

#growing for the

future

COLLEGE OF AGRICULTURE, COMMUNITIES, AND THE ENVIRONMENT

Undergraduate, graduate, and career-based certificate programs from Kentucky's most diverse and affordable public university.





WELCOME

We're so glad you're here! Welcome to Kentucky State University's Land Grant Program, home to one of only two Cooperative Extension programs in the state, a cutting-edge research station, and the College of Agriculture, Communities, and the Environment.

As a historic 1890 Land Grant Program, Kentucky State University offers opportunities for students to explore education and careers in agriculture through hands-on, experiential learning. The college offers two undergraduate degrees and two graduate degrees with many career-based certificates to prepare you for employment in the industry.

We'd love to have you on campus, but we understand that everyone needs different learning opportunities. That's why we offer online classes with some certificates achievable entirely online. If you can join us in Frankfort, take advantage of KYSU Ag's 300-acre research farm, 307-acre forested Environmental Education and Research Center, and our 14-acre Aquaculture Research Center—all right here on campus!

Interested? Set up a time to visit us. We'd love to show you around!

#GROWINGFORTHEFUTURE

GET YOUR BACHELOR OF SCIENCE IN

AGRICULTURE, FOOD, & ENVIRONMENT

The College of Agriculture, Communities, and the Environment offers this undergraduate major with five options: Agricultural Systems, Environmental Systems, Nutritional Sciences and Food Systems, Aquaculture Systems, and Agriculture Business. AFE graduates are prepared for careers in all areas of the agriculture industry including farming, research, agriculture business, forestry, fish and wildlife management, land management, and Cooperative Extension. This versatile degree also equips students with skills for graduate degree programs.

OPTION IN AGRICULTURAL SYSTEMS

The Agricultural Systems option prepares students for careers in the agriculture and natural sciences industries, developing skills in economics and marketing, soil science, entomology, organic agriculture, agriculture and energy, ornamental plants, and urban agriculture. Graduates of this program will be ready for careers in one of the top-employing fields in the U.S.

REQUIRED CLASSES INCLUDE:

AFE 318 Environmental Entomology

AFE 334 Soil Science

AFE 426 Agriculture Economics and Marketing

AFE 445 Agriculture and Energy

Recommended Option Electives:

AFE 425 Organic Agriculture

AFE 435 Urban Agriculture

AFE 440 Ornamental and Landscape Plants

AFE 443 Apiculture/Pollination Biology

AQU 480 Introduction to Geographic Information Systems





OPTION IN ENVIRONMENTAL SYSTEMS

Learning to restore a balance between humanity and our changing environment will be among the biggest challenges of coming years. It will require an understanding of the interaction between ecology, sociology, economics, and other areas. Students in this option will understand our dependence and impacts on the natural world and how to ensure a sustainable future for us all.

REQUIRED CLASSES INCLUDE:

AFE 334 Soil Science

AFE 366 Climate Change Studies

BIO 316 Ecology

BIO 417 Ecological Field Methods

AQU 480 Introduction to Geographic Information Systems

Recommended Option Electives:

AFE 318 Environmental Entomology

AFE 425 Organic Agriculture

AFE 489 Remote Sensing of the Environment

AQU 513 Aquatic Ecology

TOP 5 AQUACULTURE PROGRAM IN THE U.S.



OPTION IN NUTRITIONAL SCIENCES & FOOD SYSTEMS

The Nutritional Sciences and Food Systems option prepares students for jobs facing important nutrition and wellness issues that society faces and will continue to manage as global food challenges rise. Graduates will find career opportunities in nutrition research, advocacy, food safety, and production and processing. Nutritional sciences and food systems is a growing field in a booming agriculture industry.

REQUIRED CLASSES INCLUDE:

AFE 404 Nutrition and Metabolism

AFE 405 Research and Extension in Nutrition

AFE 416 Nutrition and Society

AFE 417 Modern Nutrition and Disease

Recommended Option Electives:

AFE 455 Food Safety and Microbiology

AFE 465 Food Systems

FNU 104 Basic Nutrition

OPTION IN AQUACULTURE SYSTEMS

Aquaculture is the rearing of aquatic organisms under controlled or semi-controlled conditions. Interest in aquaculture has increased worldwide as fish consumption has increased concurrently with decreasing catches of wild fish. Aquaculture is the fastest growing food producing activity in the world and now produces over 50% of the world's seafood. In Kentucky and the southern United States, aquaculture production focuses on raising freshwater species commercially.

