

REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN METEOROLOGY

COLLEGE OF ATMOSPHERIC AND GEOGRAPHIC SCIENCES

THE UNIVERSITY OF OKLAHOMA

For Students Entering the Oklahoma State System for Higher Education:

**Summer 2013 through
Spring 2014**

GENERAL REQUIREMENTS

Total Credit Hours **125-126**
 Total Upper-Division Credit Hours **52**
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**

Meteorology

B685

Bachelor of Science in
Meteorology

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

GENERAL EDUCATION AND COLLEGE REQUIREMENTS

Courses graded P/NP will not apply.

Courses for fulfillment of General Education and College of Atmospheric & Geographic Sciences requirements must be from the approved General Education course list at http://www.ou.edu/enrollment/home/classes_offered/general_education.html.

University-Wide General Education (minimum 40 hours) and College of Atmospheric and Geographic Sciences Requirements Courses graded P/NP will not apply

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

A. 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

B. Foreign Language (0-10 hours in the same language)

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.

1. Beginning Course (0-5 hours) _____
2. Beginning Course, continued (0-5 hours) _____

C. Mathematics (3 hours, 1 course). ***MATH 1823**, Calculus & Analytic Geometry I

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

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

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

1. Political Science 1113, American Federal Government
2. _____

Core Area IV: Humanities (12 hours, 4 courses)

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

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

1. **METR 4911**, Senior Seminar
2. **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

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

1. **MATH 2423**, Calculus & Analytic Geometry II (carries General Educ. credit)
2. **MATH 2433**, Calculus & Analytic Geometry III
3. **MATH 2443**, Calculus & Analytic Geometry IV
4. **PHYS 2524**, General Physics for Engr. & Science Majors
5. **C S 1313**, Programming for Non-Majors, **or**
METR 1313, Introduction to Programming for Meteorology

MATH 1914, 2924, and 2934 will also fulfill the College's calculus requirement.

Courses required for the major or major support may **not** also fulfill University-Wide General Education Requirements

MAJOR REQUIREMENTS

CORE (40 hours, 16 courses)

METEOROLOGY COURSES

- | | | |
|------|---|---|
| 1111 | Orientation to Professional Meteorology | 1 |
| 2011 | Intro. to Meteorology I Lab | 1 |
| 2013 | Intro. to Meteorology I | 3 |
| 2021 | Intro. to Meteorology II Lab | 1 |
| 2023 | Intro. to Meteorology II | 3 |
| 3113 | Atmospheric Dynamics I: Intro. to Atmospheric Kinematics/Dynamics | 3 |
| 3123 | Atmospheric Dynamics II: Theory of Atmospheric Flows | 3 |
| 3213 | Physical Meteorology I: Thermodynamics | 3 |
| 3223 | Physical Meteorology II: Cloud Physics, Atmos. Electricity/Optics | 3 |
| 3613 | Meteorological Measurement Systems | 3 |
| 4133 | Atmospheric Dynamics III: Mid-Latitude Synoptic-Scale Dynamics | 3 |
| 4233 | Physical Meteorology III: Radiation and Climate | 3 |
| 4424 | Synoptic Meteorology Lab | 4 |
| 4433 | Mesoscale Meteorology | 3 |
| 4911 | Senior Seminar (Capstone) | 1 |
| 4922 | Senior Seminar II (Capstone) | 2 |

Meteorology, Hydrology or Climatology upper-division elective:

_____ 3

MAJOR SUPPORT REQUIREMENTS

- | | | |
|---|---|---|
| PHYS 1311 | General Physics Lab I | 1 |
| PHYS 1321 | General Physics Lab II | 1 |
| MATH 3413 | Physical Mathematics I | 3 |
| METR 4313 | Statistical Meteorology, or | 3 |
| MATH 4753 | Applied Statistical Methods | |
| Communication Elective: one course from the following: | | |
| COMM1113 | Princ. of Communication | |
| COMM2613 | Public Speaking | |
| ENGL 3153 | Technical Writing, or | |
| EXPO 1223 | Expository Writing | |
| GEOL 3333 | Geowriting | |
| METR 3980 | Honors Research | |
| JMC 2033 | Writing for Mass Media | |
| _____ | | 3 |
| Science Elective: one course from the following: | | |
| AGSC 1013 | Extreme Weather & Climate | |
| AGSC/GEOL 2014 | The Earth System | |
| GEOL 1114 | Physical Geology | |
| ASTR 1504 | General Astronomy | |
| ASTR 1514 | Astronomy: Exploring the Universe, with Lab | |
| BIO 1114 | Introductory Zoology | |
| CHEM 1415 | General Chemistry (cont.) | |
| GEOG 1114 | Physical Geography | |
| PBIO 1114 | General Botany | |

_____ 4-5

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.

