PhD in Agricultural and Applied Economics

Degree Requirements

The PhD program emphasizes preparation for research, teaching and extension work in academia, as well as for careers in agribusiness, government, and international agriculture. The program usually requires about three years beyond the master's program to complete. The size, quality and diversity of the faculty provide a broad choice of advisors and research topics. Students and their advisory committees have latitude in developing a plan of study.

Doctoral candidates will choose specialties from one of the following Focus Areas (FAs) (will not appear on transcripts or diplomas).

**Agribusiness and Organizational Economics:** The Focus Area provides a coherent area of study for preparing students for academic careers in applied economics, management, and related cognate fields, and for careers in government and industry. The program is based upon a set of courses offered in the division that support MS and PhD training in microeconomic theory, institutional and neo-institutional economics, and organizational economics. These core courses are augmented by courses in qualitative and quantitative methods and a cognate area that supports your student research. The cognate area is chosen in consultation with the major advisor and committee input.

**Environmental and Development Economics:** In this Focus Area, students will develop skills and knowledge to address some of society’s most pressing problems. There are many linkages among development and environmental and natural resource policy issues, both in developed and developing economies. This is especially true where agriculture plays a significant role in the livelihoods of people and rural communities, because soil and water resources are critical determinants of both agricultural productivity and human well-being, but also because of the importance of agriculture and resources for the quality of life of all humans. The importance of these linkages is evidenced by the emphasis on sustainable development in policy circles. Because institutions affect environmental outcomes, risk, and economic development, comparing institutions across differing contexts can provide useful insights for policy. Behavioral economics is an emerging research area that can be applied productively to environmental and development issues. Students will apply theory from economics and other social sciences, use rigorous analytical tools for translational research to analyze real-world problems and policies that can address them.

**Public Policy Analysis:** This Focus Area seeks knowledge about how agricultural and food policy and innovation influence markets and, ultimately, human well-being. The program relies on a rigorous approach to agricultural economics that underpins applied analysis, including experimental and behavioral economic models, strategic interaction models, structural economic models, investment or firm models, systems simulation, mathematical programing and econometrics. It relies on coursework and research with widely recognized centers for agricultural economics, such as the Food and Agricultural Policy Research Institute (FAPRI) (https://www.fapri.missouri.edu), Agricultural Markets and Policy (AMAP) (https://amap.missouri.edu), the Economics and Management of Agribiotechnology Center (EMAC) (https://emac.missouri.edu) and the Food Equation Institute (FEI).

The general course requirements for the PhD consist of theory and methods courses, followed by a well-balanced selection of elective and research courses in agricultural and applied economics and other disciplines at the graduate level. The course of study will prepare students for the qualifying exam taken after the first year of courses, the comprehensive exam assessing competency in his or her chosen fields of study, and independent research. A dissertation embodying the results of original research must be written on a subject approved by the program committee. An oral examination over the dissertation completes the degree requirements.

The minimum requirements for the PhD are as follows:

- 72 credit hours (minimum) from courses numbered 7000 – 9000, and within the 72 credit minimum are the following constraints:
  - No more than 30 credit hours can be transferred from an MS program
  - 15 credits must be from courses numbered 8000 – 9000, exclusive of dissertation research, problems or independent study
  - 6 credit hours designated as the PhD Focus Area Theory core
  - 6 credit hours designated as the PhD Focus Area Methods core (can be met from any combination of quantitative, qualitative, mixed or other methods courses)
  - 3 credit hours of AAE 8510 Research Methods and Design
  - 12 credit hours of AAE 9090 Doctoral Dissertation Research in Agricultural and Applied Economics
  - 45 credit hours designated as electives and/or additional required Focus Area courses

**Sample Plan of Study**

**Fall semester, year 1:** AAE 9040 Advanced Microeconomics Theory and Applications I; Focus Area theory or methods course; Elective

**Spring semester, year 1:** Focus Area theory or methods courses

**Fall semester, year 2:** Focus Area field courses and/or Electives

**Spring semester, year 2:** AAE 8510 Research Methods and Design; Focus Area field courses and/or Electives

**Subsequent semesters:** Field Courses and/or Electives; Research and Dissertation hours

**Qualifying Process**

After completing the first year sequence, students complete a qualifying exam process determined by the research Focus Area faculty. Examinations are completed in May with a retake, if needed, offered in August. Students must pass the qualifying exam process to continue in the PhD program.

**Comprehensive Examination Process**

Students take the Comprehensive Exam after passing the qualifying exam process and completing coursework, including core courses and field courses. The Comprehensive Exam consists of three parts: the written dissertation proposal, a written comprehensive exam, and an oral examination. The Comprehensive Exam is administered by the student's Doctoral Program Committee.

**Dissertation Requirements**

Two types of dissertations are acceptable. The first type of dissertation is organized around a single topic and typically is a lengthy monograph of your research findings. The second type of dissertation is a compilation
of three narrow-topic essays that are loosely related to a single, general theme or topic. Students select dissertation topics in consultation with their Doctoral Program Committee.

Admissions

The Division's Graduate Studies Committee and Focus Area faculty oversee the admissions process. Admission into the PhD program is determined by an assessment of program prerequisites and application materials. Domestic and international students are equally welcome to apply.

Prerequisites for the PhD program include courses in intermediate microeconomics; intermediate macroeconomics; econometrics or regression and correlation analysis; differential calculus; and statistics. Applicants who have not met these prerequisites or have limited background in economics may be required to correct these deficiencies or take certain courses without graduate credit before being formally admitted into the program. A master's degree in economics, agricultural economics, or a related field, is preferred but not required for admittance into the PhD program. Minimum requirements for admission into the PhD program are a Bachelor's degree (BA or BS) or equivalent and undergraduate GPA 3.0. The Test of English as a Foreign Language (TOEFL) or an equivalent English competency test is required of applicants whose first language is not English, with minimum TOEFL scores of 80 if internet-based. Applicants should also take the GRE or GMAT exams.

For More Information

For further information on admissions or financial assistance, write to Harvey James, director of graduate studies, 146 Mumford Hall, Columbia, MO 65211, or hjames@missouri.edu.