REQUIRED CLASSES INCLUDE:

AQU 411 Fish Diseases
AQU 421 Fish Nutrition
AQU 422 Principles of Aquaculture
AQU 460 Water Quality Management

Recommended Option Electives:

AQU 412 Fish Morphology and Physiology

AFE 426 Agriculture Economics and Marketing

AFE 527 Fish Reproduction and Spawning Techniques

OPTION IN AGRICULTURE BUSINESS

The option in Agriculture Business trains students in various aspects of business and management necessary for success in any agriculture-related business. This can include large and small firms as well as international companies. The skills and information learned will prepare students in the management and marketing of agriculture products and issues specific to agriculture enterprises.

REQUIRED CLASSES INCLUDE:

AFE 215 Agribusiness Management

AFE 426 Agriculture Economics and Marketing

ACC 201 Principles of Accounting

AQU 409 Biostatistics

BUA 321 Legal Environment

ECO 202 Microeconomics II

MGT 465 Entrepreneurship

Option in partnership with the KYSU School of Business







CAREER-BASED

UNDERGRADUATE CERTIFICATES

CERTIFICATE IN FOOD SAFETY

The Certificate in Food Safety requires a minimum of 12 credit hours of course work which includes the following classes: FNU 104 Fundamentals of Nutrition; AFE 455 Food Safety and Microbiology; AFE 465 Food Systems; and AFE 425 Organic Agriculture. Only classes in which students receive a "C" or better will count toward the Certificate.

CERTIFICATE IN SUSTAINABLE AGRICULTURE SYSTEMS

The Certificate in Sustainable Agricultural Systems requires a minimum of 15 credit hours of course work—12 hours of set courses and one additional class selected by the student to focus on a specific area of sustainable agriculture. Required courses are: AFE 334 Soil Science; AFE 340 Environ Science and Agroecology; AFE 425 Organic Agriculture; and AFE 445 Agriculture and Energy. Any of the following courses could be taken as and elective for this certificate: AFE 407 Agroforestry; AFE 435 Urban Agriculture; AFE 442 Plant Propagation; or AFE 443 Apiculture/Pollination Biology.

CERTIFICATE IN HUMAN HEALTH AND NUTRITION

The Certificate in Human Health and Nutrition consists of 12 hours designed to give the student specific training in nutrition in the context of community education and human health. Students who acquire this certificate will take FNU 104 Fundamentals of Nutrition; AFE 405 Research and Extension in Nutrition; AFE 416 Society and Nutrition; and AFE 417 Modern Nutrition and Disease.

CERTIFICATE IN AGRICULTURE BUSINESS AND MANAGEMENT

The Certificate in Agriculture Business and Management requires a minimum of 12 credit hours of course work which includes the following classes: ACC 201 Principles of Accounting; AFE 215 Ag Management; AFE 426 Principles of Ag Economics and Marketing; and MGT 465 Entrepreneurship. All four of these classes are part of the Agriculture Business option within the AFE degree. This certificate is offered in conjunction with the KYSU School of Business.

CERTIFICATE IN ENVIRONMENTAL MEASUREMENTS

The Certificate in Environmental Measurements will require 14 credit hours of course work and allows students to experience many measurement techniques and protocols. Classes include: AQU 480 Introduction to Geographic Information Systems (GIS); AFE 489 Remote Sensing of Environment; AQU 460 Water Quality Management and AFE 461 Water Quality LAB; and BIO 417 Ecological Field Methods. This program creates educational opportunities for KYSU students and non-traditional students as well as high school teachers and government and private industry employees. Students will develop basic skills in acquiring, analyzing, and interpreting field data.

CERTIFICATE IN GEOSPATIAL TECHNOLOGY AND APPLICATION

The Certificate in Geospatial Technology and Application requires 12-credit hours including: AQU 480 Introduction to Geographic Information Systems (GIS); COS 364 Data Storage and Data Mining; AFE 489 Remote Sensing of Environment; and AFE 366 Climate Change Studies. Students develop basic skills in acquiring, analyzing and interpreting spatial database and prepare standard cartographic maps using 21st century mapping and visualization techniques.

