

Name: _____

Date: _____

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

FALL Semester		First Year	SPRING Semester	
MATH 1241 Calculus I	3	MATH 1242 Calculus II	3	
CHEM 1251 Principles of Chemistry	3	LBST 11xx Arts and Society Elective	3	
CHEM 1251L Principles of Chemistry Lab	1	LBST 2101 Western Culture and History	3	
UWRT 1101 English Composition	3	UWRT 1102 Academic Writing	3	
ESCI 1101 Earth Sciences - Geography	3	PHYS 2101 Physics for Science I	3	
ESCI 1101L Earth Sciences - Geography Lab	1	PHYS 2101L Physics for Science I - Lab	1	
Fall Semester Total		14	Spring Semester Total	
			16	

Fall Semester		Second Year	Spring Semester	
METR 3140 Fundamentals of Meteorology ***	3	METR 3210 Atmospheric Thermodynamics	3	
ESCI 3101 Global Environmental Change	3	METR 4105 Meteorological Computer Apps	3	
MATH 2241 Calculus III	3	MATH 2171 Differential Equations	3	
PHYS 2102 Physics for Science II	3	Social Science Elective *	3	
PHYS 2102L Physics for Science II - Lab	1	LBST 2102 Global Connections	3	
Fall Semester Total		13	Spring Semester Total	
			15	

Fall Semester		Third Year	Spring Semester	
METR 3245 Synoptic Meteorology	4	METR 3250 Dynamic Meteorology	3	
METR 3220 Physical Meteorology	3	METR 4205 Climate Dynamics	3	
STAT 2122 Intro to Prob and Stats	3	Major Elective **	3	
FORL 1201 (or proficiency)	4	FORL 1202 (or proficiency)	4	
General Elective	2	LBST 22xx Liberal Studies Elective	3	
Fall Semester Total		16	Spring Semester Total	
			16	

Fall Semester		Fourth Year	Spring Semester	
METR 4245 Adv Synoptic Meteorology	3	Major Elective **	3	
METR 4250 Adv Dynamic Meteorology	3	Writing (W) Comm Elective (METR 3330)	3	
Major Elective **	3	Oral (O) Comm Elective (ESCI 4600)	1	
Writing (W) Comm Elective (GEOG 3215)	3	General Elective	4	
General Elective	3	General Elective	4	
Fall Semester Total		15	Spring Semester Total	
			15	

BS Meteorology Requirement	
General Education Requirement	Red

BS Meteorology Degree total hours	71
CLAS Required Degree total hours	120

Approved Major Electives - Fall Offerings	
METR 4110 Atmospheric Instrumentation **	3
METR 4240 Boundary-Layer Meteorology	3
METR 4320 Tropical Meteorology	3
ESCI 3105 Oceanography	3
ESCI 4140 Hydrologic Processes	4
ESCI 4170 Fundamentals of Remote Sensing **	4
GEOG 3190 Biogeography	3
GEOG 3215 Environmental Planning (W)	3
GEOG 4110 GIS for Non-Majors #	3
GEOG 4131 Environmental Modeling with GIS	4
GEOG 4132 Spatial Modeling in GIS	4
GEOG 4215 Urban Ecology	3
GEOL 4105 Geomorphology	4

Approved Major Electives - Spring Offerings	
METR 3330 Weather Forecasting (W)	3
METR 3340 Weather Communications	3
METR 4150 Applied Climatology (W)	3
METR 4220 Atmospheric Chemistry	3
METR 4350 Mesoscale Meteorology	3
ESCI 3205 Water Resources	3
ESCI 4155 Fluvial Processes	4
ESCI 4222 Watershed Science	3
ESCI 4180 Digital Image Processing in Rem Sens	4
GEOG 3215 Environmental Planning (W)	3
GEOG 4110 GIS for Non-Majors #	3
GEOG 4150 Spatial Databases in GIS	4
GEOG 4216 Landscape Ecology	3

* One of the following courses: ANTH 1101, ECON 1101, ECON 2101, GEOG 1105, POLS 1110, or SOCY 1101

*** METR 3140 Fundamentals of Meteorology is also offered during Summer Session I

Students interested in taking multiple GIS courses must first take GEOG 4110 GIS for Non-Majors

** Students interested in employment with the federal government (e.g., National Weather Service) should take either METR 4110 (Atmospheric Instrumentation) or ESCI 4170 (Fundamentals of Remote Sensing)

** See the next page for suggested electives if you are interested in (1) a weather forecasting career, (2) a broadcast meteorology career, (3) an environmental monitoring career, or (4) preparation for graduate studies

Recommendations for Elective Courses

1. NATIONAL WEATHER SERVICE and PRIVATE COMPANIES

- a. ESCI 4140 Hydrologic Processes
- b. ESCI 4170 Fundamentals of Remote Sensing
- c. METR 3330 Weather Forecasting (W)
- d. METR 4110 Atmospheric Instrumentation
- e. METR 4150 Applied Climatology (W)
- f. METR 4240 Boundary Layer Meteorology
- g. METR 4320 Tropical Meteorology
- h. METR 4350 Mesoscale Meteorology

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

2. 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. Additional courses in communication, journalism, writing and/or speech
- g. Additional courses in publishing and/or broadcast media

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. ENVIRONMENTAL MONITORING

- a. ESCI 3205 Water Resources
- b. ESCI 4140 Hydrologic Processes
- c. ESCI 4170 Fundamentals of Remote Sensing
- d. METR 4220 Atmospheric Chemistry
- e. METR 4240 Boundary Layer Meteorology
- f. METR 4150 Applied Climatology (W)
- g. GEOG 3190 Biogeography
- h. GEOG 4125 Urban Ecology
- i. GEOG 4126 Landscape Ecology

Using general electives to complete **all** of the 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 4140 Hydrologic Processes
- b. ESCI 4170 Fundamentals of Remote Sensing
- c. METR 3330 Weather Forecasting (W)
- d. METR 4110 Atmospheric Instrumentation
- e. METR 4150 Applied Climatology (W)
- f. METR 4220 Atmospheric Chemistry
- g. METR 4240 Boundary Layer Meteorology
- h. METR 4320 Tropical Meteorology
- i. METR 4350 Mesoscale Meteorology
- j. 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.

