Purpose

- The goal of preliminary exams is to evaluate doctoral student knowledge depth in fundamental mechanical engineering topic areas.

Personnel

- 3 Department-approved ME committee members are required (Advisor cannot attend).
- No other guests are permitted to attend including other faculty, students, family, etc.

Procedure

- Will take place within 12 months of completing preliminary topic exams (before start third year). At least one week prior to the exam, student’s must send a 250 word presentation abstract, including title and any relevant references, to all committee members.
- Advisors are encouraged to not intervene or assist students during exam, except in cases where clarifications are needed. The intent is to evaluate the student research progress, without assistance.
- Preliminary research exams should be schedule for 60 minutes, with 30 min for presentation and 30 min for questions and discussion.

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Purpose

- The intent of the preliminary research exam is to evaluate a doctoral student’s ability to perform doctoral level research.

Personnel

- 3 Department-approved committee members are required (including Advisor). 2 committee members must be ME faculty.
- No other guests are permitted to attend including other faculty, students, family, etc.

Procedure

- Will take place in August after PhD student’s first year in the program. Each topic area exam will last 30 minutes.

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Purpose

- A comprehensive exam is the last step before a doctoral student defends their research. Successful completion of the comprehensive exam transitions the doctoral student to a doctoral candidate.
- Typical timeline for a comprehensive exam is 12-18 months prior to anticipated defense.
- A comprehensive exam is typically structured around completed research aims, or research objectives, with an exam goal of building committee consensus towards expectations for completing additional aims/objectives, and/or improvements to the previous research.

Personnel

- 5 committee members are required (3 ME faculty, 1 must be non-ME, Advisor is Chair). All committee members must be approved by the Department and Graduate School.
- Additional faculty, collaborators, and students are welcome to attend, though additional guests are asked not to attend.

Procedure

- Student must submit their proposal to the examining committee at least two weeks prior to the examination. The proposal should describe the work that has been completed to date and proposed work that will be completed for the dissertation.
  - Included in the proposal should be a comprehensive literature review of your field of concentration and the subject of your dissertation. This proposal must be typed, single-spaced, in 12-point font, and at least 25 pages.
- The committee chair (advisor) will introduce the committee and the presenting student. The chair will ask that the audience refrain from asking questions until the conclusion of the presentation. The chair will advise the committee to feel free to ask questions during the presentation. After the presentation, the audience will be allowed to ask questions. The audience will then be excused. The committee will ask the student questions until they are satisfied. The student will be excused while the committee deliberates. The committee members will be asked to sign the signature page each as “satisfactory” or “unsatisfactory”. The committee is not obligated to form consensus. It is advised that the chair signs last. The student is invited back into the room to discuss the exam outcome and future steps if needed.
- Advisors are encouraged to not intervene or assist students during defense, except in cases where clarifications are needed. The intent is to evaluate the student research progress, without assistance.
- Defenses should be scheduled for 2 hours. Typical presentations last 45 minutes, with 75 minutes for questions and discussion.

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Purpose

- A thesis defense (PhD or MS) is the pinnacle of the student’s research efforts. Only students that have been properly, and adequately, prepared by their advisors should schedule their defense.
- Typical depth for a PhD is 3 (or more) peer-reviewed journal publications (1 or more for MS).
- A PhD defense is typically structured around several research aims, or research objectives, that typically coincide with published journal papers. An MS defense is typically structured around 1 main research aim (research objective).

Personnel

- For the PhD, 5 committee members are required (3 ME faculty, 1 must be non-ME, Advisor is Chair). MS requires 3 committee members (2 ME faculty, third can be in ME or non-ME). All members must be approved by the Department and Graduate School.
- This is a public defense, so all guests are welcome to attend.

Procedure

- Students must submit their dissertation to the committee at least three weeks before your thesis defense so the committee has time to review it. Prior to the defense, you should speak with all members of the committee to assess their areas of interest and concerns. This will help you anticipate any questions that will be asked.
- The same procedure as the Comprehensive Exam is followed. MS defenses should be scheduled for 1-2 hours. MS presentations typically last 30-45 minutes, with the remaining time devoted to questions and discussion.