

Master of Science in Economic Analytics at Clemson University:

Graduate Student Handbook for Academic Year 2025-2026

I. Overview

The Master of Science in Economic Analytics is a cutting-edge program that combines economic theory with advanced data analysis skills. By integrating applied microeconomics, econometrics, statistics, data scraping, machine learning, and sophisticated analytics techniques, this program provides a powerful toolkit for making data-driven economic decisions. Whether you aspire to be a professional economist, a business-data scientist, or a strategic advisor, you will develop the skills to analyze complex data and drive important decisions.

A. Flexible and Customizable Curriculum:

Your academic journey begins with a robust core curriculum featuring:

- Economics and Price Theory for Business
- Strategy, Markets, and Competition
- Advanced Economic Analytics for Business
- Advanced Data Analysis for Economics

Beyond these foundations, you can tailor your studies by selecting electives that align with your interests. Choose from a broad array of courses—including financial economics, law and economics, cost-benefit analysis, game theory, monetary economics, economics of public policy, economics of education, international economics, economics of health, antitrust economics, sports economics, environmental economics, anti-trust economics, natural resources, and more—and even incorporate classes from other departments to create a personalized learning experience.

B. Flexible Study Options:

Complete the program in as few as two semesters—by taking five courses each in the fall and spring—or opt for a more measured pace over multiple semesters with options for an internship or thesis during the summer.

For more details, contact Tom Evans, the program coordinator for the MA in Economics, at tevans6@clemson.edu.

NOTE: The U.S. Department of Homeland Security recognizes the MS in Economic Analytics as a Science, Technology, Engineering, and Mathematics (STEM) degree. International (F-1) students may apply for a 24-month extension of optional practical training (OPT) with the MS in Economic Analytics.

II. Curriculum

The curriculum details for the M.S. in Economic Analytics are as follows.

A. Minimum Requirements

Here are the minimum requirements for the M.S. in Economic Analytics:

- 30 credits at the 6000 or 8000 level, or above.
- 24 credits of graded coursework.
- 6 credits of applied economic theory at 8000 level.

- 6 credits of applied econometrics at 8000 level.
- 6 credits of data analysis for economics at 8000 level.
- At most 6 credits of elective credit outside of the economics department.
- At least half of all graded coursework must be earned from 8000 level courses, or above.
- A minimum graduate grade-point average of 3.0.

B. Typical Core Classes

The 6 credits of applied economic theory at 8000 level are typically satisfied by taking any two of the following three classes (you are permitted to take all three courses).

ECON 8500	Economics and Price Theory for Business	3 credits	Fall
ECON 8230	Microeconomics for Public Policy	3 credits	Fall
ECON 8430	Strategy, Markets, and Competition	3 credits	Spring

The 6 credits in applied econometrics at the 8000 level are typically satisfied with the following two classes.

ECON 8700	Economic Analytics for Business	3 credits	Fall
ECON 8710	Advanced Economic Analytics for Business	3 credits	Spring

The 6 credits in data analysis for economics at 8000 level typically satisfied with the following two classes.

ECON 8600	Data Analysis for Economics	3 credits	Fall
ECON 8610	Advanced Data Analysis for Business	3 credits	Spring

NOTE 1: Intermediate microeconomics is a pre-requisite for ECON 8500 and ECON 8230.

NOTE 2: An undergraduate course in econometrics, such as ECON 4050, is a prerequisite for ECON 8700.

NOTE 3: ECON 6240 and ECON 8430 may not both be counted towards the master's program. If a student takes ECON 6240, they can either take at least two of ECON 8500, ECON 8230, or ECON 8050 to fulfill the applied economic theory requirement.

NOTE 4: Though rare, substitutions may be approved by the program coordinator and course instructor.

C. Capstone Thesis, Internship, or Research Course

MS students are required to complete either a 6-credit thesis, participate in a 3 or 6-credit internship, or complete a 3-credit master's research course.

