

INTENT TO TAKE ORAL QUALIFYING EXAM

(To be completed by student and signed by advisor)

Name _____ Date: _____

*Form must be submitted 60 days prior to exam date

CSU ID: ____-____-____ Phone: ____-____-____ Email _____

Examination Committee Chair: _____

TEST TO BE TAKEN:

Fall/Spring 20____ Date of Exam: _____

TOPIC	EXAMINER (Name, Title, & Department)
TOPIC 1: _____	_____ Signature _____
TOPIC 2: _____	_____ Signature _____
TOPIC 3: _____	_____ Signature _____
TOPIC 4: _____	_____ Signature _____

- Two tenured/tenure track faculty members from Mechanical Engineering.
- Three required core courses have been completed.

- All examiners are tenured/tenure-track faculty at Colorado State University
- Not all examiners are faculty at Colorado State University (a petition for consideration must be attached)

Semester and Year you entered the Ph.D. program: _____

This is a: _____ 1st Attempt of Oral Qualifying Exam

_____ 2nd Attempt of Oral Qualifying Exam

Previous Score/Results & Conditions:

Student's Signature _____ Date: _____

Advisor's Signature _____ Date: _____

Examination Committee Approved by Associate Department Head
Associate Department Head Signature _____ Date: _____

REPORT OF ORAL QUALIFYING EXAM

SCORE: _____

EXAM: _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	EXAM: _____ _____ _____ _____ _____ _____ _____ _____ _____ _____
EXAM: _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	EXAM: _____ _____ _____ _____ _____ _____ _____ _____ _____ _____

0-2.0 FAIL, 2.5-4.0 FAIL with Permission to Retake, 4.5-5.5 PASS with Conditions, 6.0-8.0 PASS

Departmental Approval:

Examination Results Approved by Associate Department Head
Associate Department Head Signature _____

Date: _____

Mechanical Engineering Ph.D. Qualifying Exam

Note: This section is for guidance only and should mirror the current graduate student handbook. If discrepancies exist, the rules of the exam outlined in the graduate student handbook supersede this document.

Purpose:

The main objective of the exam is to ensure that all PhD graduates are able to demonstrate a mastery of the underlying theory specific to their dissertation research and a thorough understanding of theory in their engineering sub-discipline. The Oral Qualifying Exam is private and only open to the student's Examination Committee and his/her graduate advisor.

Examination Committee:

The examination committee will consist of four (4) examiners, one of whom will act as a chair of the committee as soon as it is formed at the request of the student to be examined. The chair and one additional committee member must be tenure track or tenured faculty in the Department of Mechanical Engineering. The other two committee members can be filled by faculty inside or outside the department. However, if they do not hold an appointment in the university, they are permitted on the Examination Committee only by approval of the graduate education committee (GEC).

The faculty advisor is not part of the examination committee but can be present during the examination as a courtesy. The faculty advisor has no voice on the committee.

Scheduling:

1. The student must complete at least one year of graduate course work and all of the required Core Courses prior to taking the Qualifying Exam.
2. The student must take the exam by the beginning of their fourth semester in the PhD program. The exam can be taken earlier provided that criterion 1 is satisfied.
3. The student and examination committee must establish a day and time for the exam to be administered and the student must submit the intent to take the oral qualifying exam form at least 60 days prior to exam date.
4. The report of the oral qualifying exam must be submitted by the chair to the Graduate Program Specialist within 1 week of the examination.
5. With permission of the Associate Head for Graduate Studies, it is permissible to have one and only one committee member who is not the chair give their portion of the exam up to one week (7 calendar days) early due to scheduling conflicts. In this case, the committee member must provide, in writing, the examination results and comments from their portion of the exam to the committee chair. That examiner then gives up their voice on the outcome of the exam. This must occur prior to conducting the rest of the exam. In the case of absence due to illness or other unforeseen circumstances, the exam must be rescheduled within 2 weeks. If this pushes the exam into the student's 4th semester, this does not constitute a violation of point #2 above.

Format:

1. The exam will be a 2-hour oral exam administered in four 30-minute segments by the Examination Committee.
2. The exam will consist of 4 topical areas, at least 2 of which will be from the following list of core subject areas. The associated Core Course is listed in parentheses as a general guideline for the topical area. However, the topical

content of the oral exam is at the discretion of the examiner.

- Thermodynamics (MECH 538)
- Dynamics of Mechanical Systems (MECH 529)
- Materials (MECH 532)
- Solid Mechanics (CIVE 560)
- Fluid Mechanics (MECH 539)
- Heat Transfer (MECH 544)
- Mathematics for Scientists and Engineers (MATH 530)
- Computational Methods for Mechanical Engineers (MECH 568)

The remaining 2 subject areas may be based on the candidate's dissertation research topic subject at the approval by the Advisor and Examination Committee or otherwise should be based on coursework similar to the core subject areas listed above.

3. The Examination Committee can choose to conduct the oral examination on these topics in the context of the candidate's dissertation topic.
4. The Examination will be graded on an integer scale of 0 to 8.0 (scoring in increments of 0.5), with a maximum grade of 2.0 for each of the four topical areas. The final number grade will determine the outcome of the exam as follows:

Integer	Outcome
6.0 to 8.0	Pass
4.5 to 5.5	Pass with Conditions
2.5 to 4.0	Fail with Permission to Retake
0 to 2.0	Fail

Note that any committee member can require that a student complete additional work for any integer grade less than 8.0.

5. The Examination Committee will meet in private (without the presence of the thesis advisor) to determine a final score on the 0 to 8 scale and assign the associated final grade of pass, pass with condition, fail with permission to retake, or fail. Those students who fail with permission to retake will only be allowed to retake the exam once.
6. The Examination Committee will report the results of the qualifying examination to the Associate Department Head for Graduate Studies.

Research Advisor's Role:

1. The student's Research Advisor will work with the student to identify the 4 subject areas of the Qualifying Exam and the appropriate members of the Examination Committee for each subject area.
2. After agreeing on the recommended constitution of the Examination Committee, the student will contact the members of the Examination Committee to request their participation in the Qualifying Exam process and solicit a chair.
3. Having obtained consent from the Examination Committee members and Research Advisor, the student will obtain approval for the proposed topical areas and Examination Committee make-up by the Associate Department Head for Graduate Studies.
4. The Research Advisor may be present during the Qualifying Exam but will not participate in the examination process.
5. The Research Advisor may not be present for the private Examination Committee deliberation during which the final grade is assigned but will be a part of the post-

examination debriefing (after the score has been determined).

6. The Research Advisor will communicate the final grade to the student after the exam if present. In their absence, the results will be communicated by the chair to the student.