NC A&T Natural Resources and Environmental Design

GRADUATE STUDIES

Grad Studies Home
Curriculum
Course Descriptions
Career Opportunities
Employers
Faculty
Admissions Criteria
Facilities
NRED Home

Natural Resources and Environmental Design

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OBJECTIVES

The Department of Natural Resources and Environmental Design offers a program leading to the Master of Science Degree in Plant, Soil and Environmental Science . Students may select any concentration in Applied Environmental Biology, Land Use and Management, Soil and Sustainable Fertility, Applied Environmental Chemistry, Soil Mineralogy, Soil and Water Conservation, Environmental Horticulture, Plant Biotechnology, Constructed Wetlands, and Mushroom Biology . The objective of the program is to prepare students with the expertise needed to assume technical, teaching, research, and extension positions in universities, industries, and state/federal governments.

Master of Science - DEGREE OFFERED

Master of Science – Plant, Soil and Environmental Science

GENERAL PROGRAM REQUIREMENTS

The admission of students to the graduate degree program in the Department of Natural Resources and Environmental Design is concurrent with the general admission requirements of the University. For other requirements refer to the graduate catalog.

DEPARTMENTAL REQUIREMENTS

Candidate should have a Baccalaureate degree from an accredited undergraduate institution. A bachelor's degree in Agriculture is not required if the student has had adequate training in the basic sciences. The candidate should have a grade point average of 3.0 either in science and mathematics courses, or an overall undergraduate GPA of at least 2.6 (on a 4.0 scale).

Additionally, the candidates should have the following required courses and credits or their equiv alent.

Chemistry 12 credit hours
Biology 12 credit hours
Mathematics and Calculus 6 credit hours
Physics 3 credit hours
Soil and Plant Science 3 credit hours each

Students who have not completed the required or equivalent courses at the undergraduate level, but have satisfied all other requirements for admission will be granted provisional or conditional admission and allowed to make up the deficiencies in the first two semesters. The students lacking adequate background in soil science, plant science or environmental science should take 6 credits in the deficient concentration.

Thesis Option

This option consists of a minimum of 30 semester hours at the 600 and 700 levels and completion of a thesis. A student receives 6 semester hours credit for thesis.

Non-thesis Option

This option consists of a minimum of 33 semester hours at 600 and 700 levels, and completion of a project report. The student pursuing the Master of Science degree in Plant, Soil and Environmental Science is required to complete a common core of courses consisting of 10 hours of the following courses: A student must take courses marked with asterisk (*).

* HORT 700 Plant Biotechniques (Plant Science Option) 3 (1-4)
*SLSC 632 Soil Physics (Soil Science Option) 3 Semester Hours
*AGRI 604 Experiment Methods in Research 3 Semester Hours
*SLSC 717 Methodology in Soil, Plant, and Water Analysis 3 Semester Hours
*NARS 720 Graduate Seminar in Natural Resources 1 Semester Hour

Students pursuing the M.S. in Plant, Soil and Environmental Science are required to spend a minimum of two years to complete course work and a problem in applied research. In addition, a minimum of 16 semester hours is required by area of concentration.

Courses offered in Plant, Soil and Environmental Science - M.S. Program

Courses Credits

AGEN 600 Soil and Water Engineering I 3 (2-2)
AGEN 624 Water Resources Engineering 3 (2-2)
AGEN 701 Soil and Water Design 3 (2-2)
AGEN 714 Applied Hydrogeology 3 (2-2)
AGRI 604 Experiment Methods in Research 3 (3-0)
AGRI 799 Thesis Research in Agriculture and Environmental Science 6 (6-0)
AGRI 999 Continuation of Thesis 1 (1-0)
EASC 622 Environmental Sanitation and Waste Management 3 (2-2)
EASC 624 Earth Science, Geomorphology 3 (2-2)
EASC 625 Earth Resources 3 (2-2)
EASC 644 Problem Solving in Earth Science 3 (2-2)
EASC 666 Earth System Science 3 (2-2)
EASC 699 Environmental Problems 3 (3-0)
EASC 708 Conservation of Natural Resources 3 (3-0)
EASC 718 Applied Environmental Microbiology 3 (2-2)
HORT 600 Plant Tissue Culture 3 (2-2)
HORT 611 Commercial Greenhouse Production 3 (2-2)
HORT 620 Vegetable Production 3 (2-2)
HORT 700 Plant Biotechniques 3 (1-4)
NARS 608 Special Problems in Natural Resources 3 (3-0)
NARS 610 Applied Spatial Statistics and GIS 3 (2-2)
NARS 618 General Forestry and Ecology 3 (2-2)
NARS 720 Graduate Seminar in Natural Resources 1 (1-0)
NARS 777 Special Problems in Plant Sciences Graduate Studies 3 (3-0)
SLSC 621 Soil Microbiology 4 (2-4)
SLSC 632 Soil Physics 3 (2-2)
SLSC 633 Soil Genesis, Classification and Land Use 4 (2-4)
SLSC 634 Soil Environmental Chemistry 4 (3-2)
SLSC 640 Wetland Management 3 (3-0)
SLSC 710 Soils of North Carolina 3 (2-2)
SLSC 715 Soil Mineralogy 3 (3-0)
SLSC 717 Methodology in Soil, Plant and Water Analysis 3 (0-6)
SLSC 727 Soil Fertility and Plant Nutrition 3 (3-0)
SLSC 734 Applied Environmental Chemistry 4 (4-0)