ECON 8510	Master's Economic Research course	3 credits
ECON 8810	Internship in Economics	3 or 6 credits
ECON 8910	Master's Thesis Research	6 credits

ECON 8510 – Master’s Economic Research: This course meets weekly during the spring semester. Students will design and execute a semester-long research project. You will identify a research question, formulate a background statement, conduct a comprehensive literature review, collect and analyze data using econometric and related methods, and present your findings in a formal research paper and presentation.

ECON 8810-Internship in Economics: This course provides students with an opportunity to apply economic analysis in a business setting, and to develop technical skills in a professional environment, as part of their summer internship or full-time work. The economics department is in the process of identifying several local technology, financial and manufacturing firms that are interested in actively participating in an internship program with M.S. students.

ECON 8890-Master’s Thesis: This class involves writing a complete thesis, from inception to completion. Students will select a faculty research mentor and a three-person committee to support and critically evaluate the completed research. Students will select a topic of their own choosing and then complete the entire process of gathering data, completing background information, presenting the theory, performing the econometric analysis and robustness tests, and then presenting the findings in writing and a formal in-person presentation. The final paper will be stored and searchable in the Clemson Library.

D. Elective Courses in Economics

All coursework must be completed at the 6000 or 8000 level, with at least half of all graded coursework at the 8000 level. Here is the list of economics electives.

- ECON 6020 – Law and Economics (Fall and Spring)
- ECON 6100 – Economic Development (Fall)
- ECON 6110 – Economics of Education
- ECON 6120 – International Microeconomics (Fall)
- ECON 6130 – International Macroeconomics
- ECON 6220 – Monetary Economics
- ECON 6230 – Economics of Health (Fall and Spring)
- ECON 6250 – Antitrust Economics (Fall)
- ECON 6260 – Seminar in Sports Economics (Fall and Spring)
- ECON 6270 – Development of the American Economy (Spring)
- ECON 6280 – Cost-Benefit Analysis (Spring)
- ECON 6400 – Game Theory (Spring)
- ECON 6570 – Natural Resource Use, Technology, and Policy (Spring)
- ECON 8510 – Master’s Economic Research
- ECON 8110 – Economics of Environmental Quality (Spring)
- ECON 8150 – Economic History of the United States
- ECON 8260 – Economic Theory of Regulation (Fall)
- ECON 8990 – Financial Economics (Fall)

NOTE 5: The program is in the process of adding elective courses in financial economics and personnel economics.

E. Electives Courses from Other Departments

Students may take up to 6 credits from this list.

AGRB 6090 – Commodity Futures Markets
AGRB 6560 – Prices
CRP 8040 – Introduction to GIS for Planning and Policy (Fall, 4 credits)
CPSC 6300 – Applied Data Science (Fall)
FOR 6340 and FOR 6341 – Geographical Information Systems for Natural Resources and Lab
STAT 6020 – Introduction to Statistical Computing (in past, Fall for SQL and Spring for R)
STAT 8010 – Statistical Methods I (Fall and Spring) for those with insufficient background
STAT 8020 – Statistical Methods II (Fall and Summer)
STAT 8030 – Regression and Least Squares Analysis (Fall and Spring)
STAT 8040 – Sampling (Spring)
STAT 8050 – Design and Analysis of Experiments (Fall and Spring)

F. Degree Completion Options

The degree completion options for the M.S. in Economic Analytics are as follows.

Complete the degree in two semesters:

Students take 5 classes in each of the fall and spring semesters, and graduate in May. Students are recommended to take the following classes in the fall and spring semesters:

Fall Semester

ECON 8500- Economics and Price Theory for Business
And/Or ECON 8230 – Microeconomics for Public Policy
ECON 8600 – Data Analysis for Economics
ECON 8700 – Economic Analytics for Business
6 credits of electives

Spring Semester

ECON 8430 – Strategy, Markets, and Competition
ECON 8610 – Advanced Data Analysis for Economics
ECON 8710 - Advanced Data Analytics for Business
ECON 8510 – Master’ Economic Research
3 credits of electives

Complete the degree in three semesters:

There are several options for completing the degree in three semesters.

First, students would take 4 classes in each of the fall and spring semesters. This would include the six core class requirements as presented above, and 2 elective classes.

