

THE UNIVERSITY OF ALABAMA | COLLEGE OF ENGINEERING AEROSPACE ENGINEERING & MECHANICS TUSCALOOSA, ALABAMA

AEM Qualifying Exam

Students must pass a qualifying exam prior to Candidacy and enrolling in AEM 699 dissertation research¹. The qualifying exam is to help determine the student's preparedness for the advance knowledge and critical thinking required for dissertation-level independent research, two areas of assessment for our program.

The exam is created and evaluated by a qualifying exam committee. The qualifying exam committee will consist of the student's research advisor and two faculty members selected by the advisor with consideration of input by the student, the student's expected research area, and the student's core and Plan of Study curriculum. It is preferred the QE committee members will also be on the student's dissertation committee.

Except for study week and finals week, the qualifying exam may be scheduled when the university is in session for fall, spring, or summer and the committee is available. At least five weeks are required between the formation of the committee and the exam start. At this time, the Graduate Program Coordinator must be notified that the student is planning to take their qualifying exam. By three weeks out, the committee must provide the student general guidelines about research and Plan of Study coursework topics that could be addressed during the qualifying exam. The exam will start with a take-home assignment developed by the committee and conclude with a follow-on presentation. Once the assignment is given, the student will have up to two weeks to prepare a presentation and present to the committee. At minimum, a PDF slide-deck of the presentation must be given to the committee 24 hours prior to the presentation. The presentation should address at minimum: background and literature review; approach, derivations and modeling; analysis and results; and conclusions and limitations. The presentation is limited to 30 minutes and may only be interrupted for brief clarification questions. Immediately following the presentation, the committee will hold a question and answer session with the student for a period limited to 60 minutes. The room must have a white-board or similar writing and display tool for the audience to view.

After the presentation and within 48 hours, the qualifying exam committee will assess the student's pass or fail performance in context to their preparedness for the advance knowledge and critical thinking required for independent research in the student's topic area. Two of the three committee members must agree the student's performance on the exam was a pass to pass the qualifying exam. If the student fails the qualifying exam, the committee must provide areas of deficiency. The student then has one more opportunity to pass the exam. A second attempt must occur in a different semester.

A student must also complete 75% of coursework or successfully propose their research topic to file for PhD Candidacy and start taking AEM 699