

Agricultural and Applied Economics (MS)

Graduate Student Handbook
2023-2024

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Clemson® University

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College of
**AGRICULTURE, FORESTRY
AND LIFE SCIENCES**

Clemson Graduate School Information

These guidelines supplement the current version of the [Clemson University Graduate School Policy Handbook](https://media.clemson.edu/graduate/website/files/pdfs/PolicyHandbook-complete-fall2023.pdf) (<https://media.clemson.edu/graduate/website/files/pdfs/PolicyHandbook-complete-fall2023.pdf>)

The policies and procedures of the Graduate School have been established to ensure that a consistent set of standards are followed from the admissions process all the way through to the awarding of degrees for every Graduate School program.

[Graduate School Forms](https://www.clemson.edu/graduate/students/forms.html)

(<https://www.clemson.edu/graduate/students/forms.html>)

[Graduate School Deadlines](https://www.clemson.edu/graduate/students/deadlines.html)

(<https://www.clemson.edu/graduate/students/deadlines.html>)

Overview of Program

Students who earn a Master of Science (MS) in Applied Economics and Statistics (AES) learn to apply economic theory, design experiments or surveys, estimate econometric models, and test hypotheses with inferential statistics to analyze human behavior, business practice, or government policy. The behavior, practice, or policy might relate to agriculture, banks, credit markets, environmental or natural resource management, forestry, health care, insurance, marketing, property rights, regional economic growth, regulation, stock markets, sports businesses, or sustainable development.

The faculty endeavor to create an environment conducive for learning, scholarship, and career preparation. Economic faculty from the Department of Agricultural Sciences, the John E. Walker Department of Economics, and statisticians from the Dept. of Mathematical Sciences teach the required and most of the elective courses. The Department of Agricultural Sciences is the administrative home of the program. The graduate program coordinator is Michael Vassalos (mvassal@clemson.edu), and his contact information is: email: mvassal@clemson.edu phone: 864-656-2439.

Goal

Students learn to competently apply economic theory, design experiments or surveys, estimate econometric models, and use statistical techniques to analyze public or private issues. Students also learn to clearly and succinctly communicate their research in written and spoken media. These issues will usually pertain to agricultural competitiveness or policy, insurance and credit markets, health care, management of wildlife and other natural resources, property rights and environmental quality,

sports, regulation, and sustainable economic development. This degree prepares students to obtain and perform well at jobs in business, government, and non-profit organizations.

The student learning outcomes are as follows:

1. Students apply relevant economic theory and previous empirical research to analyze business behavior or government policy related to agriculture, natural resource management, environmental quality, health care, property rights, sports, regulation, or sustainable economic development.
2. Students use appropriate descriptive statistics to accurately summarize economic data, specify and estimate econometric models, and use inferential statistics to reach conclusions about empirical regularities in populations of interest.
3. Students clearly and cogently write research findings in professional manuscripts and technical reports and translate those findings in writing for policy makers and other lay audiences.
4. Students effectively communicate research findings to professional, policy-making, and lay audiences.

What Graduates do

Recent graduates have used their degree to fill increasingly valuable niches for data analyses and management in the public or private sector. Recent employers include: AgSouth Farm Credit, Archer Daniels Midland, BB&T Bank, BBDO Atlanta, Black Book, Bureau of Labor Statistics, Cardlytics, Cardno Entrix, Delta Airlines, Ducks Unlimited, Epic, Florida Farm Bureau, Fractal Analytics, Hanesbrand Inc., Impact DataSource, Intercontinental Hotels Group, Ipsos, Greenville Technical College, Medical University of South Carolina, National Golf Foundation, Resurgent Capital Services, SAG Corporation, Tri-County Technical College, U.S. Forest Service, USAA Federal Savings Bank, and Vision Recycling. Other graduates have subsequently earned doctorates in economics, agricultural and applied economics, data analytics, or statistics.

Professional Licensure

No professional licensure applies to the Graduate Program

Approved Locations and Modalities of Delivery

This program is an on Campus face-to-face graduate degree where some students perform their research at various Research and Experiment Stations across the state.

Cohort information

Basic Program Metrics

Typical time to degree: 2 years for a Master Degree in Agricultural and Applied Economics.

Contact Information

The graduate program coordinator is Michael Vassalos (mvassal@clemson.edu), and his contact information is: email: mvassal@clemson.edu phone: 864-656-2439.

Advisory Board

There is no Advisory Board for the Graduate Program.

Admission Requirements

Requirements (in addition to Graduate School requirements)

To apply to the MS in Agricultural and Applied Economics program follow the instructions at www.grad.clemson.edu/admission/index.php and complete the online application. Applications should be completed by April 15 for the fall semester. Students who apply for the spring semester need to complete their applications no later than October 15. However, with a delay in student VISAs, international students should apply a month earlier than these deadlines.

