

# Davis College of Agriculture, Natural Resources, and Design

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## Degrees Offered

- Master of Agriculture with a major in Agriculture, Natural Resources, and Design

## SCHOOL OF AGRICULTURE AND FOOD

- Master of Science with a major in Agronomy
- Master of Science with a major in Animal Physiology
- Master of Science with a major in Applied and Environmental Microbiology
- Master of Science with a major in Entomology
- Master of Science with a major in Genetics and Developmental Biology
- Master of Science with a major in Horticulture
- Master of Science with a major in Nutritional and Food Science
- Master of Science with a major in Plant Pathology
- Master of Science with a major in Reproductive Physiology
- Doctor of Philosophy with a major in Animal and Food Science
- Doctor of Philosophy with a major in Genetics and Developmental Biology
- Doctor of Philosophy with a major in Plant and Soil Science
- Doctor of Philosophy with a major in Reproductive Physiology

## SCHOOL OF DESIGN AND COMMUNITY DEVELOPMENT

- Master of Landscape Architecture with a major in Landscape Architecture
- Master of Science with a major in Agricultural and Extension Education
- Master of Science with a major in Design and Merchandising
- Doctor of Philosophy with a major in Agricultural and Extension Education

## SCHOOL OF NATURAL RESOURCES

- Master of Science in Forestry with a major in Forestry
- Master of Science with a major in Agricultural and Resource Economics
- Master of Science with a major in Recreation, Parks, and Tourism Resources
- Master of Science with a major in Wildlife and Fisheries Resources
- Doctor of Philosophy with a major in Forest Resources Science
- Doctor of Philosophy with a major in Human and Community Development
- Doctor of Philosophy with a major in Natural Resource Economics
- Doctor of Philosophy with a major in Resource Management

The Davis College of Agriculture, Natural Resources, and Design is comprised of three schools: Agriculture and Food, Design and Community Development, and Natural Resources. The college's faculty and staff are located in four buildings on the Evansdale campus; on farms administered by the Davis College of Agriculture, Natural Resources, and Design in Kearneysville, Morgantown, Reedsville, Union, and Wardensville; and at the West Virginia University Forest on nearby Chestnut Ridge.

Students study many different subjects concerned with human behavior, plants, animals, trees, and microorganisms. Curricula in the college stress the life sciences, applied and basic research, and economic and social relationships among people as they live and work in a wide variety of settings. Courses offered in the college give students a comprehensive understanding of the natural environment and resources from which we produce our food, fiber, wood, energy, and leisure activities.

The Davis College of Agriculture, Natural Resources, and Design's research is conducted in the West Virginia Agricultural and Forestry Experiment Station. Research proposals are generated, evaluated, approved, and funded through the Experiment Station. The university controls extensive lands, which are administered by the college, with specific areas set aside for research and teaching purposes agronomy, entomology, horticulture, livestock, poultry, organic farming, forestry, wildlife and fisheries, and outdoor and adventure recreation. Graduate students in the Davis College benefit both from a variety of educational and research settings and from extensive opportunities for hands-on learning.

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## ADMINISTRATION

### DEAN

- Daniel J. Robison - Ph.D. (University of Wisconsin-Madison)  
Director, West Virginia Agricultural and Forestry Experiment Station

### ASSOCIATE DEAN FOR ACADEMIC AFFAIRS

- J. Todd Petty - Ph.D. (University of Georgia)  
Academic Affairs

### ASSOCIATE DEAN FOR RESEARCH AND OUTREACH

- Tim T. Phipps - Ph.D. (University of California)  
Associate Director, West Virginia Agricultural and Forestry Experiment Station

## Degree Designation Learning Goals

### MASTER OF AGRICULTURE (MAGR)

The Master of Agriculture, Natural Resources and Design is an interdisciplinary degree that offers advanced study in all areas of agriculture, natural resources, and design. This program provides an opportunity for students to expand on the knowledge and skills they acquired during their undergraduate studies and enables students to tailor their education to fit individual career goals. The Master of Agriculture, Natural Resources and Design may benefit individuals who are seeking a higher paying position, wish to improve chances for admission to a professional school, want to make a career change, start an entrepreneurship, or improve their skills to enhance their current careers.

Students earning an MAGR degree will be able to:

- Communicate professional concepts orally and in writing.
- Explain the holistic nature of opportunities and problems pertaining to agriculture, natural resources, or design.
- Explain the role of inquiry and research in addressing opportunities and problems pertaining to agriculture, natural resources, or design.
- Construct a theoretical framework that addresses a particular opportunity or problem in agriculture, natural resources, or design and generalize that framework to aid in understanding similar opportunities or problems.
- Apply research skills to analyze agriculture, natural resources, or design opportunities or problems.

### MASTER OF LANDSCAPE ARCHITECTURE (MLA)

The MLA program provides students with the knowledge necessary to develop the skills and abilities in design, planning, and management that are pivotal to effectiveness and success in the workforce, and that are responsive to the unique qualities of the state and the region. The program prepares students to become effective professionals and citizens by emphasizing a philosophy of responsibility and commitment to ethical standards regarding the natural environment, professional practice, and personal relationships.

