

**DEPARTMENT OF MECHANICAL ENGINEERING
UNIVERSITY OF COLORADO BOULDER**

Research Preliminary Exam

The Research Preliminary Exam is a presentation of research to a committee of three that must include the student's research advisor and at least one other ME faculty member. Students should view this as an early thesis proposal.

Students will schedule this exam on their own and should complete it within one semester of passing the Oral Fundamental Topic Preliminary Exam. Students must send a 5-page written report, including title, figures, and relevant references, to all committee members at least 1 week prior to the exam.

Student's Name _____ **Date of Exam** _____ **Research Area** _____

1. Literature and Previous Work

Demonstrates sound knowledge of literature in the area, and of prior work on the specific research problem.

___ Needs Significant Improvement ___ Needs Improvement ___ Acceptable ___ Very Good ___ Excellent

2. Problem Definition

States the research problem and objectives clearly, providing motivation for undertaking the research.

___ Needs Significant Improvement ___ Needs Improvement ___ Acceptable ___ Very Good ___ Excellent

3. Research Plan

Provides a sound plan for applying state-of-the-field research methods/tools to solving the defined problem and shows a good understanding of how to use methods/tools effectively.

___ Needs Significant Improvement ___ Needs Improvement ___ Acceptable ___ Very Good ___ Excellent

4. Preliminary and Expected Results

Provides a sound plan for analyzing and interpreting research results/data.

___ Needs Significant Improvement ___ Needs Improvement ___ Acceptable ___ Very Good ___ Excellent

5. Impact of Proposed Research

Demonstrates the potential value of solution to the research problem in advancing knowledge within the area of study. Also demonstrates awareness of broader implications of the proposed research. Broader implications may include social, economic, technical, ethical, business, etc. aspects.

___ Needs Significant Improvement ___ Needs Improvement ___ Acceptable ___ Very Good ___ Excellent

6. Quality of Written/Oral Communication

Communicates research proposal clearly and professionally in both written and oral forms.

___ Needs Significant Improvement ___ Needs Improvement ___ Acceptable ___ Very Good ___ Excellent

7. Critical Thinking

Demonstrates capability for independent research in the area of study, preparedness in core disciplines relevant to research, and ability to complete the proposed research.

___ Needs Significant Improvement ___ Needs Improvement ___ Acceptable ___ Very Good ___ Excellent

8. Overall Score

___ Pass ___ Conditional Pass (see conditions below) ___ Fail

Conditions:

Advisor Name:

Signature:

Committee Member:

Signature:

Committee Member:

Signature: