PhD Atmospheric Science (ATS) Qualifying Exam Policies

PhD Qualifying Exam Process and Guidelines for Atmospheric and Earth Science

Prior to the Qualifying Exam, the student should develop a dissertation proposal under the supervision of their research advisor. The Qualifying Exam is intended to test the depth of knowledge in a student's proposed research area. The exam has a written and an oral component. Note that, although there are two components to the qualifying exam, they are in fact one exam. A student has two attempts to pass the Qualifying Exam.

UAH Catalog prior to Fall 2026: Student must take AES 782 - Professional Development before attempting the Qualifying Exam since proposal writing is emphasized in that course.

UAH Catalog starting in Fall 2026: Students must complete six credit hours of AES 798 Advanced Research before attempting the Qualifying Exam since proposal writing is emphasized in that course. Although not required for minimum PhD degree requirements, advisors may recommend that the student take AES 782 Professional Development prior to the Qualifying Exam.

Proposal

The student must write a 15-page proposal including figures (excluding references) in single spaced 12-point font, 1 inch margin format. The format for this proposal is outlined in the AES

782 course. The proposal must include an outline detailing when the student will finish the research and defend the dissertation. The advisor must approve this proposal.

Prior to initial PhD Committee meeting

At least 2 weeks before the initial PhD Committee meeting, the student must email their proposal to committee members (CMs) for their review.

Initial PhD Committee meeting

At the committee meeting, the student will make a 15-20 minute presentation that will provide an overview of the research proposal. This initial committee meeting is for introductory purposes only and not to be construed as an exam. Light clarifying questions from the PhD CMs, while in-depth questioning and discussion is not expected.

Questions to Advisor

Two weeks after this initial meeting, each CM should email two to three exam questions to the Advisor. Note that the minimum required number of committee members for a PhD is five, but sometimes a student has more committee members. A total of eight to ten questions are reasonable for this 70 hour, with several questions possessing multiple parts. As external (to UAH or NSSTC) CMs are involved, it is recommended that the Advisor provide clear instructions for those members who are not familiar with AES Qualifying Exam procedures.

Written exam

Typically, the student takes the written exam over a weekend. Therefore, the advisor must email the questions to the student between 11:30 A.M. and 12 noon on a Friday. The questions must also be emailed to the AES Department Chair. The student has 70 hours to answer the questions. The answers must be emailed back to the advisor and the Department Chair on or before 10 A.M. on the following Monday. The student can scan the exam and email it in PDF format to the Advisor, or convert their MS Word or other formatted text document into a PDF. To ensure fairness for all students who take these exams, no extra time to answer these questions will be allowed. If the advisor does not receive the student responses on or before 10 A.M., the student must retake the exam. The committee will write new questions, and the process will be repeated. At this point, the student has only one more attempt to pass the exam. The guidelines and format with example questions are listed in the attached file.

Student responses forwarded to CMs

The advisor provides the student responses to each of the CMs. The exam responses should be sent to the CMs within 24 hours of receipt of them.

CM evaluations

The CMs must provide (to the Adviser) a pass or fail grade for the responses to their questions. Typically, a 2-week period of time is set aside for exam review and grading, after which the Oral Exam is given.

Oral Examination

The student should take the oral examination 2 weeks after the written exam. The Advisor and CMs should work to adhere to the 2-week separation between the written and oral exam to ensure consistency within the Qualifying Exam for all students. This portion of the exam is used to: a) test the student's knowledge in the proposed area of research, including the fundamentals of Atmospheric and Earth Science and to ask follow-up questions to the written portion of the exam, and c) to evaluate the student's ability to provide coherent reasoning and answers related to questions on their research topic, and/or other related topics. At the end of the oral exam the CMs will collectively decide (with a vote) to Pass, Fail, or Conditionally Pass the student. Remedial work for conditional pass must be clearly outlined and must remain on file in the department. If a student fails the exam, they have a second attempt to pass the exam that could include both oral and/or written portions.