Students earning an MLA degree will be able to:

- Demonstrate a solid professional educational foundation that encompasses knowledge and skills of design, construction, problem-solving, plant materials, landscape management, and professional practice and that is responsive to the needs of the environment, society, and the landscape architecture profession.
- Understand ethical standards regarding the environment, the profession, personal relationships, and social responsibility.
- Proficiently communicate professional concepts graphically, orally, and in writing.
- Incorporate professional information through the study of real-life problems in Morgantown, the state of West Virginia, and the region.

### MASTER OF SCIENCE (MS)

The Davis College of Agriculture, Natural Resources, and Design offers numerous MS programs.

Students earning an MS degree will be able to:

- Communicate professional concepts orally and in writing.
- Explain the holistic nature of opportunities and problems pertaining to agriculture, natural resources, or design.
- Explain the role of inquiry and research in addressing opportunities and problems pertaining to agriculture, natural resources, or design.
- Construct a theoretical framework that addresses a particular opportunity or problem in agriculture, natural resources, or design and generalize that framework to aid in understanding similar opportunities or problems.
- Apply research skills to analyze agriculture, natural resources, or design opportunities or problems.
- Produce and defend original research in their major area of study.

## MASTER OF SCIENCE IN FORESTRY (MSF)

This program prepares students for careers in professional forestry ranging from consulting for private woodland owners to managing vast tracts of public forestlands. Students are trained in life sciences—biology, ecology, tree identification, sustainable forestry—and specialized sciences such as forest biometrics, forest economics, geographic information systems (GIS), and remote sensing of forest resources.

Students earning an MSF degree will be able to:

- Understand taxonomy and identify forest and other tree species, their distribution, and associated vegetation and wildlife.
- Understand soil properties and processes, hydrology, water quality, and watershed functions.
- Understand ecological concepts and principles including the structure and function of ecosystems, plant and animal communities, competition, diversity, population dynamics, succession, disturbance, and nutrient cycling.
- Demonstrate the ability to make ecosystem, forest, and stand assessments.
- Understand tree physiology and the effects of climate, fire, pollutants, moisture, nutrients, genetics, insects and diseases on tree and forest health and productivity.
- Identify and measure land areas and conduct spatial analysis.
- Design and implement comprehensive inventories that meet specific objectives using appropriate sampling methods and units of measurement.
- Analyze inventory data and project future forest, stand, and tree conditions.
- Develop and apply silvicultural prescriptions appropriate to management objectives, including methods of establishing and influencing the composition, growth, and quality of forests, and understand the impacts of those prescriptions.
- Analyze the economic, environmental, and social consequences of forest resource management strategies and decisions.
- Develop management plans with specific multiple objectives and constraints.
- Understand valuation procedures, market forces, processing systems, transportation and harvesting activities that translate human demands for timber-based and other consumable forest products into the availability of those products.
- Understand valuation procedures, market, and non-market forces that avail humans the opportunities to enjoy non-consumptive products and services of forests.
- Understand administration, ownership, and organization of forest management enterprises.
- Understand forest policy and the processes by which it is developed.
- Understand how federal, state, and local laws and regulations govern the practice of forestry.
- Understand professional ethics, including the Society of American Foresters Code, and recognition of the responsibility to adhere to ethical standards in forestry decision making on behalf of clients and the public.
- Understand the integration of technical, financial, human resources, and legal aspects of public and private enterprises.
- Communicate professional concepts orally and in writing.
- Explain the holistic nature of forestry opportunities and problems.
- Explain the role of inquiry and research in addressing opportunities and problems pertaining to forestry.
- Construct a theoretical framework that addresses a particular opportunity or problem in forestry and generalize that framework to aid in understanding similar opportunities or problems.
- Apply research skills to analyze forestry opportunities or problems.
- Produce and defend original research in their major area of study within forestry.

## DOCTOR OF PHILOSOPHY (PHD)

The Davis College of Agriculture, Natural Resources, and Design offers numerous doctoral programs.

Students earning a doctoral degree will be able to:

- Conduct independent and original research of publishable quality in agriculture or natural resources
- Effectively communicate, orally and in writing, the state of knowledge in the student's discipline, field, sub-field, and specific research area.
- Teach, at any undergraduate level or beyond, core courses in the student's discipline and field and specialized courses in the student's sub-field and research area.
- Write research manuscripts and technical reports that lead to refereed publications.

## General Admission Requirements and Information

### REGULAR

A regular graduate student is a degree-seeking student who meets all of the criteria for regular admission to a program of his/her choice. The student must possess a baccalaureate degree from a college or university, have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours), meet all criteria established by the degree program, and be under no requirements to make up deficiencies.

The student must:

- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or the New Medical College Admissions Test (New MCAT).
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to receiving a graduate degree.
- International students have the additional requirement to submit a minimum score of 550 on the paper TOEFL examination or 213 on the electronic TOEFL examination if their native language is not English.
- The specific graduate programs may have additional requirements for admission.

## **PROVISIONAL**

A student may be admitted as a provisional graduate student when the student possesses a baccalaureate degree but does not meet the criteria for regular admission. The student may have incomplete credentials, deficiencies to make up, or may have an undergraduate scholastic record that does not meet grade point requirements for regular admission. After successful fulfillment of the deficiencies, the student will be granted regular graduate student status.

## **NON-DEGREE**

A non-degree student is a student not admitted to a program. Admission as a non-degree student does not guarantee admission to any course or program.

A student must present evidence of a baccalaureate degree. A maximum of twelve credit hours of work as a non-degree student may be applied to a graduate degree if the student is later accepted into a graduate program.