks prior to distribution to the Committee). Non-adherence to formatting guidelines will require revisions *before* the document is approved for submission to the Prelim Committee.
- After submitting to the committee, the faculty are likely to request specific revisions to the written Prelim document. The student has ~2 weeks to make revisions prior to resubmitting the Final Revised Written Prelim. If extensive revisions are required, the student can delay their Oral Exam (as long as it is completed by February 1st of G3).

Written Prelim Exam Content Requirements

Section 1 (Page 1): Title, Summary, Narrative

A) Descriptive Title 200 character, max)

- Is limited to 200 characters including spaces and punctuation.

B) Project Summary/Abstract (30 lines, max)

- This is a **succinct description** of the proposed work and should be able to stand on its own (separate from the application). This section should be informative to other persons working in the same or related fields and understandable to a scientifically literate reader. Avoid using the first person.
- State the broad, **long-term objectives** and **specific aims**. Describe the general **research design** and **methods** for achieving the stated goals. Be sure that the project summary reflects the key focus of the proposed project.

C) Project Narrative (~3 sentences)

- Describe how, in the short or long term, the research **would contribute to fundamental knowledge** about the nature and behavior of living systems **and/or the application of that knowledge** to enhance health, lengthen life, and reduce illness and disability.

Section 2 (Page 2): Specific Aims

- Introduce the **background** and **importance** of the research area. State concisely the **goals** of the proposed research and summarize the expected **outcome(s)**, including the **impact** that the proposed research results will have on the involved research field(s).
- Succinctly list the **basis** and **specific objectives** of the research proposed (e.g., to test a stated hypothesis, create a novel design, solve a specific problem, challenge an existing paradigm, address a critical barrier to progress in the field, or develop new technology).

Section 3 (Page 3): List of Abbreviations

- List all abbreviations used in the proposal

Section 4 (Pages 4 – 17 max): Research Strategy

A) Background and Significance (4 pages, max)

- Describe the background and foundational studies for the proposed research in this field. Include preliminary results, if any, that are pertinent to presenting the background (data collected by others in the lab may be included with appropriate acknowledgement).
- Explain the importance of the problem, and/or critical barriers to progress that the proposed project addresses. Describe how the project will improve scientific understanding, clinical knowledge, and/or technical capability in one or more broad fields.
- Describe how the research proposal is innovative: explain how concepts, methods, or

technologies, that drive this field will be changed if the proposed aims are achieved.

B) Approach (10 pages, max)

This section should include:

- An **overarching hypothesis or goal**
- A **hypothesis or goal for each Specific Aim**
- **Objectives/Sub-aims within each Specific Aim** that will be used to examine the hypothesis/hypotheses or accomplish specific scientific goals
- A description of the **Methods, Approaches, and/or Techniques** to be used in each aim. Include how the data will be collected, analyzed, and interpreted. Include **preliminary studies**, if any, that are pertinent to the feasibility and/or progress towards the objectives/aims (data collected by others in the lab may be included with appropriate acknowledgement). If the project is in the early stages of development, describe the strategy to **establish feasibility**, and address the **management of any high-risk aspects** of the proposed work. Briefly outline plans for the **statistical analyses** of the data (including power calculations prior to experimental design), whenever appropriate.
- A discussion for each Aim and **how the data/results will be interpreted, limitations of the approaches/methods, possible problems, and alternative approaches** that would be tried if the initial approaches do not work.

Section 5 (no page limit): References

- List **all** authors unless the number of authors exceeds 10, in which case “*et al*” may be used. Include **titles** in citations.
- While there is not a page limitation, it is important to be selective, and include the most **appropriate** and **current** literature references pertinent to the proposed research.

Oral Prelim Exam

After the committee has approved the Written Proposal portion of the Prelim Exam, or the student has submitted a Revised Proposal to the Committee, the student will meet with the committee for an Oral Examination. **The Student's Prelim Committee, Revised Prelim Proposal, Updated CV, Prelim Date, Time, and Location *must* be entered in T3 prior to the Oral Exam.**

Please Note: To prepare, students are encouraged to arrange "mock" oral exams with members of the student's lab and other graduate students.

Presentation and Examination Questions: During the first ~30 minutes of the exam, the student presents an uninterrupted seminar primarily on the research project and obtained results. The student's thesis advisor(s) will then be asked to leave, as they are not present during the second part of the exam. The student is then asked questions by the Prelim Committee. The range of questions in this Oral Exam are in the general area of biochemistry and are related to, but are not restricted to the student's proposal.

Recommendation by the Prelim Committee: At the end of the exam, the student will leave the room while the Committee discusses the results. The mentor may be asked to join the committee for consultation. At this time, each Committee member will evaluate the Prelim in T3 indicating whether the student Passes or Fails, generating the Final Preliminary Exam Evaluation document which will be approved by the DGS and forwarded to the Graduate School. The DGSA cannot submit the official Report of the Doctoral Preliminary Examination form to the DGS for his/her signature and transmission to the Graduate School until all evaluations are completed.

Evaluation: The student is informed of the Committee's decision and advice at the exam's conclusion. The T3 evaluation and comments should be discussed by the student and their research advisor.

Re-taking the Preliminary Exam

A student who fails the preliminary examination may apply, **with consent of all of the members of the students Prelim Exam Committee and the Dean of the Graduate School**, for the privilege of a re-examination.

Graduate School Re-examination Requirements:

- Re-exam must occur no earlier than 3 months and no later than 6 months after the original exam date.
- Exam must be held by the end of the Spring Semester of G3 unless specifically requested and approved in writing by the Dean.
- All members of the student's original Prelim Committee must serve on the re-examination committee.
- Successful completion of the second examination requires the affirmative vote of all Committee members. Failure on the second examination will render a student ineligible to continue for the Ph.D. degree at Duke University.