

Name: _____

Catalog: _____

Curriculum and Recommended Schedule --- B.S. in METEOROLOGY

FALL Semester		First Year	SPRING Semester	
METR 1102 Introduction to Meteorology	3	MATH 1242 Calculus II (≥ C)	3	
METR 1102L Introduction to Meteorology - Lab	1	PHYS 2101 Physics for Science I (≥ C)	3	
METR 1600 First-Year Meteorology Seminar	1	PHYS 2101L Physics for Science I - Lab	1	
MATH 1241 Calculus I (≥ C)	3	1501 Global - Social Science (Recommend: ESCI 1501)	3	
CHEM 1251 Principles of Chemistry	3	1502 Global - Arts Humanities	3	
CHEM 1251L Principles of Chemistry Lab	1	1511 Local - Social Science	3	
WRDS 1103 or 1104 Writing and Inquiry	3			
Fall Semester Total		15	Spring Semester Total	
			16	

Second Year	
METR 3140 Fundamentals of Meteorology (≥ C)	3
ESCI 3101 Global Environmental Change	3
MATH 2241 Calculus III	3
PHYS 2102 Physics for Science II	3
PHYS 2102L Physics for Science II - Lab	1
General Elective	3
Fall Semester Total	
16	
METR 3210 Atmospheric Thermodynamics (≥ C)	3
METR 4105 Meteorological Computer Apps (≥ C)	3
MATH 2171 Differential Equations	3
1512 Local - Arts Humanities	3
CTCM 2530 Critical Thinking Communication	3
Spring Semester Total	
15	

Third Year	
METR 3245 Synoptic Meteorology (≥ C)	4
METR 3220 Physical Meteorology	3
STAT 2122 Intro to Probability and Statistics *	3
General Elective	2
FORL 1201 (or proficiency)	3
Fall Semester Total	
15	
METR 3250 Dynamic Meteorology (≥ C)	3
METR 4205 Climate Dynamics	3
METR 4650 Meteorology Professional Seminar	1
General Elective	3
FORL 1202 (or proficiency)	3
Spring Semester Total	
13	

Fourth Year	
METR 4245 Adv Synoptic Meteorology	3
METR 4250 Adv Dynamic Meteorology	3
Restricted Major Elective **	3
General Elective	3
General Elective	3
General Elective	3
Fall Semester Total	
15	
Restricted Major Elective **	3
Restricted Major Elective **	3
General Elective	3
General Elective	3
General Elective	3
Spring Semester Total	
15	

B.S. Meteorology Requirement	
General Education Requirement	Red

BS Meteorology Degree total hours	73
UNCC Required Degree total hours	120

Restricted Major Electives - Typical Fall Offerings	
METR 4110 Atmospheric Instrumentation **	3
METR 4320 Tropical Meteorology	3
ESCI 3220 Air Quality	3
ESCI 4201 Hydroclimatology	3
ESCI 4140 Hydrologic Processes	4
ESCI 4170 Fundamentals of Remote Sensing	4
ESCI 3105 Oceanography	3
GEOG 4110 GIS for Non-Majors	3

Restricted Major Electives - Typical Spring Offerings	
METR 3330 Weather Forecasting ***	3
METR 3340 Weather Communications	3
METR 4350 Mesoscale Meteorology ***	3
ESCI 3205 Water Resources	3
ESCI 4122 Statistics & Data Analysis in Earth Sciences	4
ESCI 4155 Fluvial Processes	4
ESCI 4220 Atmospheric Chemistry	3
ESCI 4222 Watershed Science	3
GEOG 3215 Environmental Planning	3

NOTE: This advising sheet is valid for students who declared as a major in the **Fall 2024 term or later.**

* Acceptable Alternatives include STAT 3122, MATH 3122, or ESCI 4122 Statistics and Data Analysis in the Earth Sciences

** Students interested in employment as a **broadcast meteorologist** (e.g., TV stations) or with the **federal government** (e.g., the National Weather Service) **must take** METR 4110 Atmospheric Instrumentation

*** METR 3330 Weather Forecasting and METR 4350 Mesoscale Meteorology are taught in alternate spring semesters

Bachelors of Science in Meteorology

Required Departmental Courses

Course #	Course Title	Hours	Prerequisites
METR 1102	Introduction to Meteorology + Lab	4	
METR 1600	First-Year Meteorology Seminar	1	Declared as a Meteorology major and fewer than 60 credits
ESCI 3101	Global Environmental Change	3	METR 1102 or ESCI 1101
METR 3140	Fundamentals of Meteorology	3	METR 1102 or ESCI 1101
METR 3210	Atmospheric Thermodynamics	3	METR 3140 with C or better, MATH 1242 (Pre or Co)
METR 3220	Physical Meteorology	3	METR 3210 with C or better
METR 3245	Synoptic Meteorology + Lab	4	METR 3210 with C or better
METR 3250	Dynamic Meteorology	3	METR 3245 with C or better, MATH 1242, PHYS 2101
METR 4105	Meteorological Computer Applications	3	METR 3140 with C or better, MATH 1241
METR 4205	Climate Dynamics	3	METR 4105 and ESCI 3101 with D or better
METR 4245	Advanced Synoptic Meteorology	3	METR 3250 with C or better
METR 4250	Advanced Dynamic Meteorology	3	METR 3250 with C or better, MATH 2171, MATH 2241
METR 4650	Meteorology Seminar (O)	1	METR 3245