INFORMATION CONCERNING GENERAL RULES, REGULATIONS AND MINIMUM REQUIREMENTS

TOTAL HOURS: A minimum of 125-126 semester hours acceptable toward graduation must be completed.

UPPER-DIVISION HOURS: A minimum of 48 upper-division semester hours acceptable toward graduation must be completed. OU courses numbered 3000 or above are upper-division. Transfer work is counted as lower-division or upper-division credit depending on the level at which it was offered at the institution where it was earned. Two-year college work is accepted only as lower-division credit.

SENIOR INSTITUTION HOURS: A minimum of 60 semester hours applied toward graduation must be earned at senior (4-year) institutions.

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.

Year	FIRST SEMESTER	Hours	SECOND SEMESTER	Hours
FRESHMAN	ENGL 1113, Principles of English Composition (Core I)	3	ENGL 1213, Principles of English Composition (Core I), or	3
	² MATH 1823, Calculus & Analytic Geometry I (Core I)	3	EXPO 1213, Expository Writing (Core I)	
	CHEM 1315, General Chemistry (Core II)	5	² MATH 2423, Calculus & Analytic Geometry II (Core I)	3
	HIST 1483 or 1493, U.S. (Core IV)	3	² C S 1313, Programming for Non-Majors, or	3
	METR 1111, Orientation to Professional Meteorology	1	METR 1313, Introduction to Programming for Meteorology	
			PHYS 1311, General Physics Laboratory I	1
			² PHYS 2514, General Physics for Engr. & Science (Core II)	4
			P SC 1113, American Federal Government (Core III)	3
	TOTAL CREDIT HOURS	15	TOTAL CREDIT HOURS	17
SOPHOMORE	² MATH 2433, Calculus & Analytic Geometry III	3	² MATH 2443, Calculus & Analytic Geometry IV	3
	² METR 2011, Intro. to Meteorology I Laboratory	1	² METR 2021, Intro. to Meteorology II Laboratory	1
	² METR 2013, Introduction to Meteorology I	3	² METR 2023, Introduction to Meteorology II	3
	² PHYS 2524, General Physics for Engr. & Science Majors	4	¹ General Education Western Civilization & Culture (Core IV)	3
	PHYS 1321, General Physics Laboratory II	1	One of the following: AGSC 1013; AGSC 2014; GEOG 1114; GEOL 2014; GEOL 1114; ASTR 1504; ASTR 1514; BOT 1114; CHEM 1415; or ZOO 1114	4-5
	¹ General Education Understanding Artistic Forms (Core IV)	3	¹ General Education Social Sciences (Core III)	3
	TOTAL CREDIT HOURS	15	TOTAL CREDIT HOURS	17-18
JUNIOR	² MATH 3413, Physical Mathematics I	3	² METR 3123, Atmospheric Dynamics II: Theory of Atmos. Flows	3
	² METR 3113, Atmospheric Dynamics I: Atmos. Kinematics/Dynamics	3	² METR 3223, Physical Meteorology II: Cloud Physics, Atmospheric Electricity and Optics	3
	² METR 3213, Physical Meteorology I: Thermodynamics	3	Free Elective	3
	METR 3613, Meteorological Measurements	3	Free Elective	3
	Writing/Communications Elective — One of the following: COMM 1113; COMM 2613; ENGL 3153; GEOL 3333; JMC 2033; or HON 3980, Honors Research (must be in the Honors College)	3	General Education Non-Western Culture (Core IV)	3
	TOTAL CREDIT HOURS	15	TOTAL CREDIT HOURS	15
SENIOR	² METR 4911, Senior Seminar (Capstone)	1	METR 4433, Mesoscale Meteorology	3
	1 of the following 2: METR 4313, Statistical Meteorology, or MATH 4753, Applied Statistical Methods	3	METR 4922, Senior Seminar II (Capstone)	2
	² METR 4133, Atmospheric Dynamics III: Mid-Latitude Synoptic-Scale Dynamics	3	Meteorology, Hydrology or Climatology Upper-Division Elective	3
	² METR 4233, Physical Meteorology III: Radiation & Climate	3	Upper-Division Free Elective	3
	² METR 4424, Synoptic Meteorology Laboratory	4	Upper-Division Free Elective	3
Upper-Division Free Elective	3			
	TOTAL CREDIT HOURS	17	TOTAL CREDIT HOURS	14

• 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.

¹ 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.**

² Students must attain a grade of C or better in all MATH, PHYS, and C S, 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.

Computer Science Area of Concentration	Minor in Broadcast Meteorology	Additional Minors
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.	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.	Minors in Mathematics, Business, Chemistry, Computer Science, Environmental Science, Geography, Geology, Hydrologic Science, Interdisciplinary Perspectives on the Environment, and Physics 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.