## REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN METEOROLOGY

**COLLEGE OF ATMOSPHERIC AND GEOGRAPHIC SCIENCES**

**THE UNIVERSITY OF OKLAHOMA**

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### GENERAL REQUIREMENTS

- **Total Credit Hours**: 125-126
- **Total Upper-Division Credit Hours**: 80
- **Minimum Retention/Graduation Grade Point Averages**:
  - Minimum in OU coursework: 2.25
  - Minimum in Major Coursework – Combined and OU: 2.25
  - Overall – Combined and OU: 2.25

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### University-Wide General Education (minimum 40 hours) and College of Atmospheric and Geographic Sciences Requirements

#### Core Area I: Symbolic and Oral Communication (9-19 hours, 3-5 courses)

- **English Composition**: 6 hours, 2 courses
  1. English 1113, Principles of English Composition
  2. English 1213, Principles of English Composition, or EXPO 1213, Expository Writing

#### Core Area II: Natural Science (7 hours, 2 courses including one laboratory component)

- **Science with Lab**: CHEM 1315, General Chemistry
- **Science without Lab**: PHYS 2514, General Physics for Engr. & Science Majors

#### Core Area III: Social Science (6 hours, 2 courses)

- **Political Science**: 1113, American Federal Government
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#### Core Area IV: Humanities (12 hours, 4 courses)

- **Understanding Artistic Forms**: 3 hours, 1 course
  - Western Civilization and Culture: 6 hours, 2 courses
  1. History 1483, U.S., 1492-1865, or History 1493, U.S., 1865-Present
  2. **Non-Western Culture**: 1 hour, 1 course (excluding HIST 1483 and 1493)

- **Western Civilization and Culture**: 6 hours, 2 courses
  1. History 1483, U.S., 1492-1865, or History 1493, U.S., 1865-Present
  2. **Non-Western Culture**: 1 hour, 1 course (excluding HIST 1483 and 1493)

#### Core Area V: Senior Capstone Experience (3 hours, 2 courses)

- METR 4911, Senior Seminar
- METR 4922, Senior Seminar II

At least three hours of Upper-Division General Education coursework must be completed outside the major.

*College of Atmospheric and Geographic Sciences requirements

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### Additional College of Atmospheric and Geographic Sciences Bachelor of Science Requirements:

1. MATH 2924, Differential & Integral Calculus II
2. PHYS 2524, General Physics for Engr. & Science Majors
3. CS 1313, Programming for Non-Majors, or METR 1313, Introduction to Programming for Meteorology

MATH 1823, 2423, and 2433 will also fulfill the College’s calculus requirement.

### Courses required for major support may not also fulfill University-Wide General Education Requirements

#### Core (40 hours, 16 courses)

- **METEOROLOGY COURSES**:
  - 1111 Orientation to Professional Meteorology
  - 2011 Intro. to Meteorology I Lab
  - 2013 Intro. to Meteorology I
  - 2020 Intro. to Meteorology II Lab
  - 2023 Intro. to Meteorology II
  - 3113 Atmospheric Dynamics I: Intro. to Atmospheric Kinematics/Dynamics
  - 3123 Atmospheric Dynamics II: Theory of Atmospheric Flows
  - 3213 Physical Meteorology I: Thermodynamics
  - 3223 Physical Meteorology II: Cloud Physics, Atmos. Electricity/Optics
  - 3613 Meteorological Measurement Systems
  - 4133 Atmospheric Dynamics III: Mid-Latitude Synoptic-Scale Dynamics
  - 4233 Physical Meteorology III: Radiation and Climate
  - 4424 Synoptic Meteorology Lab
  - 4433 Mesoscale Meteorology
  - 4911 Senior Seminar (Capstone)
  - 4922 Senior Seminar II (Capstone)

#### Major Support Requirements

- **MATH**: 2934, Differential & Integral Calc. III, or MATH 2443, Calc. & Analytic Geom. IV
- PHYS 1311, General Physics Lab I
- PHYS 1321, General Physics Lab II
- MATH 3413, Physical Mathematics I
- METR 4313, Statistical Meteorology, or MATH 4753, Applied Statistical Methods

