Requirements for the Meteorology-Climatology Bachelor of Science Degree

Department of Earth and Atmospheric Sciences, College of Arts and Sciences,
University of Nebraska-Lincoln
Effective Fall 2018

Course	Title	Credits	Prerequisites	Semester Offered	Semester Taken
Group A: Core Courses (26 hours – Take all courses from this group)					
METR 100	Weather and Climate	4	MATH 101 or higher; or a qualifying Math Placement Exam score for MATH 102 or 104 or higher	All Semesters	
METR 205	Introduction to Atmospheric Science	4	MATH 106; METR 100; PHYS 211 or 211H.	Every Fall	
METR 223	Atmospheric Thermodynamics	4	CSCE 155N; METR 205; MATH 107 or parallel.	Every Spring	
METR 311	Dynamic Meteorology I[1]	3	METR 205, MATH 208, CSCE 155N, PHYS 211	Every Fall	
METR 312	Dynamic Meteorology II[1]	3	METR 311 and MATH 221/221H	Every Spring	
METR 323	Physical Meteorology[1]	4	METR 205, CSCE 155N, PHYS 212	Every Fall	
METR 341	Synoptic Meteorology[1]	4	METR 223	Every Spring	
Group A: Instrumentation (3 hours) ***One course required*** ***Additional courses taken may be used to partially fulfill Group B requirements***					
METR 463	Radar Meteorology[1]	3	METR 323	Spring - ODD Years	
METR 464	Satellite Meteorology[1]	3	METR 205	Fall – EVEN Years	
Group A: Senior Capstone (3-4 hours) ***One course required*** ***Additional courses taken may be used to partially fulfill Group B requirements***					
METR 442	Advanced Synoptic Meteorology-Climatology[1,2]	4	METR 341	Every Fall	
METR 470	The Climate System: Analysis and Prediction	3		TBD	
Group B: Meteorology Electives (12 hours) ***Courses taken to fulfill Group A requirements cannot apply to fulfill Group B requirements***					
METR 408	Microclimate: The Biological Environment	3	Junior standing, MATH 106, 5 hrs PHYSICS	Every Fall	
METR 421	Cloud Physics	3	METR 223, METR 323 or equivalent	Fall – EVEN years	
METR 433	Boundary-layer Meteorology	3	METR 223, Math 208/208H	TBD	
METR 443	Severe Storms Meteorology-Climatology	3	METR 311, METR 341 or parallel	Spring - EVEN Years	
METR 444	Mesoscale Meteorology	3	METR 311	Fall - ODD Years	
METR 446	Broadcast Meteorology	3	METR 100	Spring - EVEN Years	
METR 447	Broadcast Meteorology Practicum	1 – 3	Permission.	Fall and Spring	
METR 450	Climate and Society	3	METR 100 or NRES 370	Spring - EVEN Years	
METR 454	Statistical Analysis of Atmospheric Data	3	6 hrs METR and MATH 107/107H	Every Spring	
METR 463	Radar Meteorology[1]	3	METR 323	Spring - ODD Years	
METR 464	Satellite Meteorology[1]	3	METR 205	Fall – EVEN Years	
METR 469	Bio-atmospheric Instrumentation	3	Junior standing, MATH 106, 4 hrs PHYSICS	Fall - ODD Years	
METR 471	Tropical Meteorology	3	METR 223, METR 311	Fall - ODD Years	
METR 478	Regional Climatology	3	METR 370	Spring – ODD Years	
METR 479	Hydroclimatology	3	METR 100 OR NRES 208 or METR 370	Spring – EVEN Years	
METR 487	Earth's Climate: Past, Present, Future	3	6 hrs METR or 6 hrs GEOL	Fall - EVEN Years	
METR 495	Internship in Meteorology-Climatology	1 – 6	Permission	All Semesters	
METR 498	Special Topics in Meteorology-Climatology	3	Permission	All Semesters	
METR 498	Weather and Climate Impacts	3	Permission	Spring – EVEN Years	
METR 499	Independent Study	1 – 24	Permission	All Semesters	
METR 499H	Honors Course	1 – 4	Permission	All Semesters	

Requirements for the Meteorology-Climatology Bachelor of Science Degree
College of Arts and Sciences, University of Nebraska-Lincoln

Course	Title	Credits	Prerequisites	Semester Offered	Semester Taken
Group C: Required Related Study (34 Hours)					
CHEM 109	General Chemistry 1	4	MATH 103	All Semesters	
METR 498 OR CSCE 155N	Introduction to Scientific Programming in Atmospheric Sciences OR Computer Science I: Engineering & Science Focus (FORTRAN or MATLAB)	3	MATH 102	Every Spring	
PHYS 211	General Physics I[1]	4	One year high school physics or PHYS 141 or PHYS 151or permission, MATH 106 or parallel	All Semesters	
PHYS 221	General Physics Laboratory I[1]	1	PHYS 211 or parallel	All Semesters	
PHYS 212	General Physics II[1]	4	PHYS 211, MATH 107 or parallel	All Semesters	
MATH 106	Analytic Geometry & Calculus I[1,3]	5	MATH 102 Math 103, appropriate score on Math placement exam	All Semesters	
MATH 107	Analytic Geometry & Calculus II[1,3]	4	A grade of P or C or better in MATH 106	All Semesters	
MATH 208	Analytic Geometry & Calculus III[1,3]	3	A grade of P or C or better in MATH 107	All Semesters	
MATH 221	Differential Equations[1,3]	3	A grade of P or C or better in MATH 208	All Semesters	
STAT 380	Statistics and Applications[3]	3	MATH 107	All Semesters	

University of Nebraska-Lincoln General Education Requirements

Achievement Centered Education (ACE) Requirements		Course	Semester Taken
ACE 1	Written Skills		
ACE 2	Communications Skills		
ACE 3	Mathematical, Computational, or Statistical Skills	MATH 106	
ACE 4	Study of Scientific Methods and Knowledge of the Natural and Physical World	METR 100	
ACE 5	Study of Humanities		
ACE 6	Study of Social Sciences		
ACE 7	Study of the Arts to Understand Their Context and Significance		
ACE 8	Ethical Principles, Civics, and Stewardship and Their Importance to Society		
ACE 9	Global Awareness or Knowledge of Human Diversity through Analysis of an Issue		
ACE 10	Integration of Abilities and Capacities in a Creative or Scholarly Product	METR 442	

College of Arts and Sciences General Education Requirements

College Distribution Requirements (CDR)		Course	Semester Taken
CDR A	Written Communication		
CDR B	Natural, Physical, & Mathematical Sciences	PHYS 211	
CDR B - lab	Natural, Physical, & Mathematical Sciences Lab	PHYS 221	
CDR C	Humanities		
CDR D	Social Sciences		
CDR E	Modern or Classical Language (4 years in high school or 6 hours above the 200-level)		
CDR F	Additional Breadth	MATH 107	

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)[4] and the guidelines set forth by the American Meteorological Society[5].

[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] Course fulfills requirement for a plan A minor in Math.

[4] http://www.opm.gov/qualifications/standards/IORs/gs1300/1340.htm

[5] https://www.ametsoc.org/ams/index.cfm/about-ams/ams-statements/statements-of-the-ams-in-force/bachelor-s-degree-in-atmospheric-science/