**Thesis Proposal and Comprehensive Exam Format**

The BME Ph.D. Comprehensive Exam is held with the student’s Ph.D. Advisory Committee plus a Chair (assigned by BME) and consists of the following three components:

**Part A: Thesis Proposal**

The student must present a written Thesis Proposal prepared according to the guidelines in Appendix A and circulated to the committee members at least one week before the examination.

**Part B: Thesis Proposal Presentation**

The students must make an oral presentation of their Thesis Proposal to the committee and defend it by responding to the committee questions directly related to the background, progress, and proposed work of direct relevance to their project. The presentation should be no longer than 20 minutes, not including questions.

**Part C: General Competence**

Throughout the Thesis Proposal presentation and the subsequent question and answer period, the student must demonstrate a general knowledge and competence in the relevant areas of Biomedical Engineering and tools necessary for the project. This will involve responding to “higher-level” questions which may not be related directly to the student project. Note that areas on which the student will be questioned will have been defined by the Advisory Committee at the preceding Comprehensive Exam Preparation Meeting.

**Thesis Proposal and Comprehensive Exam Outcomes**

Each component of the Examination will be rated as **Satisfactory**, **Conditional**, or **Unsatisfactory**. The overall result of the Ph.D. Comprehensive Exam is determined as follows:

**Satisfactory**: If all three components are rated as **Satisfactory**, the student will be deemed to have satisfactorily completed all three components and will receive a “Pass” grade. The next meeting will be a regular Advisory Committee Progress Meeting to be scheduled within one year of this meeting.

**Conditional**: If one or more of the components is rated as less than **Satisfactory** and no more than one component is **Unsatisfactory**, the student will be graded as “Incomplete” and be asked to take appropriate corrective measures within three (3) months. The committee may also impose one or more conditions that must be fulfilled prior to the next meeting. If the student does so to the satisfaction of the committee, the student will be awarded a “Pass” and will continue in the program. Otherwise, the student will be awarded a “Fail” and must follow the procedure in the “Unsatisfactory” section below.

**Unsatisfactory**: If two or more components are rated as **Unsatisfactory**, the student will be failed and be required to redo the entire exam within three (3) months. If the student fails a second time, the student will be required to withdraw from the program.

**Thesis Proposal and Comprehensive Exam Timing**

Given the importance of the Ph.D. Comprehensive Exam and the consequences of failure, the exam will normally be held no later than 6 months following the Comprehensive Exam Preparation Meeting.

**Important Note**: It is the responsibility of the student to inform him/herself of the Comprehensive Exam Policy and Procedures and deadlines. Failure to comply can lead to expulsion from the program, unless strong justification is provided and confirmed in writing by the Supervisor.

The methods adopted for examination and evaluation and the areas to be examined in Comprehensive Examinations are specified by departmental regulations and are in agreement with the graduate studies guidelines approved by the School of Graduate and Post Doctoral Studies.
APPENDIX A

The Thesis Proposal should take the form of the research module of a CIHR grant proposal and should follow the formatting and other instructions given on http://www.cihr-irsc.gc.ca/e/29300.html

The research proposal should include the following sections:

1. **Summary of research proposal:** Summarize the objective(s), hypothesis and research plan. A maximum of one page may be used.

2. **Summary of progress:** Do not include references, tables, charts, figures or photographs. Summarize progress towards the Thesis and/or summarize previous work relevant to this proposal.

3. **Response to previous reviews - Up to 2 pages:** This section should only be used when submitting a revised thesis proposal following a Conditional or Unsatisfactory rating. Students should use these pages to respond to previous committee comments and indicate what corrective actions have been taken.

4. **Research proposal - (10 pages):** The research proposal should be clear and concise. Page limits do not include references, tables, charts, figures and photographs. Legends should be succinct. Detailed descriptions of methods and discussion of results should be included in the body of the proposal. They should not be in the legends nor included as an appendix. Questionnaires and consent forms may be attached as appendices, where applicable.

**In the research, student must explain:**

a) What they want to do (central hypothesis, research question, specific objectives)

b) Why this is a reasonable thing to do (review of previous work done on the subject matter, rationale)

c) Why this is important (new knowledge to be obtained, improvements to health which will result)

d) How they are going to do it (work plan, timelines, analysis and interpretation of results, pitfalls, ways around the pitfalls, alternatives)

e) Why they should do it (relevant prior experience and skills, collaborators for technical gaps, preliminary data showing feasibility)

5. **Appendices:** Where appropriate, the student may append documents such as thesis chapters or journal articles in support of their proposal. A maximum of five such documents may be appended.

**How to prepare and format proposal and attachments:**

Please follow these guidelines for formatting each page of the Thesis Proposal. To be forwarded to committee as a consolidated PDF file.

- Indicate your name, the project title, at the top of each page.
- Indicate the page number clearly at the bottom of each page.
- Insert a margin of 2 cm - minimum - around the page.
- Observe page limitations, additional pages may NOT be added unless specified.
- Use only letter size (21.25 X 27.5 cm) white paper/background for all attachments.
- Photo-reduce the supporting documents if the originals are larger than letter size
- Use a font size of 12 point, black ink. Six lines per inch. No condensed type or spacing.
- Attachments must be uploaded in PDF format.