For the summer semester, students have three options:

1. Participate in an internship. Students can 6 credits for an internship. The economics department is working with local businesses and governments to identify appealing internships. Note that the internship can be completed in any semester.

2. Write a thesis. The thesis can be written during the summer after taking all the coursework. The thesis counts for 6 credits. Graduation would occur in August. Note that the thesis can be written in any semester.
3. Take other elective work during the summer semesters. Several of the non-economics department elective courses are offered in the summer. There are typically no economics electives offered in the summer. However, if a student decides not to complete a thesis or internship, they must have taken ECON 8510 in the spring.

Complete the degree in more than 3 semesters

There is no requirement to complete the M.S. in three or fewer semesters, or to complete the internship or thesis in the summer. Students are welcome to spread their course work over extended semesters and years.

NOTE 6: For graduate students, 9 credits are considered full-time.

NOTE 7: Students have six years from the date of matriculation to complete their degree.

NOTE 8: Check course availability through Section Overview in iRoar. Use Public Access to the Syllabus Repository at <https://etpr.app.clemson.edu/repository/> to download previous syllabi.

G. PhD Preparation Option

MS students who are superbly prepared and wish to develop advanced skills in economic theory, may earn their MS degree by successfully completing each course in the core curriculum of the PhD in Economics, and one three-credit elective course, to fulfill the program minimum requirements. Students who wish to take the core courses must obtain advance permission from the PhD and MS program coordinators. The PhD core currently consists of Applied Mathematical Economics (ECON 8040), a three-course sequence in microeconomics (ECON 8010, 8020, and 9010), a two-course sequence in macroeconomics (ECON 8050 and, for now, ECON 8980), and a three-course sequence in econometrics (ECON 8060, 8070, and either 8080 or 9090).

III. Administrative Requirements: Policies, Procedures, and Forms

Clemson University and its Graduate School have many policies and procedures that applicants, admitted students, and faculty must follow. Each student is responsible to know about these policies and procedures, which are found in the current Graduate Student Handbook. See also <https://www.clemson.edu/graduate/students/policies-procedures/index.html>.

As a result of its policies and procedures, the Graduate School also has forms that should be filled out and filed in a timely fashion to ensure that an applicant is considered for admission and an admitted student graduates on time. Students are responsible for meeting administrative requirements and also keeping track of any subsequent changes. Students must consult the Graduate School Announcements and updates on the Graduate School's website. Forms for enrolled students are available at <https://www.clemson.edu/graduate/students/forms.html>.

Some of the most important policies, procedures, and forms are discussed below in this section. Although the information in this section is correct at the time of its being written, students are

responsible for all subsequent changes. That is, the information in this section cannot substitute for and is not necessarily the current information on the Graduate School's websites

A. Admission Requirements

The program takes a broad view of applicants. There are no limits on the number of students that can be accepted. Students accepted into the program have demonstrated the preparation and ability to be successful.

Accepted students will typically have the following qualifications:

- A four-year undergraduate degree from an accredited institution with GPA of at least 3.0.
- Taken intermediate microeconomics and earned 3.0 or above.
- Taken a statistics course and earned 3.0 or above.
- Taken univariate and multivariate calculus and earned 3.0 or above.

Students who majored in economics, agricultural economics, or in mathematics or statistics and took intermediate microeconomics will have adequate backgrounds.

Students who have not achieved all the above will still be considered, but students need to then provide evidence that they will be successful in the program. This could be by explaining exceptional circumstances, or by describing the subsequent steps that students have taken to improve or demonstrate competency in each of these areas.

Excellent students with inadequate backgrounds in economics may be admitted but may also be required to take extra, co-requisite undergraduate courses, such as intermediate microeconomics or calculus. Domestic students with inadequate backgrounds may also apply as non-degree seekers, take co-requisite undergraduate or even core graduate courses, and then apply to the program.

B. Application and Admission to Program

To apply for admission to the M.S. in Economic Analytics program, please follow the instructions at <https://www.clemson.edu/graduate/admissions/apply/new-applicants.html> and start the online application here: <https://gradapply.clemson.edu/apply/>. Applications should be completed by March 15 to guarantee a decision and notification before April 15.

