BS in Environmental Sciences with Emphasis in Atmosphere

Degree Program Description

The Environmental Science degree combines interests in predicting and understanding weather patterns, monitoring environmental change, conserving and managing soil and biological organisms, assuring healthy streams and adequate water supplies, improving environmental quality with the shaping of new policies and educating others about the natural environment and environmental issues. Example careers include Atmospheric Scientist, Climatologist, Hydrologist, and Meteorologist. Employment may occur in a variety of sectors, including federal, state, county and city government.

Major Program Requirements

The degree combines interests in predicting and understanding weather patterns, monitoring environmental change, conserving and managing soil and biological organisms, assuring healthy streams and adequate water supplies, and improving environmental quality with the shaping of new policies and educating others about the natural environment and environmental issues. Example careers include Atmospheric Scientist, Climatologist, Hydrologist, and Meteorologist. Employment may occur in a variety of sectors, including federal, state, county and city government agencies, non-government agencies (NGOs), and private consulting firms.

Students earning a Bachelor of Science in Environmental Sciences are required to complete all University general education (http://catalog.missouri.edu/academicdegreerequirements/generaleducationrequirements/), University graduation (http://catalog.missouri.edu/academicdegreerequirements/universityrequirements/), and degree requirements, including selected foundational courses, which may fulfill some University general education requirements.

Foundational

MATH 1100	College Algebra	3-5
or MATH 1160	Precalculus Mathematics	
MATH 1400	Calculus for Social and Life Sciences I	3-5
or MATH 1500	Analytic Geometry and Calculus I	
CHEM 1400 & CHEM 1401	College Chemistry I and College Chemistry I Laboratory	4
Economics/Business Elective (select from ABM, ECONOM, FINPLN, FINANC, MANGMT, MRKTNG)		3
ENV_SC 1100	Introduction to Environmental Science	3
ABM 2123	Quantitative Applications in Agricultural and Natural Resource Sciences	3
or STAT 1200	Introductory Statistical Reasoning	
AGSC_COM 2220	Verbal Communication in Agriculture, Food and Natural Resources	3
ATM_SC 1050	Introductory Meteorology	3
NAT_R 2325	Introduction to Geographic Information Systems	3
or GEOG 3040	Introduction to Geographic Information Systems GIS	
ENV_SC 4560	Observing the Earth from Space	3
or ABM 1200	Applied Computer Applications	

Core Emphasis Requirements

Mathmatical Science		
MATH 1160	Precalculus Mathematics	5
MATH 1500	Analytic Geometry and Calculus I	5
MATH 1700	Calculus II	5
MATH 2300	Calculus III	3
MATH 4100	Differential Equations	3
Physics		
PHYSCS 2750	University Physics I	5
PHYSCS 2760	University Physics II	5
Additional Emphasis Area Requirements		
ATM_SC 2720	Weather Briefing	2
ATM_SC 3600	Climates of the World	3
ATM_SC 4710	Synoptic Meteorology I	4
ATM_SC 4310	Atmospheric Thermodynamics	4
ATM_SC 4550	Physical Meteorology	3
ATM_SC 4590	Radar Meteorology	3
ATM_SC 4720W	Synoptic Meteorology II - Writing Intensive	4
Capstone Experience		
ATM_SC 4320	Atmospheric Dynamics	4
Electives approved by professional advisor to complete 120 credit total; select at least one additional writing intensive course		**20**

Accelerated BS in Environmental Sciences with Emphasis in Atmosphere to MS in Natural Resources with Emphasis in Soil, Environmental and Atmospheric Sciences

The accelerated option will allow students to earn a bachelors and masters degree within five years.

Total credits required for graduation must be at least 140 total credit hours:

- Total undergraduate credit hours: 114
- Total dual enrollment credit hours: 14
- Total graduate credit hours: 18

Required Core Courses

At least 15 credit hours must be 8000-level & above		
ATM_SC 7310	Atmospheric Thermodynamics *	4
ATM_SC 7320	Atmospheric Dynamics *	4
ATM_SC 8085	Problems in Atmospheric Science **	3
NAT_R 9087	Graduate Seminar in Natural Resources **	1
ATM_SC 8090	Masters Research in Atmospheric Science	1-99

* Taken during first year as Provisional Graduate Student.
** Taken in second year as Graduate Student.

ATM_SC 8085 Problems in Atmospheric Science is a requirement for M.S. students on the atmospheric science track. It is a generalized

atmospheric science class testing students' all-round fundamental knowledge of atmospheric science at a graduate level. All students are required to take NAT_R 9087 Graduate Seminar in Natural Resources.

Year 1 of Master's (as Provisional Graduate Student - Dual Credit, Atmosphere Track)		**14**
ATM_SC 7310	Atmospheric Thermodynamics	4
ATM_SC 7320	Atmospheric Dynamics	4
Atmospheric Science 7000-level Elective		3
Atmospheric Science 8000-level Elective		3
Year 2 of Master's (As Graduate Student)		**18**
ATM_SC 8085	Problems in Atmospheric Science	3
NAT_R 9087	Graduate Seminar in Natural Resources	1
ATM_SC 8090	Masters Research in Atmospheric Science	5
Atmospheric Science 8000-level & above		9

Thesis

Thesis is required for students to completed the degree.

For general information on how accelerated programs work, and for guidance on participation, refer to Accelerated Programs (http://catalog.missouri.edu/academicpolicies/acceleratedoptions/).

Semester Plan

Below is a sample plan of study, semester by semester. A student's actual plan may vary based on course choices where options are available.

First Year					
Fall	**CR**	**Spring**	**CR**		
MATH 1500	5	MATH 1700	5		
HIST 1100 or POL_SC 1100	3	AGSC_COM 2220	3		
ENV_SC 1100	3	ATM_SC 2720	2		
ATM_SC 1050	3	NAT_R 2325	3		
		ENGLSH 1000	3		
	14		**16**		
Second Year					
Fall	**CR**	**Spring**	**CR**	**Summer**	**CR**
MATH 2300	3	ATM_SC 3600	3	CHEM 1400 & CHEM 1401	4
FINPLN 2183	3	MATH 4100	3		
PHYSCS 2750	5	PHYSCS 2760	5		
ATM_SC 2022	3	Related Disciplinary Elective	3		
	14		**14**		**4**
Third Year					
Fall	**CR**	**Spring**	**CR**		
ATM_SC 4710	4	ATM_SC 4590	3		
ATM_SC 4550	3	Humanities Elective	3		
ENV_SC 4560	3	ATM_SC 4720W	4		
Elective	3	Elective	3		
Humanities Elective-Lower Level WI	3				
	16		**13**		
Fourth Year					
Fall	**CR**	**Spring**	**CR**		
ATM_SC 4310	4	ATM_SC 4320	4		
Elective	6	Related Disciplinary Electives	9		
ENV_SC 2600	3	Elective	3		
	13		**16**		

Total Credits: 120