Major Elective Courses (9 total credits - select from list below)

Course #	Course Title	Hours	Prerequisites
ESCI 3105	Oceanography	3	ESCI 1101 and GEOL 1200 (or instructor permission)
ESCI 3205	Water Resources	3	ESCI 2222 (or instructor permission)
ESCI 3220	Air Quality	3	ESCI 3101 or ESCI 3222
ESCI 4140	Hydrologic Processes + Lab	4	ESCI 1101+L or GEOL 1200+L
ESCI 4155	Fluvial Processes + Lab	4	ESCI 1101+L or GEOL 1200+L
ESCI 4170	Fundamentals of Remote Sensing	4	METR 1102 or ESCI 1101, and GEOL 1200
ESCI 4201	Hydroclimatology	3	ESCI 3101
ESCI 4222	Watershed Science	3	ESCI 4140 or ESCI 4155
GEOG 3120	Fundamentals of GIS	4	GEOG 1103 or ESCI 2210 (or instructor permission)
GEOG 4110	GIS for Non-Majors	3	
METR 3330	Weather Forecasting (W)	3	METR 3245
METR 3340	Weather Communications	3	METR 3245 (Pre or Co)
METR 4000	Topics in Meteorology	1-4	METR 3140
METR 4110	Atmospheric Instrumentation	3	METR 3210 with C or better
METR 4240	Boundary Layer Meteorology	3	METR 3210
METR 4320	Tropical Meteorology	3	METR 3250
METR 4350	Mesoscale Meteorology	3	METR 3250 (Pre or Co)
METR 4400	Internship in Meteorology	3-6	
METR 4800	Individual Study in Meteorology	1-4	

Required Extra-Departmental Courses

Course #	Course Title	Hours	Prerequisites
CHEM 1251	Principles of Chemistry + Lab	4	
MATH 1241	Calculus I	3	
MATH 1242	Calculus II	3	MATH 1241 with C or better
MATH 2171	Differential Equations	3	MATH 1241 with C or better
MATH 2241	Calculus III	3	MATH 1241 with C or better
PHYS 2101	Physics for Science I + Lab	4	MATH 1241 with C or better
PHYS 2102	Physics for Science II + Lab	4	PHYS 2101 and MATH 1242 with grades C or better
STAT 2122	Intro to Probability and Statistics	3	MATH 1242

Recommendations for Elective Courses

1. WEATHER FORECASTING – NATIONAL WEATHER SERVICE and PRIVATE COMPANIES

- a. METR 3330 Weather Forecasting
- b. METR 4110 Atmospheric Instrumentation
- c. METR 4320 Tropical Meteorology
- d. METR 4350 Mesoscale Meteorology
- e. ESCI 4201 Hydroclimatology
- f. GIS Course (GEOG 3120 or GEOG 4110)

Using general electives to complete **all** suggested courses is recommended. A formal internship with, or volunteering for, an NWS forecast office is highly recommended to increase employment chances.

2. WEATHER FORECASTING – BROADCAST METEOROLOGY

- a. METR 3330 Weather Forecasting (W)
- b. METR 3340 Weather Communications
- c. METR 4110 Atmospheric Instrumentation
- d. METR 4320 Tropical Meteorology
- e. METR 4350 Mesoscale Meteorology
- f. ESCI 3220 Air Quality
- g. ESCI 4201 Hydroclimatology

Using general electives for communications courses may increase your chances for employment. An internship with a television or radio station is highly recommended to increase employment chances.

3. CLIMATE ANALYSIS or ENVIRONMENTAL MONITORING

- a. ESCI 3205 Water Resources
- b. ESCI 3220 Air Quality
- c. ESCI 4122 Statistics and Data Analysis in Earth Sciences
- d. ESCI 4140 Hydrologic Processes
- e. ESCI 4155 Fluvial Processes
- f. ESCI 4170 Fundamentals of Remote Sensing
- g. ESCI 4201 Hydroclimatology
- h. METR 4110 Atmospheric Instrumentation
- i. METR 4240 Boundary Layer Meteorology
- j. GIS Course (GEOG 3120 or GEOG 4110)

Using general electives to complete **all** suggested courses is recommended. A formal internship with, or volunteering for, an environmental firm is highly recommended to increase employment chances.

4. GRADUATE STUDIES or RESEARCH

- a. ESCI 3220 Air Quality
- b. ESCI 4122 Statistics and Data Analysis in Earth Sciences
- c. ESCI 4201 Hydroclimatology
- d. METR 3330 Weather Forecasting
- e. METR 4110 Atmospheric Instrumentation
- f. METR 4320 Tropical Meteorology
- g. METR 4350 Mesoscale Meteorology
- h. GIS Course (GEOG 3120 or GEOG 4110)
- i. Additional coursework in *earth sciences, geography, geology, mathematics, chemistry, physics, statistics, and/or computer science*

Using general electives to complete as many of the suggested courses as possible is recommended. Participation in a Research Experience for Undergraduates (REU) or any other research-related activity is highly advantageous for acceptance into meteorology or atmospheric science graduate programs.