CERTIFICATE IN FAMILY AND CONSUMER SCIENCES

The Certificate in Family and Consumer Sciences (FCS) will enable AFE majors, as well as those majoring in Business, Behavioral and Social Sciences, and Education to obtain a certificate in another course of study to assist with student career readiness and placement. Students will learn key consumer topics that relate to family functioning including food preparation, consumer education, financial management, housing, home environments, and lifespan development. The FCS certificate requires 4 classes totaling 12 credit hours of course work and includes: FCS 305 Principles of Food Preparation; FCS 303 Consumer Economics and Resource Management; FCS 304 Housing and Home Environment; and PSY 303 Theories and Methods in Developmental Psychology.

CERTIFICATE IN ELEMENTS OF FASHION AND HOME DÉCOR

The Certificate in the Elements of Fashion and Home Décor surveys an integrated, interdisciplinary approach to the study of design including fashion, interior decor, home environments, housing, and related consumer concerns. The certificate will require 4 classes totaling 12 credit hours of course work and includes: FCS 201Design Elements and Principles for the Consumer; FCS 202 Apparel Construction and Analysis; FCS 303 Consumer Economics and Resource Management; and FCS 304 Housing and Home Environment.

CERTIFICATE IN AQUACULTURE AND AQUATIC SCIENCES

The Certificate in Aquaculture and Aquatic Sciences requires a minimum of 12 completed credit hours of course work including: AQU 407 Fish Genetics; AQU 409 Biostatistics; AQU 411 Fish Diseases; AQU 413 Aquatic Ecology; AQU 422 Principles of Aquaculture; AQU 421 Fish Nutrition; AQU 427 Fish Reproduction and Spawning Techniques; and more. Only classes in which students receive a "C" or better will count toward the certificate degree. This certificate degree can be taken entirely online or at the university's campus in Frankfort, Ky.

GET YOUR BACHELOR OF SCIENCE IN

CHILDHOOD DEVELOPMENT & FAMILY RELATIONS

The Bachelor of Science Degree in Child Development and Family Relations is a non-teaching major that prepares students to pursue careers in areas such as but not limited to research, evaluation, children's programming, children's advocate and parent-child education. Other career options for individuals completing this degree include managing an in-home childcare center, early childhood director, curriculum developer, and corporate advisor for in-hours child care facilities.

The baccalaureate degree program in this instructional area prepares students to direct or teach in pre-school programs or work in family service agencies. The program is 120 credit hours and includes several internships to ensure students are prepared to accept roles as child development specialists or administrators.

REQUIRED CLASSES INCLUDE:

CDF 101 Introduction to Early Childhood Education

CDF 102 Family Development

CDF 203 Child Development I

CDF 204 Child Development II

CDF 206 Music, Games & Creative Experiences for Young

CDF 305 Materials and Methods in Early Childhood Education

CDF 315 Child Guidance

CDF 316 Teachers Role in Family and School Relations

CDF 407 Advanced Practicum in Early Childhood Programs I

CDF 408 Advanced Practicum in Early Childhood Programs II

CDF 409 Organization and Administration of Early Childhood Education Programs

CDF 420 Parent Education





GET YOUR MASTERS OF SCIENCE IN

ENVIRONMENTAL STUDIES

Global ecological problems will be among the biggest challenges of the next millennium. Such issues include climate change; species and habitat loss; soil, air and water pollution; food safety and quality; and environmental quality and soil health. Learning to restore the balance between humanity and our changing environment will require an understanding of the interactions between ecology, sociology, economics, and other disciplines. This program prepares students seeking meaningful employment with a commitment to human values.

