

Requirements for the Meteorology-Climatology B.S. Degree
Effective Fall 2010

Group A: Required Meteorology-Climatology Courses

Course #	Course Title	Semester Credits	Prerequisites	Semester Typically Offered			Semester Taken
				Fall	Spring	Summer	
METR 200	Weather and Climate	4	MATH 101	All	All	All	
METR 205	Intro to Atmospheric Science	4	METR 200, MATH 106, PHYS 211	All			
METR 223	Atmospheric Thermodynamics	4	METR 205, MATH 107/109H or parallel, CSCE 155N		All		
METR 311	Dynamic Meteorology I ¹	3	METR 205, CSCE 155N, MATH 208, PHYS 211	All			
METR 312	Dynamic Meteorology II ¹	3	METR 311, MATH 221		All		
METR 323	Physical Meteorology ¹	3	METR 205, CSCE 155N, PHYS 212		All		
METR 341	Synoptic Meteorology I ¹	3	METR 205		All		
Majors must also take one of the following analysis and prediction courses.							
<i>The course not taken may be used to fulfill group B requirements.</i>							
METR 442	Synoptic Meteorology II ^{1,2}	4	METR 341	All			
METR 470	The Climate System : Analysis & Prediction ^{1,2}	3		All			
Majors must also take one of the following instrumentation and/or remote sensing courses.							
<i>The courses not taken may be used to fulfill group B requirements.</i>							
METR 463	Radar Meteorology ¹	3	METR 323		Odd		
METR 464	Satellite Meteorology ¹	3	METR 205	Even			
METR 465	Satellite Remote Sensing of the Atmosphere ¹	3	METR 323	Odd			

Group B: Select at least 12 hours from the following Meteorology-Climatology courses

Courses taken to fulfill group A requirements cannot apply to fulfill group B requirements.

METR 408	Microclimate	3	MATH 106, 5 hrs PHYS	All			
METR 415	General Circulation of the Atmosphere	3	METR 205, PHYS 211, PHYS 221	Even			
METR 428	Air Pollution	3	6 hrs METR, CHEM 109		Odd		
METR 442	Synoptic Meteorology II ^{1,2}	4	METR 341	All			
METR 443	Severe Storms	3	METR 205		Even		
METR 450	Climate & Society	3	METR 200 or METR 370		Even		
METR 454	Statistical Analysis of Atmospheric Data	3	6 hrs METR, MATH 107	Odd			
METR 463	Radar Meteorology ¹	3	METR 323		Odd		
METR 464	Satellite Meteorology ¹	3	METR 205	Even			
METR 465	Satellite Remote Sensing of the Atmosphere ¹	3	METR 323	Odd			
METR 469	Bio-Atmospheric Instrumentation ¹	3	MATH 106, 5 hrs PHYS	Odd			
METR 470	The Climate System : Analysis & Prediction ^{1,2}	3		All			
METR 475	Physical Climatology	3	METR 205	Odd			
METR 478	Regional Climatology	3	METR 370		Odd		
METR 479	Hydroclimatology	3		Even			
METR 483	Global Climate Change	3	METR 475, MATH 106, 5 hrs PHYS		Even		
METR 487	Earth's Climate: Past, Present, & Future	3	6 hrs METR or 6 hrs GEOL				
METR 495	Internship in Meteorology/Climatology	(3) 1-6	Permission	All	All	All	
METR 498	Special Topics Meteorology/Climatology	(6) 1-24	Permission	All	All	All	
METR 499	Independent Study	(3) 1-24	Permission	All	All	All	
METR 499H	Honors Course	(3) 1-4	Admission to Honors Program	All	All	All	

Group C: Required Related Study

Course #	Course Title	Semester Credits	Prerequisites	Semester Typically Offered			Semester Taken
				Fall	Spring	Summer	
CHEM 109	General Chemistry	4	MATH 103 or 106	All	All	All	
CSCE 155N	FORTRAN Programming ³	3			All		
PHYS 211	General Physics ¹	4	MATH 106 or parallel, high school physics	All	All	All	
PHYS 221	General Physics Lab Parallel to 211 ¹	1	PHYS 211 or parallel	All	All	All	
PHYS 212	General Physics ^{1,3}	4	PHYS 211	All	All	All	
MATH 106	Analytic Geometry and Calculus I ^{1,4}	5	MATH 102 or 103 Math Placement Applies	All	All	All	
MATH 107	Analytic Geometry and Calculus II ^{1,4}	5	Grade of C or better in MATH 106	All	All	All	
MATH 208	Analytic Geometry and Calculus III ^{1,4}	4	Grade of C or better in MATH 107	All	All	All	
MATH 221	Differential Equations ^{1,4}	3	Grade of C or better in MATH 208	All	All	All	
STAT 380	Statistics ^{1,4}	3	Grade of C or better in MATH 107	All	All	All	

All Meteorology-Climatology B.S. degrees awarded by the University of Nebraska – Lincoln meet both the requirements for employment with the Federal Government as a meteorologist (GS 1340)⁵ and the guidelines set forth by the American Meteorological Society⁶. These requirements include:

A degree in meteorology, atmospheric science or other natural science that includes at least 24 semester (36 quarter) hours of meteorology/atmospheric science including:

- 6 semester hours of atmospheric dynamics and thermodynamics with calculus as a prerequisite or co-requisite;
- 6 semester hours of analysis and prediction of weather systems (synoptic/mesoscale);
- 3 semester hours of physical meteorology
- 2 semester hours of remote sensing of the atmosphere and/or instrumentation;
- 6 semester hours of physics with calculus as a prerequisite, with at least one course including laboratory sessions;
- 3 semester hours of ordinary differential equations; and
- 9 semester hours of course work appropriate for a physical science major selected from a combination of at least three of the following topics (physical hydrology, statistics, chemistry, aeronomy, computer science, advanced electricity, and magnetism, radiative transfer, advanced thermodynamics, physical oceanography, physical climatology, and light and optics)

¹ Course fulfills a requirement for employment with the Federal Government as a meteorologist (GS 1340).

² Course fulfills UNL's ACE 10 requirement.

³ Only CSCE 155N *Fortran* Programming will count for the Meteorology-Climatology degree. CSCE 155N *Matlab* will not count.

⁴ Course fulfills requirement for a plan A minor in Math.

⁵ <http://www.opm.gov/qualifications/standards/IORs/gs1300/1340.htm>

⁶ http://www.ametsoc.org/policy/2010degree_atmosphericscience_amsstatement.html