An applicant's grades, GRE scores, statement of purpose, two letters of recommendation, reputation of his or her alma mater, academic background, and relevant work or personal experience are the criteria for an admission decision. The **minimum GPA requirement** is 3.0. Normally admitted students have a combined GRE score of 300 or higher for their verbal and quant score and 3.0 or higher for analytical writing score. The respective median scores of recently enrolled students on the verbal, quantitative, and analytical writing parts of the GRE are approximately 154, 152, and 4.0. No GRE waiver is provided. Admitted students usually have earned at least a B average, or equivalent grade, for their courses in economics, statistics, and mathematics. You are **required to** identify a faculty member willing to serve as your major advisor and indicate that in your application.

Normally, admitted international students have a **cumulative** TOEFL iBT score in the range of 90 to 100 with minimum scores of 20 for listening and 20 for speaking. Reading and writing scores of admitted applicants are usually higher than 20. Otherwise, the successful applicant has earned at least 7.0 on the IELTS, if he/she did not take the TOEFL. An applicant with a low TOEFL or IELTS score can be admitted conditional on completing Level 112 of an ELS course and, if necessary, retaking the GRE. International applicants who have studied abroad for at least two years in the U.S. or other English-speaking country and completed their undergraduate education in an English

speaking country are not required to retake the TOEFL or IELTS. However, they should report their most recent scores in the online application.

Successful applicants have normally passed undergraduate courses in univariate and multivariate calculus, introductory probability and statistics, and intermediate microeconomics. An undergraduate course in intermediate macroeconomics is highly recommended. Students who majored in economics or agricultural economics and took econometrics or who majored in statistics and took intermediate microeconomics typically have an adequate background. Exceptional students with inadequate backgrounds may be admitted but required to take extra, co-requisite courses during their first semester. Domestic students with inadequate backgrounds may also apply as non-degree seekers, take co-requisite courses, and then apply to the program.

The number of applicants who are accepted each year varies. The acceptance rate varies from 1/3 to 2/3 of all applications. Over the last six years, the number of accepted students who enrolled in the program has averaged annually seven students per year.

Dates and deadlines

Applications should be completed by April 15 for the fall semester. Students who apply for the spring semester need to complete their applications no later than October 15. However, due to delays in processing student VISAs, international students should apply a month earlier than these deadlines.

Support Mechanisms

Students are typically funded through Research Assistantships and some Teaching Assistantships. Some students though are self-funded.

Fees

No Program-specific Fees apply to the Graduate Program.

Transfer Credits

The Program follows Graduate School guidelines for transfer credits.

Requirements for Degree

Minimum Degree Requirements

Thesis Option

The thesis option provides additional training in the use of economic theory, econometrics, and statistics to analyze real world economic issues. Students who choose this option often plan to pursue a PhD degree or a career that requires a high level of research competence. An acceptable Master's thesis will include a problem specific theoretical section that generates testable economic hypothesis and an empirical section that tests the validity of the economic hypothesis.

Students who choose the thesis option must take at least 24 graded credit hours of course work and 6 units of thesis research (ECON 8910 or APEC 8910) to earn the minimum 30 credits. At least 12 of the 24 graded credits must be 8000-level or 9000-level courses for this option. Well-prepared, full-time students in this option can earn their degree in one calendar year but most take 18 months to finish the required courses and thesis requirements. Completion of a thesis is often a prerequisite to most Ph.D. graduate programs in Economics or Applied Economics.

Non-Thesis Option

The non-thesis option provides practical training in applied economics, econometrics, and data analysis for industry or government positions. The program provides additional technical skills for business- or public-service-oriented students. A technical, or professional, paper is recommended but not required. An acceptable technical paper will include a relevant literature and theory review plus an applied empirical section. Students that have Research Assistantships cannot select the non-thesis option, unless there are extenuating circumstances, and only after communicating with the committee and graduate program coordinator.

Students choosing the non-thesis option must earn at least 30 credit hours of graded course work. At least 15 of the 30 graded credits must be at the 8000-level or 9000-level courses for this option. Well-prepared, full-time students can satisfy the requirements of the non-thesis degree option in one calendar year (academic year plus summer semester), but generally take longer to finish.

