The Department of Atmospheric Sciences offers the Bachelor of Science degree in Meteorology. The undergraduate curriculum in meteorology emphasizes weather and weather forecasting, but also includes courses in climatology, atmospheric chemistry, cloud physics and remote sensing of the atmosphere with radar and satellites. As the curriculum makes clear, the study of these subjects relies on a foundation of physics, chemistry and mathematics. Meteorology also has connections to oceanography and other geosciences disciplines, which may be taken as elective courses.

Students who receive BS degrees in Meteorology often obtain employment with the National Weather Service, private meteorological consulting and weather forecasting companies, air quality consulting firms, airlines, TV stations, energy trading companies, universities, state governments, agricultural firms and computer-related industries. Some students choose to enter the military services as weather officers. Positions in teaching and research normally require a graduate degree.

Students interested in cooperative educational arrangements and internships should contact the department's academic advisor for information.

In the curriculum presented, students are advised to note the prerequisites for the courses in ATMO, which often depend on courses in mathematics, physics or chemistry.

### Program Requirements

#### First Year

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>ATMO 201</td>
<td>Weather and Climate</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CHEM 119</td>
<td>Fundamentals of Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>ENGL 104</td>
<td>Composition and Rhetoric</td>
<td>3</td>
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<tr>
<td></td>
<td>MATH 171</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>or MATH 151</td>
<td>or Engineering Mathematics I</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Semester Credit Hours</td>
<td><strong>14</strong></td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ATMO 203</td>
<td>Weather Forecasting Laboratory</td>
<td>1</td>
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<tr>
<td></td>
<td>CHEM 120</td>
<td>Fundamentals of Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>MATH 172</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>or MATH 152</td>
<td>or Engineering Mathematics II</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PHYS 206</td>
<td>Newtonian Mechanics for Engineering and Science</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PHYS 226</td>
<td>Physics of Motion Laboratory for the Sciences</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>American history</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Semester Credit Hours</td>
<td><strong>16</strong></td>
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</tbody>
</table>

#### Second Year

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>Fall</td>
<td>ATMO 251</td>
<td>Weather Observation and Analysis</td>
<td>3</td>
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<tr>
<td></td>
<td>ATMO 363</td>
<td>Introduction to Atmospheric Chemistry and Air Pollution</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MATH 251</td>
<td>Engineering Mathematics III</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following:

- ATMO 321 Computer Applications in the Atmospheric Sciences
- CSCE 110 Programming I
- CSCE 206 Structured Programming in C

Government/political science (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science) 3

### Third Year

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>ATMO 335</td>
<td>Atmospheric Thermodynamics</td>
<td>3</td>
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<tr>
<td></td>
<td>ATMO 336</td>
<td>Atmospheric Dynamics</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>STAT 211</td>
<td>Principles of Statistics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>American history</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Atmospheric sciences or technical elective</td>
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<td>1</td>
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<tr>
<td></td>
<td></td>
<td>Semester Credit Hours</td>
<td><strong>14</strong></td>
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<tr>
<td></td>
<td>Spring</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ATMO 435</td>
<td>Synoptic-Dynamic Meteorology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>COMM 203</td>
<td>Public Speaking or Communication for Technical Professions</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>or COMM 205</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Language, philosophy and culture</td>
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<td>3</td>
</tr>
<tr>
<td></td>
<td>Atmospheric sciences or technical elective</td>
<td></td>
<td>6</td>
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<td></td>
<td></td>
<td>Semester Credit Hours</td>
<td><strong>16</strong></td>
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#### Fourth Year

<table>
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<tr>
<th>Term</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>ATMO 441</td>
<td>Satellite Meteorology and Remote Sensing</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>or ATMO 443</td>
<td>or Radar Meteorology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ATMO 446</td>
<td>Physical Meteorology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Social and behavioral science</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Atmospheric sciences or technical elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>General elective</td>
<td></td>
<td>3</td>
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<tr>
<td></td>
<td></td>
<td>Semester Credit Hours</td>
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### Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>ATMO 456</td>
<td>Practical Weather Forecasting</td>
<td>3</td>
</tr>
<tr>
<td>Creative arts</td>
<td>(<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts</a>)</td>
<td>3</td>
</tr>
<tr>
<td>General elective</td>
<td>2,3</td>
<td>3</td>
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</tbody>
</table>

**Semester Credit Hours**  
15

**Total Semester Credit Hours**  
120

1 A grade of C or better is required.
3 MLSC, NVSC and AERS courses can be used as general electives if a minor is completed in Military Science. See an academic advisor for more information.
4 All students enter as Lower Level Meterology (METL) until completion of ATMO 335 and ATMO 336 and the associated prerequisite courses. Once students have completed these courses, their major will be changed to Upper Level Meterology (METR), and they will be eligible to take upper-level electives. This change should occur following the fall semester of the junior year.
5 Select in consultation with faculty academic advisor. Select from ATMO 300-499 ([http://catalog.tamu.edu/undergraduate/course-descriptions/atmo/](http://catalog.tamu.edu/undergraduate/course-descriptions/atmo/)) (except ATMO 321); BESC 403; BIOL 111; CHEM 227, CHEM 237; ECCB 308, ECCB 309; GEOG 400-499 ([http://catalog.tamu.edu/undergraduate/course-descriptions/geog/](http://catalog.tamu.edu/undergraduate/course-descriptions/geog/)); GEOS 400-499 ([http://catalog.tamu.edu/undergraduate/course-descriptions/geos/](http://catalog.tamu.edu/undergraduate/course-descriptions/geos/)); MATH 311, MATH 400-499 ([http://catalog.tamu.edu/undergraduate/course-descriptions/math/](http://catalog.tamu.edu/undergraduate/course-descriptions/math/)); OCNG 400-499 ([http://catalog.tamu.edu/undergraduate/course-descriptions/ocng/](http://catalog.tamu.edu/undergraduate/course-descriptions/ocng/)); SCSC 301. Up to 3 hours may be ATMO 484 (Broadcast Internship) and up to 6 hours may be ATMO 484 (NWS Internship). Only 6 hours of 484, 485, and 491 courses may apply towards this requirement.