Bachelors of Science in Meteorology

Required Departmental Courses

Course #	Course Title	Hours	Prerequisites
ESCI 1101	Earth Sciences - Geography	3	
ESCI 1101L	Earth Sciences - Geography Lab	1	
ESCI 3101	Global Environmental Change	3	ESCI 1101
METR 3140	Fundamentals of Meteorology	3	ESCI 1101+L
METR 3210	Atmospheric Thermodynamics	3	METR 3140 with C or better, MATH 1241
METR 3220	Physical Meteorology	3	METR 3210 with C or better, CHEM 1251
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 with C or better, ESCI 3101, METR 3250 (Pre or Co)
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

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

Course #	Course Title	Hours	Prerequisites
ESCI 3105	Oceanography	3	ESCI 1101+L or GEOL 1200+L
ESCI 3205	Water Resources	3	ESCI 1101+L or GEOL 1200+L
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	ESCI 1101+L or GEOL 1200+L
ESCI 4180	Digital Image Processing in Remote Sensing	4	ESCI 4170
ESCI 4222	Watershed Science	3	ESCI 4140 or ESCI 4155
GEOG 3190	Biogeography	3	ESCI 1101 or BIOL 2120
GEOG 3215	Environmental Planning (W)	3	
GEOG 4110	GIS for Non-Majors	3	
GEOG 4131	Environmental Modeling with GIS	4	GEOG 4110 and/or permission of the instructor
GEOG 4132	Spatial Modeling with GIS	4	GEOG 4110 and/or permission of the instructor
GEOG 4150	Spatial Databases with GIS	4	GEOG 4110 and/or permission of the instructor
GEOG 4215	Urban Ecology	3	
GEOG 4216	Landscape Ecology	3	
GEOL 4105	Geomorphology	4	ESCI 1101+L or GEOL 1200+L
METR 3330	Weather Forecasting (W)	3	METR 3245
METR 3340	Weather Communications	3	METR 3245 (Pre or Co)
METR 4110	Atmospheric Instrumentation	3	METR 3210
METR 4150	Applied Climatology (W)	3	METR 3250
METR 4220	Atmospheric Chemistry	3	MATH 1242, CHEM 1251
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)

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
MATH 2171	Differential Equations	3	MATH 1242
MATH 2241	Calculus III	3	MATH 1242
PHYS 2101	Physics for Science I + Lab	4	MATH 1241
PHYS 2102	Physics for Science II + Lab	4	PHYS 2101, MATH 1242
STAT 2122	Intro to Probability and Statistics	3	MATH 1242

**ADVISING WORKSHEET UNC CHARLOTTE
GENERAL EDUCATION PROGRAM**

I. Development of Fundamental Skills of Inquiry		Credit Hours	Courses taken
Basic writing skills	Either <i>UWRT</i> 1101 or <i>UWRT</i> 1103	3	
Basic writing skills	<i>UWRT</i> 1102 (students who take <i>UWRT</i> 1103 do not have to take <i>UWRT</i> 1102)	0-3	
Mathematics and logical reasoning	<i>MATH</i> 1xxx	3	
Mathematics and logical reasoning	One of the following: <i>MATH</i> 1xxx, <i>STAT</i> 1xxx, or <i>PHIL</i> 2105	3	

II. Inquiry in the Sciences		Credit Hours	Courses taken
Life sciences and/or physical sciences	Two of the following, and one of them must be with a lab: <i>ANTH</i> 2141; <i>BIOF</i> 1101; <i>BIOL</i> 1110, 1115; <i>CHEM</i> 1111, 1112, 1200, 1203, 1204, 1251, 1252; <i>ESCI</i> 1101; <i>GEOG</i> 1103; <i>GEOL</i> 1200, 1210; <i>ITCS</i> 1350	4	(with lab)
	<i>PHYS</i> 1100, 1101, 1102, 1130, 1201 <i>PHYS</i> 1203, 2101, 2102; <i>PSYC</i> 1101	3-4	(with or without lab)
Social science	One of the following: <i>ANTH</i> 1101; <i>ECON</i> 1101, 2101, 2102; <i>GEOG</i> 1105; <i>POLS</i> 1110; <i>SOCY</i> 1101	3	

III. Themes of Liberal Education for Private and Public Life		Credit Hours	Courses taken
Arts and society	One of the following: <i>LBST</i> 1101, 1102, 1103, 1104, 1105	3	
Western culture	<i>LBST</i> 2101	3	
Global understanding	<i>LBST</i> 2102	3	
Ethical and cultural critique	One of the following: <i>LBST</i> 2211, 2212, 2213, 2214, 2215	3	

IV. Communication Skills		Credit Hours	Courses taken
Writing in the discipline course in the major	One three semester hour course or its equivalent totaling three semester hours in the major with the W designation	3	
Writing in the discipline course	A second course with the W designation (Can be in the major or outside the	3	
Oral communication	A course with the O designation (If a course is designated for both O and W, the one course can be applied to both.)	1-3	

The following applies only to students majoring in a program in the College of Arts and Sciences, College of Architecture, or College of Health and Human Services.		Credit Hours	Courses taken, if applicable
Foreign language	A 1202-level course in a foreign language	4-8	