Advisory Committees

The Program follows Graduate School guidelines for forming or modifying Advisory Committees

Preliminary Exams

Not Applicable

Comprehensive Exam

Not Applicable

Expectations for Thesis/Dissertation

The final examination consists of two parts: 1) completion of a thesis or technical paper and 2) and an oral examination. The oral examination is primarily a student's defense of his/her thesis or technical paper but can include questions that any member of the advisory committee might ask to ascertain that the student can competently apply economics and statistics to analyze real world issues. The thesis or technical paper must be successfully defended at least three weeks prior to graduation. Written notification of the defense is due in Enrolled Services at least 10 days prior to the defense. The information must include the student's name, program of study, title of thesis or technical paper, major advisor, date, time, and location. The student arranges the date, time, and place for the defense in consultation with the major advisor and other members of the advisory committee. The student's advisory committee must be presented with a copy of the thesis or technical paper at least two weeks before the defense. The student's major professor and advisory committee conduct the oral examination, but all faculty members are invited to attend. After the defense, revisions in the thesis or technical paper by the student must be approved by the major advisor and committee members. Students may have two attempts to pass the exam. A GS7 must be signed and submitted no later than the end of the penultimate week of the fall or spring semester to indicate passage of the final examination. The exact date by when the GS7 must be filed is found at www.grad.clemson.edu/deadlines.php. The defense must be scheduled early enough to allow time for committee-required revisions to the thesis or technical paper before the GS7 deadline. A two-week review period is normally expected before the final defense.

Additional Requirements

Required Core Courses

The required core courses for the program and their approved substitutes when applicable are:

1. Microeconomics for Public Policy (ECON 8230), offered in fall semesters.
2. Public Policy Economics (APEC 8220), offered in fall semesters or Macroeconomic Theory (ECON 8050) offered in spring semesters.
3. Empirical Methods for Agricultural Economists (AGRB 8080), offered in fall semesters.
4. Commodity Market Analysis (APEC 8890), offered in spring semesters.
5. Research Methods in Agricultural Sciences (AGSC 8890), offered in spring semesters.
6. Newman Seminar (AGSC 6100), offered in fall semesters.

Regression and Least Square Analysis (STAT 8030), Sampling (STAT 8040), and Multivariate Statistics (STAT 8170) are often selected as an elective course taken by students desiring additional training in basic regression analysis.

Intermediate microeconomics (ECON 3140) or Microeconomics for Public Policy (ECON 8230) or its equivalent is a pre-requisite for APEC 8220. Intermediate macroeconomics (ECON 3150) or its equivalent is a pre-requisite for ECON 8050.

Statistical Methods (STAT 8010), an equivalent graduate course, or an undergraduate introduction to probability and statistics, is a pre-requisite for: STAT 8030, STAT 8040, STAT 8050, and STAT 8170. STAT 8010 is offered each summer session, in addition to being offered in the fall and spring semesters. Students needing to take STAT 8010 may include the course credits in their degree program.

Elective Courses

Students must earn at least 14 additional graduate credit hours beyond the 16-hour core requirement to complete the degree program. For students pursuing the thesis option, six of the additional required credit hours are thesis credit hours and the other 9 hours would be selected from elective courses. Students pursuing the non-thesis option are required to take an at least 15 additional elective credit hours. Elective courses can cover a wide array of topics such as: 1) benefit-cost analysis, 2) economic or regional development, 3) environmental economics, 4) natural resource economics, 5) agribusiness, 6) commodities and futures, 7) financial economics, 8) international economics, 9) industrial organization, 10) labor economics, 11) mathematical economics, 12) monetary economics, 13) public finance, anti-trust policy and regulation 14) sampling, 15) multivariate statistics, 16) spatial statistics, 17) experimental design and 18) sports economics. Students may also take, with approval of their advisory committee, at most two non-economic or non-statistical but relevant elective courses, such as Geographical Information Systems (GIS) or financial mathematics.

Suggested Timetable of Student Progress

Time	Action
End of the term prior to the term in which you plan to graduate	Submit your final GS2 to Enrolled Services
Six months prior to defense	Submit GS5 to Enrolled Student Services
Within the first four weeks of the term in which you will graduate	Complete online application for diploma (formerly Form GS4)
At least 10 days prior to your defense.	Written notification of defense submitted to Enrolled Student Services
Two weeks prior to graduation	Submit completed thesis/dissertation electronically for formatting review
Two weeks prior to graduation	File GS7D with Enrolled Student Services
One week prior to graduation	All revisions requested by the Manuscript Review Office must be completed and approved by the Manuscript Review Office

Standards of Performance

Annual Review of Progress

Academic Performance

The Graduate Program follows Graduate School policy and expectations for academic performance.

Professional Requirements and Expectations

Professional association membership: Students are encouraged to obtain membership in their Professional Societies. You are encouraged to actively participate in the national society, as well as with the local chapter.

Performance Expectations for Graduate Assistants

The Program follows Graduate School guidelines on performance expectations for Graduate Assistants.

Attendance Policies

The Program follows Graduate School guidelines on performance expectations on attendance.