

Chapter 7**COLLEGE OF AGRICULTURE, COMMUNITIES and THE ENVIRONMENT****Dr. Kirk Pomper****Director of Land Grant Programs &****Interim Dean College of Agriculture,
Communities, and Environment****217 Cooperative Extension Building****(502) 597-6408****Academic Units**

- School of Agriculture, Food and Environment
- School of Aquaculture
- School of Family and Consumer Sciences

The College of Agriculture, Communities and the Environment (CACE) works to uphold the mission of the University and Land Grant programs through its commitment to research, extension, and teaching in the food and agricultural sciences. The college is organized into three academic divisions, the School of Agriculture, Food, and Environment, School of Aquaculture, and the School of Family and Consumer Sciences, and around five research divisions: (1) Agriculture and Natural Resources; (2) Aquaculture; (3) Environmental Studies and Sustainable Systems; (4) Food and Animal Sciences; and (5) Family and Consumer Sciences.

The CACE works to resolve agricultural, educational, economic, and social problems of the people of the Commonwealth of Kentucky, especially limited-resource persons and families. The various programs of the college are supported by federal and state funds.

Research

The CACE has nationally and internationally recognized research programs in aquaculture, organic agriculture, sustainable biofuel feedstock production, alternative fruit and nut crops, ecological entomology, alternative pesticides and water quality, goat production, obesity and human health, apiculture, and geospatial sciences. The Aquaculture Program, KSU's "Program of Distinction," is widely recognized as a leader in the areas of paddlefish culture, freshwater prawn culture, Koi breeding, production of feed-trained largemouth bass, and fish meal replacement research. KSU boasts the largest multidisciplinary organic agriculture program in the 1890's Land Grant system.

The Community Research Service (CRS) encompasses all areas of research in the College of Agriculture, Communities, and Environment and 1890's Land Grant Program. Our mission is to develop, advance, and disseminate scientific knowledge, improve agricultural productivity, preserve plants and animals, protect the environment, and enhance the health and economic opportunities of the people of the Commonwealth of Kentucky, as well other stakeholders around the world. The ARS also supports the mentoring of undergraduate and graduate students in research opportunities through internship and assistantship programs. The Atwood Research Facility contains 7,000 square feet of office space and 7,000 square feet of laboratory space, including a molecular genetics laboratory and nutrition laboratory. KSU's Aquaculture Research Center (ARC) includes 33 research ponds, a 3,000-square-foot hatchery houses spawning, holding, and experimental tanks, and state-of-the art histology and genetics laboratories. The Production Technology Building houses a 10,000 square foot wet lab for the study and development of aquaponics, biofloc and other intensive recycle systems.

Augmenting these facilities are KSU's 300-acre Harold R. Benson Research and Demonstration Farm and the 300-acre Environmental Education and Research Center. The KSU farm has goat, beef, poultry, and fruit and vegetable trials, and 11 acres of certified organic land, which hosts a range of projects in organic agriculture.

Extension and Outreach

The Cooperative Extension Program (CEP) provides education and technical assistance to limited resource families and communities by meeting the needs of farmers, youth, entrepreneurs, and many others. Some extension programs provide one to-one opportunities where paraprofessionals work directly with family members. The CEP has renowned programs in: family and consumer sciences, family development and management, family financial management and consumer education, small farmer outreach training and technical assistance, apiculture, goat production, community resource development, entrepreneurship, 4-H youth development, and Hispanic initiatives.

Extension program facilities include the Center for Sustainability of Farms and Families, a 12,000 square foot, 600-seat building at the KSU Research and Demonstration Farm. The Cooperative Extension Building, which houses a Television Production Studio, is supported by an Uplink/Downlink Satellite Truck and state-of-the-art communications equipment available for use by all of CACE. The geographic information systems (GIS) laboratory is also located in the Cooperative Extension Building and is utilized by students, faculty and by agricultural research and CEP staff to support their activities.