REQUIRED CLASSES INCLUDE:

ENV 501 Intro to Environmental Studies

ENV 502 Population and Community Ecology

ENV 503 MES Student Team Project

ENV 509 Biostatistics

ENV 511 Energy and the Environment

ENV 699 MES Capstone Project (if Capstone student)

ENV 600/601 MES Research and Thesis (if Thesis student)

Elective Courses

ENV 507 Agroforestry: Local/Global Perspectives

ENV 508 Intro to GIS

ENV 513 Aquatic Ecology

ENV 515 Environmental Ethics

ENV 516 Environmental Justice

ENV 517 Environmental and Resource Economics

ENV 519 Sustainable Agriculture Systems

ENV 525 Organic Agriculture

ENV 540 Ornamental/Landscape Plants

ENV 542 Plant Propagation and Crop Production Systems

ENV 545 Molecular Techniques for Env. and Agua. Studies

ENV 550 Human Health and Environment

ENV 551 Livestock Production Practices

ENV 555 Food Microbiology and Safety

ENV 585 Special Topics

ENV 589 Remote Sensing of the Environment

ENV 595 Environmental Science and Bioremediation

MASTERS IN ENVIRONMENTAL STUDIES

CERTIFICATES

The Masters of Environmental Studies offers three certificate programs to allow students to focus on specific areas of environmental studies which will assist in greater job readiness and competitiveness of students after graduation. These certificates are available to anyone that has a bachelor's degree and wishes additional training as well and can be completed by any student regardless of area of study.

CERTIFICATE IN ENVIRONMENTAL POLICY AND DECISION MAKING

12 credit hours required. This certificate program will create educational opportunities for KYSU MES students and government and private industry employees to earn a certificate in Environmental Policy and Decision Making. These audiences can utilize the earned certificate for science teacher certification or as educational/professional development credits towards their professional skills development. Students will develop basic skills in acquiring, analyzing and interpreting complex legal issues associated with policy and decision making. The overall impact of this certificate program will enable students to develop unique skills to increase their chances to be recruited in special skills-oriented and high-salaried environmentally related jobs. This certificate program will complement the MES degree and demonstrate an area of expertise/specialization using a variety of methods used in complex legal issues. Certificates have been shown to positively impact career readiness.

Courses:

ENV 515 Environmental Ethics

ENV 516 Environmental Justice

ENV 560 Agricultural and Environmental Policy

ENV 565 Environmental Law

CERTIFICATE IN ENVIRONMENTAL METHODS

13 credit hours required. This certificate program will create educational opportunities for KYSU MES students and government and private industry employees to earn a certificate in Environmental Methods. These audiences can utilize the earned certificate for science teacher certification or as educational/professional development credits towards their professional skills development. Students will develop basic skills in acquiring, analyzing and interpreting field data. The overall impact of this certificate program will enable students to develop unique skills to increase their chances to be recruited in special skills-oriented and high-salaried environmentally related jobs. This certificate program will complement the MES degree and demonstrate an area of expertise/specialization using a variety of methods used to measure environmental parameters. Certificates have been shown to positively impact career readiness. The Certificate in Environmental Methods will require 13 credit hours of course work. It is designed to give students experience in a broad array of techniques and protocols.

Courses:

ENV 508 Introduction to Geographic Information Systems

ENV 513 Aquatic Ecology

ENV 545 Molecular Techniques for Environmental and Aquatic Studies

Select one from the following:

ENV 550 Human Health and Environment

ENV 589 Remote Sensing of the Environment

ENV 595 Environmental Science and Bioremediation Techniques

The professors are always available because of the small class sizes and Kentucky State University was an affordable option for me."

- JACOB VINCENT, LAWRENCEBURG, KY

CERTIFICATE IN ENVIRONMENTAL AGRICULTURE

12 credit hours required. Students can utilize the earned certificate for science teacher certification or as educational/ professional development credits towards their professional skills development. Students will develop basic skills in Environmental Agriculture principles and practices. The overall impact of this certificate program will enable students to develop unique skills to increase their chances to be recruited in special skills-oriented and high-salaried agriculturally and environmentally related careers. The Certificate in Environmental Agriculture is designed to give experience to students within a broad conceptual framework for more sustainable agriculture systems.

