Master of Science in Atmospheric Science

Why study atmospheric science?

The MS program in Atmospheric Science expands the student’s knowledge of fundamental atmospheric processes and how the atmosphere interacts with other parts of the environment. The breadth of the program and the diverse research topics explored by the faculty are able to accommodate students with a wide variety of interests.

Admission to Graduate Studies

An applicant seeking to pursue graduate study in the College may be admitted as either a degree-seeking or non-degree seeking student. Policies and procedures of Graduate Studies govern the process of Graduate admission. These may be found in the Graduate Studies (http://catalog.ku.edu/graduate-studies) section of the online catalog.

Please consult the Departments & Programs (http://catalog.ku.edu/ liberal-arts-sciences) section of the online catalog for information regarding program-specific admissions criteria and requirements. Special admissions requirements pertain to Interdisciplinary Studies degrees, which may be found in the Graduate Studies section of the online catalog.

Graduate Admission

Entering students are expected to have completed an undergraduate degree in a physical science (e.g., physics, chemistry, atmospheric science, oceanography), mathematics, or engineering and studied mathematics, including vector calculus and ordinary differential equations. Courses taken to remedy deficiencies may not count toward graduate degrees. Graduate Record Examination scores (verbal, quantitative, and analytical) are required of all applicants.

Submit your graduate application online (http://graduate.ku.edu/prospective-students). Send all other requested application materials to the geography and atmospheric science department:

The University of Kansas
Department of Geography and Atmospheric Science
Lindley Hall
1475 Jayhawk Blvd., Room 213
Lawrence, KS 66045

Atmospheric Science M.S. Degree Requirements

The purpose of the program is to expand the student’s knowledge of fundamental atmospheric processes and how the atmosphere interacts with other parts of the environment. Students become familiar with quantitative research methods and how these various approaches can be used to address different problems in atmospheric science. Students gain an in depth ability to learn specific skills and apply them toward his/her thesis work. These skills consist of, for example, statistical analysis techniques, numerical modeling, or work with atmospheric instrumentation. The breadth of the program and the diverse research topics explored by the faculty are able to accommodate students with a variety of interests.

Required credit hours:

30 credits 500 level or above.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATMO 710</td>
<td>Atmospheric Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>ATMO 720</td>
<td>Atmospheric Modeling</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 716</td>
<td>Advanced Geostatistics</td>
<td>3</td>
</tr>
<tr>
<td>Two-day (non-credit) orientation before classes begin in the fall semester</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEOG 980</td>
<td>Seminar in Geography: _____ (Colloquium for 1 credit hour during each of the first 2 semesters of residence at KU.)</td>
<td>2</td>
</tr>
<tr>
<td>Select 3 credit hours of electives in atmospheric science electives at the 700 level or above</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Select 6 credit hours of electives at the 500 level or above outside the geography department</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>A maximum of 6 hours of 500- and 600-level atmospheric science courses may be included in the program, excluding ATMO 505</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>ATMO 899</td>
<td>Master's Thesis</td>
<td>4</td>
</tr>
<tr>
<td>Total Hours</td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

Thesis

A master’s thesis is a demonstration of a student’s ability to formulate an atmospheric science research problem, collect and analyze relevant data, synthesize appropriate literature, arrive at logical conclusions, and present the entire exercise in a public academic forum. The thesis should address an original problem of scientific importance, though at the M.S. level, the research will to a significant degree be guided by the faculty advisor.

Thesis proposal

During the second semester in the program, the student must submit to his committee a thesis research plan. All M.S thesis proposals are expected to contain three basic elements:

1. A statement of the research problem or questions to be investigated.
2. A survey of relevant literature and how it relates to the student’s research problem
3. An outline of the general methodology, if not specific techniques, to be utilized in addressing the research problem or answering the basic research questions.

Thesis seminar and defense

Students are required to make a formal presentation to the faculty and fellow students in the form of a research seminar, and subsequently defend orally to their committee the results of their thesis research. Ideally, the final examination takes place immediately following the research seminar, but if necessary the two can be scheduled at separate times.

As part of their research training, graduate students are expected to attend departmental colloquia and seminars.

Details of the regulations on graduate study are included in the department’s Policies for Graduate Study in Atmospheric Science, available on the department’s website (http://atmo.ku.edu). Please also see the Graduate Studies section of the online catalog.