



Ph.D. in Atmospheric Science – Policies

The Doctor of Philosophy degree is a research-oriented degree awarded upon the demonstration of scholarly competence. To obtain the Ph.D. in Atmospheric Science, each student must satisfy all requirements of the School of Graduate Studies and of the Atmospheric Science Department.

- Students within UAH must fulfill all requirements of either a thesis or non-thesis Master's degree and formally apply to the Ph.D. program.
- Students entering UAH with a M.S. degree or previous graduate training in Atmospheric Science must pass the Preliminary Examination at an early opportunity. Continuation in the Ph.D. program is dependent on satisfactory performance on the Preliminary Examination which is administered twice each year. Students are only permitted two attempts to pass the Preliminary Examination.

Degree requirements include:

1. Take the Core Courses and pass the Preliminary Examination.

Each student must pass the **Preliminary Examination** covering material in the three core courses plus three other ATS courses as outlined in the Ph.D. Preliminary Exam policies. The core courses are:

- ATS 541 Atmospheric Thermodynamics and Cloud Physics
- ATS 551 Atmospheric Fluid Dynamics I
- ATS 561 Atmospheric Radiation I

It is anticipated that a student will take the exam during the second year of graduate study, but those with a strong background in Atmospheric Science may take the exam within the first year. The Preliminary Examination may be taken only twice. The student must pass all six sections in order to continue toward Ph.D. candidacy. *See the Preliminary Examination policy guidelines for further details.*

Supervisory Committee

After a student has passed the Preliminary Examination, a Supervisory Committee will be formed. The committee will consist of the student's academic advisor plus at least four other members. Three of the Committee Members, including the Committee Chair, must be tenured or tenure-track members of the ATS faculty. The committee must be approved by the Graduate Dean. The committee will later administer the Qualifying Examination, and with consent of the Graduate Dean, give approval to all aspects of requirements 2-5. *See the Qualifying Exam and Committee Member policies for further details.*

2. Satisfy the Residence Requirement.

According to the Graduate School policy, a period of academic residence is required for all students in doctoral programs and may be established through either (i) being enrolled as a full-time student (at least nine graduate semester hours) either for one continuous academic year, or for Spring and Fall semesters in the same calendar year; or (ii) being enrolled in at least six hours of graduate course work in at least three of four consecutive semesters.

3. Complete an acceptable Program of Study (POS).

Students must formulate an appropriate Program of Study, in consultation with a faculty advisor and chair, **before the end of the second semester**. Each Program of Study, individualized to meet the student's needs and requirements of the program, will stress breadth, depth and research competence, and relate the major area to its applications. Any prerequisites for courses on the POS must be fulfilled before attempting the courses.

- A Program of Study will include at least 48 semester hours of graduate level **course work**. These include the core courses needed to prepare for the Preliminary Examination and courses required in a major area of concentration that will prepare the student to conduct original research. While required, supporting courses, ATS 509, 780, 781, 782, are not included in the 48 hours.
- Students can transfer up to 24 credit hours of **course work** from their M.S. program.
- Students can transfer an additional 6 credit hours of **course work**, including, with approval, special topics courses but **not** including thesis hours.
- 50% of the required 48 hours must be from 600 level or higher.
- A minimum of 18 hours of doctoral dissertation (ATS 799) is required.
- Students must register for a total of 3 hours of Seminar and Professional Development. (ATS 780, 781, 782)
- Students must maintain a cumulative GPA of at least 3.0.
- Graduate Research Assistants need to enroll in at least 3 departmentally approved graduate credit hours every fall and spring semester even if they have completed all the requirements of the POS. An exemption may be allowed for one semester during the pursuit of the terminal degree, usually the semester during which one defends their thesis or dissertation.

► **REQUIRED CORE COURSES (total of 9 credit hours)**

Students must earn a B or above in core courses.

- ATS 541 Atmospheric Thermodynamics and Cloud Physics, 3 credit hours
- ATS 551 Atmospheric Fluid Dynamics I, 3 credit hours
- ATS 561 Atmospheric Radiation I, 3 credit hours

Students who have earned a B or better in the undergraduate equivalent of 541,551,561 at UAH do not have to re-take the course at the graduate level. However, their program of study must include alternative credit hours at the appropriate level approved by their advisor and chair of the department.

► **ELECTIVE COURSES (total of 36 credit hours)**

- 24 Elective credit hours must be 600 level (or higher) ATS courses.
- 12 Elective credit hours may be 500 or 600 (or higher) from ATS or, with approval, from another department.

► **THESIS CREDITS (minimum of 18 credit hours)**

- ATS 799

► **REQUIRED SUPPORTING COURSES (total of 9 credit hours)**

- ATS 509 Applications of Computers in Meteorology, 3 credit hours
- ATS 651 Atmospheric Fluid Dynamics II, 3 credit hours
- ATS 780 Seminar, 1 credit hour
- ATS 781 Seminar, 1 credit hour
- ATS 782 Professional Development, 1 credit hour

Students who have earned a B or better in the undergraduate equivalent of 509 at UAH have fulfilled the requirement.

4. Pass the Qualifying Examination

Once the Program of Study has been submitted and the Ph.D. Supervisory Committee has been formed, the next steps are to submit a written dissertation proposal to the committee and then make an oral presentation. This will be followed by the Qualifying Examination, which will cover the major areas of study and the student's proposal for the dissertation topic. It will have both written and oral components and will be prepared and graded by the Supervisory Committee. This examination may be taken no more than twice.

In accordance with the Graduate Studies Dates & Deadlines, a written *Notification of Oral Examination/Defense* must be sent to the Graduate Dean at least two weeks prior to exam date. After approval by the Graduate Dean, the Department Chair sends a copy of the notice to the candidate and each member of the committee.

See qualifying examination policies for further details.

5. Complete and Defend a Research Dissertation

Each student must complete and successfully defend a research dissertation, the results of which are publishable in a nationally recognized journal. The dissertation, which must comply with the regulations set forth in the School of Graduate Studies' Thesis and Dissertation Manual, must be approved by the student's Supervisory Committee, the Chair of the Atmospheric Science Department, the Dean of the College of Science, and the Dean of the School of Graduate Studies. A significant portion of the dissertation must be submitted for publication in an approved peer-reviewed journal. All requirements for the Ph.D. must be completed in no more than five years after the student has passed the Qualifying Examination.

In accordance with the Graduate Studies Dates & Deadlines, a written *Notification of Oral Examination/Defense* must be sent to the Graduate Dean at least two weeks prior to defense date. After approval by the Graduate Dean, the Department Chair sends a copy of the notice to the candidate and each member of the committee.

The dissertation defense must be given at least six weeks before the end of the semester in which degree requirements are expected to be completed, and the results reported within two working days to the graduate dean. A student may defend his/her dissertation no more than twice.

The Atmospheric Science Department does not require knowledge of a foreign language, but it does require proficiency in both spoken and written English.

Check List for Ph.D. Program of Study (POS)

	✓	Course	Credits
CORE		541	3
		551	3
		561	3
REQUIRED		509	3
		651	3
		780	1
		781	1
		782	1
ELECTIVE ATS		600+	3
		600+	3
		600+	3
		600+	3
		600+	3
		600+	3
		600+	3
		600+	3
ELECTIVE With approval, may be outside ATS		500/600+	3
		500/600+	3
		500/600+	3
		500/600+	3
THESIS		799	6
		799	6
		799	6