ME Preliminary Examination Format

(Effective Fall 2021)

Course Requirement

Only after attainment of a minimum GPA of 3.20/4.0 in at least five graduate-level courses, a minimum of 1 Math (EML 5060/5061, MAP 5345/5346), 2 Core (major area), and 2 ME Grad courses, is a student allowed to proceed with the Preliminary Examination. Students can choose the 5 best-graded courses to satisfy the minimum GPA requirement.

Doctoral Committee

During 2nd Year, the student (in consultation with major professor) forms the Doctoral Committee to initiate the Preliminary Exam process. The committee composition:

1. Major professor (Chair, Prospectus & Dissertation)
2. ME Faculty member in your major area (1) (Chair, Prelim Exam)
3. ME Faculty member outside major area (1)
4. A tenured faculty member from outside the Department of Mechanical Engineering (Univ. Rep.)
5. Optional (at the discretion of Major Professor): Additional member in the major area

The 4 primary members must be tenure-track faculty, holding the rank of Professor, Associate Professor, or Assistant Professor. Assistant professors may not serve as the University Rep.
The Doctoral Committee is responsible for both administrations of the Preliminary exam and oversight of the student's program of study.
Committee members must be approved by the ME Graduate Committee.
The preliminary exam shall be attempted during the 2nd year.

Notes:

1. Participation of the University Representative during the oral presentation of the exam is optional.
2. Major professor doesn't take part in the evaluation (scoring) process.
3. The page limit (20 pages) for the research proposal indicated above is maximum. A good quality research proposal of shorter length should not be penalized.
4. The students are encouraged to discuss the whitepaper and research proposal with their advisor before submission to the committee.
5. If a student fails the exam, Chair of the committee must ensure that detailed feedback is provided to the student.
6. If a student fails the exam, he/she can either select a new topic or continue to work on the same and improve based on the feedback provided.

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Preliminary Exam Format (Timeline for Spring 2026)**

Milestone	Complete No Later Than	Initial &Date (Student)*	Initial &Date (Chair)*
Formation of Doctoral Committee	Prior to Spring 2026 Classes CLASSES BEGIN January 7, 2026		
Student submits 1-page whitepaper on research proposal including problem statement, intellectual merit, and boarder impact to the Doctoral Committee.	Week of January 19, 2026 MLK HOLIDAY January 19, 2026		
Doctoral Committee reviews the whitepaper, makes suggestions, provides comments, and may suggest modifications to the topic (~one week).	Week January 26, 2026		
Student submits a 20-page (maximum) research proposal including theoretical framework, literature review (including a seminal/review paper), knowledge gaps, and proposed research (~6 weeks).	Week of March 9, 2026 SPRING BREAK March 16-20, 2026		
Committee reviews proposal & provides comments and questions (~2 weeks).	Week of March 23, 2026		
Response submitted by the student (~2 weeks).	Week of April 6, 2026 **DROP DEADLINE		
Oral presentation 30 min – Q&A (time as needed)	Week of April 13, 2025 FINAL EXAMS April 27 - May 1, 2026		

***Each milestone should be initialed by the student when submitted and initialed by the advisor or committee chair when written feedback is received and discussed.**

****STUDENTS WHO DO NOT COMPLETE THE EXAM PROCESS in SPRING 2026 MUST DROP THE COURSE AND RE-ENROLL FOR THE EXAM IN FALL 2026!**

Preliminary Examination Evaluation Rubric

STUDENT NAME:

Evaluation Criteria	Excellent	Good	Fair	Poor
Preciseness and Quality of Research Problem Definition				
Technical Content				
Importance to Mechanical Engineering				
Style and Clarity (Format & Language Proficiency)				
Completeness				
Uncertainty of Computed Results or Experimental Data Adequately Addressed in the Proposal				
Intellectual Merit of the Proposal				
Broader Impact of the Proposal				
Responses to Written Questions / Suggestions from the Committee Members				
Communication Skills during Oral Presentation				
Responses to Oral Questions / Suggestions from the Committee Members				
Overall Recommendation of the Committee	Pass/Fail			

Suggested Updates to Evaluation Criteria

- Quality of White Paper submission (on-time, grammar, importance)
- Quality of Proposal (on-time, grammar, formatting, response to White Paper feedback)
- Ability to communicate effectively (response to emails, timeliness of responses, command of English language, use of feedback)
- Quality of Oral Presentation (ability to respond/understand questions, grasp of research topic, address uncertainty)
- Potential for Success (ME fundamentals)
- Overall Recommendation of the Committee member (Pass/Fail)
    - Pass may include "remediation" such as enrollment in course(s), teaching experience, research, etc.