#### Communication Elective: one course from the following:

- COMM 1113, Princ. of Communication
- COMM 2613, Public Speaking
- ENGL 3153, Technical Writing
- EXPO 1223, Expository Writing
- GEOL 3333, Geoswriting
- METR 3980, Honors Research
- JMC 2033, Writing for Mass Media

#### Science Elective: one course from the following:

- AGSC 1013, Extreme Weather & Climate
- AGSC/GEOL 2014, The Earth System
- GEOG 1114, Physical Geography
- BIOL 1114, Introductory Zoology
- CHEM 1514, General Chemistry
- CHEM 1614, General Chemistry
- BIOL 1114, General Botany

#### Free Electives

- Electives to bring total applicable hours to 125-126 including 52 upper-division hours.

- Electives may be used to fulfill the requirements for a minor, if desired, but must include at least nine hours of upper-division coursework.

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OU encourages students to complete at least 32 hours of applicable coursework each year to have the opportunity to graduate in four years.

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*For Students Entering the Oklahoma State System for Higher Education: Summer 2017 through Spring 2018*

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**Meteorology**

**B685**

Bachelor of Science in Meteorology
A minimum of two semesters must be spent in residence in the College of Atmospheric and Geographic Sciences.

At least 36 of the last 48 hours must be completed in residence at OU.

RESIDENCY:
- A minimum of two semesters must be spent in residence in the College of Atmospheric and Geographic Sciences.
- At least 36 of the last 48 hours must be completed in residence at OU.

INDIVIDUAL STUDIES: No more than six hours of independent study or directed readings may be applied toward degree requirements.

GRADE POINT AVERAGES: Students must earn a minimum overall 2.25 for each of the following: Combined Retention GPA (all college grades), OU Retention GPA, GPA for all major courses, and GPA for all major courses taken at OU.

Refer to the OU General Catalog for more complete information.

Suggested Semester Plan of Study — Bachelor of Science in Meteorology (B685)

This plan shows one possible grouping of courses that would allow students to graduate in four years. Please refer to the front of the degree checksheet for official requirements. Students must consult with College of Atmospheric and Geographic Sciences and/or School of Meteorology academic advisers to verify that courses selected each semester fulfill the recommended plan and satisfy university, College of Atmospheric & Geographic Sciences, and Meteorology major requirements.

<table>
<thead>
<tr>
<th>Year</th>
<th>FIRST SEMESTER</th>
<th>SECOND SEMESTER</th>
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<tbody>
<tr>
<td>FRESHMAN</td>
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<tr>
<td>ENGL 1113, Principles of English Composition (Core I)</td>
<td>3</td>
<td>ENGL 1213, Principles of English Composition (Core I), or MATH 1213, Expository Writing (Core I)</td>
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<tr>
<td>MATH 1914, Differential &amp; Integral Calculus I (Core I)</td>
<td>4</td>
<td>MATH 2924, Differential &amp; Integral Calculus II (Core I)</td>
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<td>CHEM 1315, General Chemistry (Core II)</td>
<td>5</td>
<td>PHYS 1311, General Physics Laboratory I</td>
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<tr>
<td>HIST 1483 or 1493, U.S. (Core IV)</td>
<td>3</td>
<td>PHYS 2514, General Physics for Engr. &amp; Science (Core II)</td>
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<tr>
<td>METR 1111, Orientation to Professional Meteorology</td>
<td>1</td>
<td>P SC 1113, American Federal Government (Core III)</td>
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<tr>
<td><strong>TOTAL CREDIT HOURS</strong></td>
<td>16</td>
<td><strong>TOTAL CREDIT HOURS</strong></td>
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| SOPHOMORE | | |
| MATH 2934, Differential & Integral Calculus III | 4 | CS 3131, Programming for Non-Majors, or METR 3313 |
| METR 2011, Intro. to Meteorology I Laboratory | 1 | METR 2021, Intro. to Meteorology II Laboratory |
| METR 2013, Introduction to Meteorology | 3 | METR 2023, Introduction to Meteorology II |
| PHYS 2524, General Physics for Engr. & Science Majors | 4 | General Education Western Civilization & Culture (Core IV) |
| PHYS 3121, General Physics Laboratory II | 3 | One of the following: AGSC 1013; AGSC 2014; GEOG 1114; GEOG 2014; ASTR 1504; BOT 1114; CHEM 1415; or GEOG 2014 |
| General Education Understanding Artistic Forms (Core IV) | 3 | General Education Social Sciences (Core III) |
| **TOTAL CREDIT HOURS** | 16 | **TOTAL CREDIT HOURS** | 17-18 |