Statewide Articulation Agreement for Agricultural Education

Kentucky State University is part of the Statewide Articulation Agreement for Agricultural Education. This agreement permits high school students to earn up to six (6) credit hours toward the Bachelor of Science in Agriculture, Food, and Environment while still in high school. The articulation agreement is very significant, because students in agricultural education who complete at least three (3) high school credits in either animal science systems or horticulture/plant science systems majors (with a grade of B or better in all three (3) classes) and who also pass the appropriate Skill Standards Assessment for that major area, will receive three (3) credit hours in either animal science or plant science.

For example, high school students with a major in horticulture (or a minimum of three credits in recommended courses in horticulture) with a grade of at least a B in each class and passing the Kentucky Occupational Skills Standards Assessment (KOSSA) standard test, will receive 3 credits for AFE 217 Plant Science. The grade awarded for the appropriate class(es) will be Pass/Fail or P/F.

The Agriculture, Food, and Environment courses for which students can receive three (3) credit hours each are: 1) AFE 211 Animal Science, for animal science systems area and 2) AFE 217 Plant Science (3) for the horticulture/plant science systems area.

Degree Programs

Today's world needs people prepared to solve global challenges related to a safe and reliable food supply, protection of natural resources, climate change, improved nutrition, public health, and alternative energy sources. The United States Department of Agriculture and United States Department of Labor predict significant job growth in the areas of food, renewable energy, environment, and agribusiness. Increased demand is expected for agricultural inspectors, environmental scientists and specialists, including health, agriculturists and food scientists, soil and plant scientists, conservation scientists, forest and conservation technicians, agricultural and environmental law, public and agricultural policy, biotechnology, fisheries and wildlife, economic development, and agricultural communications. A degree from KSU's CACE will prepare graduates for a variety of jobs in these fields.

The CACE baccalaureate degree program in Agriculture, Food, and Environment (AFE), with five individual tracks 1) agriculture business, 2) agricultural systems, 3) aquaculture systems, 4) environmental systems, and 5) nutritional sciences and food systems, prepares graduates in these growth areas in the U.S. economy. Using an interdisciplinary approach, students from diverse backgrounds will develop a broad understanding of relationships between agricultural and aquaculture systems, food safety, and the environment.

Students interested in early childhood who do not want to become certified preschool or kindergarten teachers may pursue an Associate of Arts, Bachelor of Arts, or minor in Child Development and Family Relations (CDF). Graduates are ready to embark in careers supporting families and young children through childcare, social services, or child nutrition.

Bachelor of Science

Agriculture, Food and the Environment 122 credits

Liberal Studies Requirements 42 hours

Must include ECO 200, PHY 130 or BIO 103 or PHS 211, SOC 203, MAT 115

Core Courses 37 hours

AFE 116	AFE 117	AFE 211	AFE 217	AFE 311	AFE 340
AFE 401	AFE 411	AFE 450			

And 15 hours of AFE/AQU electives with 9 hours at the 3/4xx level

Track Courses 27 hours

Agriculture Business Track

AFE 215	AFE 426	AQU 409	ACC 201	BUA 321	ECO 202	MGT 465
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6 hours of AFE Electives chosen from: AFE 425, AFE 415, AFE 435, MKT 301, MGT 301, BUA 370, BUA 380. Students need to take ECO 201 in place of ECO 200 in Liberal Studies Requirement.

Agricultural Systems Track

AFE 318	AFE 334	AFE 445	AFE 426
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And 15 hours of electives from: AFE 425, AFE 435, AFE 440, AFE 443 and other AFE and AQU courses with advisor consent.

Aquaculture Systems Track

AQU 411 AQU 421 AQU 422 AQU 460

And 15 hours of electives from: AQU 412, AQU 427, AQU 451, AFE 426 and other AFE and AQU courses with advisor consent.

Environmental Systems Track

BIO 316 or BIO 417 AQU 480 AFE 334 AFE 366

And 15 hours of electives from: AFE 318 or AQU 413, AFE 425, AFE 445, AFE 489, AQU 460, BIO 417

Nutritional Sciences and Food Systems Track

AFE 404 AFE 405, AFE 416, AFE 417.

And 15 hours of electives from: BIO 303, AFE 435, AFE 495, NUR 412, FNU 104, BIO 302, AFE 455, AFE 465 and BIO 408 and other AFE and AQU courses with advisor consent.

Support Courses

16 hours