Courses:

ENV 519 Sustainable Ag Systems

ENV 525 Organic Agriculture

Pick two from the following list:

ENV 507 Agroforestry: Local and Global Perspectives

ENV 508 Introduction to GIS

ENV 535 Urban Agriculture

ENV 540 Ornamental/Landscape Plants

ENV 542 Plant Propagation and Crop Production Systems

ENV 511 Livestock Production Practices

AQU 522 Principles of Aquaculture **AQU 560** Water Quality Management



GET YOUR MASTERS OF SCIENCE IN

AQUACULTURE& AQUATIC STUDIES

Aquaculture is the fastest growing food producing activity in the world and now produces over 50% of the world's seafood. Students with the Master of Science in Aquaculture and Aquatic Studies have gone on to further graduate studies or directly into employment in state and federal hatcheries, environmental agencies, commercial aquaculture farms, and associated industries such as feed and equipment sales.

This program offers two degree options: the thesis option is for students wishing to pursue further graduate work or who are planning to work in technical aspects of industries, especially involving research. The non-thesis option is geared to students who plan to engage in commercial production, state or federal hatcheries, or for those for whom this will be their terminal degree.

REQUIRED CLASSES INCLUDE:

AQU 507 Fish Genetics

AQU 509 Biostatistics

AQU 510 Fish Disease Lab

AQU 511 Fish Diseases

AQU 512 Fish Morphology and Physiology

AQU 513 Aquatic Ecology

AQU 516 Computer Applications in Statistics

AQU 521 Fish Nutrition

AQU 522 Principles of Aquaculture

AQU 525 Aquaculture Economics and Marketing

AQU 527 Fish Reproduction and Spawning Techniques

AQU 528 Fish Reproduction Lab

AQU 551 Survey of Production Methods

AQU 560 Water Quality Management

AQU 561 Water Quality Lab

AQU 580 Intro to GIS

AQU 591 Internship

AQU 600 Research

AQU 601 Thesis



STUDENT SUCCESS

ADMISSIONS & FINANCIAL AID

UNDERGRADUATE ADMISSIONS

For first-time freshmen seeking admission, you must submit an application online or in paper along with:

- Official high school transcript with cumulative GPA and courses
- Official ACT/SAT test scores
- \$30 application fee

Admissions requirements include a cumulative/unweighted 2.5 GPA and an 18 composite on the ACT or 940 on the SAT.

For requirements for home school students, transfer students, and/or international students, visit **kysu.edu/admissions**.

GRADUATE ADMISSIONS

To enroll in the Masters of Environmental Studies or Masters of Aquaculture/Aquatic Studies, students must be accepted by the Kentucky State University Office of Graduate Studies and meet the following requirements:

- Completion of baccalaureate degree with an undergraduate GPA of > 3.0
- A GRE score of > 284 (verbal + quantitative)

Applicants with lower GPA or GRE scores may be given consideration if they have significant work experience in the field or have successfully completed certain graduate-level courses.

SCHOLARSHIPS & FINANCIAL AID

Kentucky State University has designed a scholarship program to recognize and reward students who have exemplified academic excellence. The scholarship program is designed to attract a more diverse student population both in and out of state. Financial assistance is provided to students who have excelled academically throughout their educational experience. Scholarships are awarded on a competitive basis and many are renewable for subsequent semesters. In order to be considered for a scholarship award, students must meet certain criteria. Students must:

- Be a United States citizen
- Be admitted to KYSU
- Have enrolled as a full-time student at KYSU
- Have completed a Free Federal Student Aid Form (FAFSA)

The amount of funds awarded is based on availability of funding. Early submission of scholarship applications is encouraged. Scholarships are awarded on a competitive basis, and many are renewable for subsequent semesters. For more information on academic scholarships offered to incoming KYSU students, contact our Office of Admissions.



GRADUATE RESEARCH ASSISTANTSHIPS

The Kentucky State University College of Agriculture, Communities, and the Environment offers a Master's of Science in Environmental Studies (MES) degree program and invites applications for admissions.

The goal of the MES program is the pursuit and dissemination of knowledge in the interdisciplinary field of environmental studies, including the interaction of environmental effects on agriculture and forestry ecosystems. Learning to restore the balance between humanity and our changing environment requires an understanding of the interactions between ecology, sociology, economics, and other disciplines. This program prepares students seeking meaningful employment with a commitment to human values.

The interdisciplinary nature of the MES program allows students with diverse undergraduate backgrounds to apply. The MES Graduate Admissions Committee reviews materials for admission consideration on a continuing basis.