| JUNIOR | | |
| MATH 3413, Physical Mathematics I | 3 | METR 3123, Atmospheric Dynamics II: Theory of Atmos. Flows |
| METR 3113, Atmospheric Dynamics I: Atmos. Kinematics/Dynamics | 3 | METR 3223, Physical Meteorology II: Cloud Physics, Atmospheric Electricity and Optics |
| METR 3213, Physical Meteorology I: Thermodynamics | 3 | Free Elective |
| METR 3613, Meteorological Measurements | 3 | General Education Non-Western Culture (Core IV) |
| Writing/Communications Elective — One of the following: COMM 1113; COMM 2613; ENGL 3153; GEOG 3333; MJC 2033; or HON 3980, Honors Research (must be in the Honors College) | 3 | **TOTAL CREDIT HOURS** | 15 |
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| SENIOR | | |
| METR 4911, Senior Seminar (Capstone) | 1 | METR 4433, Mesoscale Meteorology/METR 4922, Senior Seminar II (Capstone) |
| 1 of the following 2: | 3 | Meteorology, Hydrology or Climatology Upper-Division Elective |
| METR 4331, Statistical Meteorology, or MATH 4753, Applied Statistical Methods | 3 | Upper-Division Elective |
| METR 4133, Atmospheric Dynamics II: Mid-Latitude Synoptic Scale Dynamics | 3 | Upper-Division Elective |
| METR 4233, Physical Meteorology III: Radiation & Climate | 3 | **TOTAL CREDIT HOURS** | 17 |
| METR 4424, Synoptic Meteorology Laboratory | 4 | **TOTAL CREDIT HOURS** | 14 |
| Upper-Division Elective | 2 | | |
| **TOTAL CREDIT HOURS** | 17 | | |

• Students who have not completed two years of the same foreign language in high school are required to take two college courses in the same foreign language. This additional coursework may add 6-10 hours to the minimum hours required for graduation.

• To be chosen from the University-Wide General Education Approved Course List for Core III (Social Science) and Core IV (Humanities). At least three hours must be upper-division outside the major.

• Students must attain a grade of C or better in all MATH, PHYS, and CS, and in METR courses that are direct prerequisites for other METR courses.

NOTE: No more than 52 hours of Meteorology coursework may be taken to fulfill the 125-126 minimum credit hours required.

Bachelor’s degrees require a minimum of 48 hours of upper-division (3000-4000) coursework.

This plan of study should not be used in lieu of academic advisement.

<table>
<thead>
<tr>
<th>Computer Science Area of Concentration</th>
<th>Minor in Broadcast Meteorology</th>
<th>Additional Minors</th>
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<tbody>
<tr>
<td>The School of Meteorology has joined with the School of Computer Science in the College of Engineering to provide an Area of Concentration within the meteorology curriculum for students interested in further developing their skills in the use of computers in science, engineering, and business. Additional information is available from your faculty adviser.</td>
<td>The College of Journalism and Mass Communication offers a minor in Broadcast Meteorology for meteorology majors interested in careers in broadcast media. Seventeen hours in communication and journalism courses are required. Additional information is available from your faculty adviser.</td>
<td>Minors in Mathematics, Business, Chemistry, Computer Science, Environmental Science, Geography, Geology, Hydrologic Science, Interdisciplinary Perspectives on the Environment, and Physics</td>
</tr>
</tbody>
</table>

Minors in mathematics, business, chemistry, computer science, environmental science, geography, geology, hydrologic science, interdisciplinary perspectives on the environment, and physics are available and students are encouraged to consider one or more of these minors. Students may obtain a minor in mathematics by taking one additional 4000+ MATH course in addition to those required in the curriculum. Additional information is available from your faculty adviser or from the Atmospheric and Geographic Sciences Dean’s Office, National Weather Center, Room 3630.