BS in Environmental Sciences with Emphasis in Atmosphere

Degree Program Description
Earth’s environment provides conditions conducive for life: an oxygenated atmosphere; water resources; and soil as a medium for plant growth. Environmental processes occurring on the planet govern the movement of air, energy, matter, and water. Through the study of Environmental Sciences, students will learn the science and experience the beauty of the outdoor environment. This degree program addresses how human activities can adversely alter some environmental processes and environmental quality, techniques to improve environmental quality, and practices that minimize human impacts on the environment.

The Environmental Sciences degree provides a strong science foundation through general science coursework and specialized studies of the atmosphere, land and soil, water, and environmental outreach and education. 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, Environmental Specialist, Environmental Technician, Hydrologist, Land Manager, Meteorologist, Soil Scientist, and Water Quality Specialist. Employment may occur in a variety of sectors, including federal, state, county and city government agencies, non-government agencies (NGOs), and private consulting firms.

Major Program Requirements
Students earning a Bachelor of Science in Environmental Sciences are required to complete all University general education (http://catalog.missouri.edu/academicdegreerequirements/ generaleducationrequirements/), University (http://catalog.missouri.edu/ academicdegreerequirements/universityrequirements/) graduation, 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 1320 College Chemistry I 4
Economics/Business Elective (select from ABM, ECONOM, FINPLN, FINANC, MANGMT, MRKTN) 3
STAT 1200 Introductory Statistical Reasoning 3
COMMUN 1200 Public Speaking 3
or AGSC_COM 2220 Verbal Communication in Agriculture, Food and Natural Resources
or AGSC_COM 2210 Communicating Science to the Public
ENV_SC 1100 Introduction to Environmental Science 3
ATM_SC 1050 Introductory Meteorology 3

Core Emphasis Requirements
Mathematical Science 21
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 10
PHYSICS 2750 University Physics I 5
PHYSICS 2760 University Physics II 5
Additional Emphasis Area Requirements 23
ATM_SC 2720 Weather Briefing 2
ATM_SC 3600 Climates of the World 3
ATM_SC 4710 Synoptic Meteorology I 4
ATM_SC 4720 Synoptic Meteorology II 4
ATM_SC 4310 Atmospheric Thermodynamics 4
ATM_SC 4550 Physical Meteorology 3
ATM_SC 4590 Radar Meteorology 3
Capstone Experience 4
ATM_SC 4320 Atmospheric Dynamics 4
Electives approved by faculty or professional advisor to complete 120 credit total; select at least one additional writing intensive course

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
ABM 1041 or 1042 3 ATM_SC 3600 3
MATH 2300 3 MATH 4100 3
PHYSCS 2750 5 PHYSCS 2760 5
ABM 2123 3 Related Disciplinary Elective 3
14 14

Third Year
Fall CR Spring CR
ATM_SC 4710 4 ATM_SC 4720 4
ATM_SC 4550 3 CHEM 1320 4
Related Disciplinary Elective 3 ATM_SC 4590 3
Humanities Elective 3 Humanities Elective - Upper Level 3

NAT_R 2325 Introduction to Geographic Information Systems 3
or GEOG 3040 Introduction to Geographic Information Systems GIS 3
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