Compensation packages include competitive Graduate Research Assistantships. Research opportunities are available with the following faculty members:

- DR. KEN ANDRIES: goat breeding, production, forage
- DR. GEORGE ANTONIOUS: pesticides residues, bioremediation, erosion management
- DR. RICHARD CRISTAN: forestry
- DR. SHAWN LUCAS: organic vegetable production, farmscaping, bioenergy
- DR. MAHETEME GEBREMEDHIN: environmental science, soil science
- DR. BUDDHI GYAWALI: land use and cover change, farm diversification and productivity, climate change adaptation and mitigation, application of GIS and remote sensing in ecosystems studies
- DR. HIDEKA KOBAYASHI: orchid breeding, cold adaptation
- DR. IBUKUN OGUNADE: livestock nutrition
- DR. FARIDA OLDEN: gene expression, nutrigenomics, honeybee disorders
- DR. KIRK POMPER: fruit horticulture production, aquaponics, plant breeding, biodiversity
- DR. JOHN SEDLACEK: conservation biological control, beneficial insect biodiversity, entomology
- DR. AVINASH TOPE: food safety in produce
- DR. THOMAS WEBSTER: honeybee pathology, colony collapse disorder
- DR. LEIGH WHITTINGHILL: urban agriculture

Graduate Research Assistantships are also available for students entering the Aquaculture/Aquatic Studies graduate degree program. Those are determined on a student-by-student basis. Contact Dr. Jim Tidwell (james.tidwell@kysu.edu).





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CAREERS

Agriculture is so much more than farming! It is everything we see and touch and do. Want to make a difference in the world? Consider one of these great careers in the agriculture industry:

- Farmer
- Ag marketing specialist
- Animal scientist
- Government inspector
- Landscape contractor
- Farm loan officer
- Extension agent
- Agriculture educator
- Water conservationist
- Forester
- Nursery/greenhouse manager
- Land use manager
- Nutritionist
- Food scientist
- Greenskeeper
- Fish and wildlife manager

DID YOU KNOW?

One U.S. farm feeds 165

people annually in the U.S. and abroad. The global population is expected to increase to 9.7 billion by 2050, which means the world's farmers will have to grow about 70 % more food than what is now produced.



WHY KYSU?

- Kentucky State University offers the lowest student-faculty ratio in Kentucky, both in the College of Ag and in other university classes.
- Students are actively engaged and involved in experimental tasks.
- Professors and mentors inspire confidence to succeed and act as role models.
- Family-feel campus environment.
- Lowest tuition of any Kentucky public university.
- Most diverse student, faculty and staff of all Kentucky universities.



AGRICULTURE, COMMUNITIES, AND THE ENVIRONMENT

Educational programs of Kentucky State University serve all people regardless of economic or social status and will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, gender identity, gender expression, pregnancy, marital status, genetic information, age, veteran status, or physical or mental disability. 2018

WHO TO CALL

SCHOOL OF AQUACULTURE AND AQUATIC STUDIES

College of Agriculture, Communities, and the Environment Dr. Jim Tidwell

Phone: (502) 597-8106

Email: james.tidwell@kysu.edu

SCHOOL OF AGRICULTURE, FOOD, AND **ENVIRONMENT**

College of Agriculture, Communities, and the Environment (AFE, MES programs; Graduate Research Assistantships)

Dr. John Sedlacek

Phone: (502) 597-6582

Email: john.sedlacek@kysu.edu

SCHOOL OF FAMILY AND CONSUMER **SCIENCES**

College of Agriculture, Communities, and the Environment Dr. Avinash Topè Phone: (502) 597-6012

Email: avinash.tope@kysu.edu

CHILDHOOD DEVELOPMENT AND FAMILY **RELATIONS PROGRAM**

College of Agriculture, Communities, and the Environment Dr. Herman Walston Phone: (502) 597-5906

Email: herman.walston@kysu.edu

OFFICE OF UNDERGRADUATE ADMISSIONS

Phone: (502) 597-6813 Email: admissions@kysu.edu

OFFICE OF GRADUATE STUDIES

Dr. James Obielodan Phone: (502) 597-6915 Email: grad@kysu.edu

GENERAL INQUIRIES

College of Agriculture, Communities, and the Environment Phone: (502) 597-5120

Email: kysuag@gmail.com