Complete applications should include the following:

- i. Complete official transcripts from all post-secondary institutions.
- ii. A personal statement. The personal statement should include the applicant's reasons for pursuing a master's degree, and why they believe their preparation is sufficient to be successful. This personal statement must be written by the applicant.
- iii. Two letters of recommendation. For undergraduate applicants both letters should be from academic sources. For currently employed applicants, please include on academic and one employment reference. The letters should specifically address the applicant's ability and preparation to be successful in a master's program.
- iv. A curriculum vitae or resume.
- v. Graduate Record Examination (GRE) scores are typically required; however, this requirement can be waived for economics majors with GPA's of at least 3.6. Median

scores of students recently admitted to the MA in Economics are 158 (61st percentile) for the quantitative, 154 (62nd percentile) for the verbal, and 4 (54th percentile) for the analytical writing parts of the GRE. (U.S. citizens and resident aliens may request a discount in the fees for the GRE from the Fee Reduction Program of the Educational Testing Service.)

- vi. International applicants must take an English test and submit official scores unless they are exempted. Admitted international students have earned at least 90 on the Test of English as a 4 Foreign Language (TOEFL) iBT and at least 20 for listening and 20 for speaking. If an admitted international student has not taken the TOEFL, she instead has earned a score of at least 60 on the Pearson Test of English (PTE) Academic, 7.0 on the International English Language Testing System (IELTS), or 115 on Duolingo's test. An applicant with a low TOEFL, PTE Academic, IELTS, or Duolingo score can still be admitted conditional on completing Level 112 of an ELS course and 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 there are not required to retake an English test. International applicants who have graduated from "exempt institutions" should contact the Graduate School to request an exemption from the English test. "Exempt institutions" are listed here: <https://www.clemson.edu/graduate/admissions/preparingto-apply/international-applicants/english-language-proficiency-exam-exemptions.html>.

C. Tuition and Fees

Tuition and fees are set by Board of Trustees during their July meeting for the upcoming academic year. The MS in Economic Analytics program is a Tier 2 program for purposes of tuition. In 2024-2025 full-time graduate students will pay tuition of \$5,610 per semester if they are residents of South Carolina and \$11,686 per semester if they are non-residents. All full-time students will pay \$713 per semester in fees. A student must take at least nine credit hours in each of the Fall and Spring semesters to be full time. Part-time students will pay \$772 per credit if they are residents and \$1,548 per credit if they are non-residents. Part-time students also pay \$121 in additional fees. Check our online calculator for tuition and fees for the latest information about costs. Grading, research, and teaching assistantships are not available to students in the MS in Economic Analytics program. Nor are we able to offer any scholarship, fellowship, or tuition waiver to our MS students.

International students pay out-of-state tuition, however, if their passports indicate that they come from any of these locations: 1) Taiwan, 2) Rhineland-Palatinate, or Rhineland-Pfalz, Germany, 3) Thuringen, Germany, 4) Brandenburg, Germany, and 5) Queensland, Australia. They pay in-state tuition because their respective governments have Sister-State Agreements with South Carolina.

All graduate students are required to have health insurance. Students who are already covered by policies that meet the University's requirements are eligible for waivers. All others are covered by the Clemson University Student Insurance Plan. Fees for health insurance are included with the \$713 in fees for Fall and Spring semesters and students are automatically enrolled. The premium for health insurance during the summer is included in the fee for the Spring semester.

D. Major Advisor, the Advisory Committee, and Plan of Study

Students should choose a major advisor by the middle of their second semester or the start of their final semester. A faculty member from the Department of Economics must serve as the major advisor or at least a co-advisor. The major advisor assists the student in course selection, supervises research, leads the student's advisory-examining committee, and writes letters of recommendation for jobs or doctoral programs. The graduate program coordinator serves as interim advisor until the student selects one.

E. Plan of Study

Required courses, elective courses, and any undergraduate, co-requisite course that addresses a deficiency in background are listed in a form called the GS2 Plan of Study. The student must file the GS2 Plan of Study by the middle of his or her second semester or before the start of his or her final semester as an enrolled student. The exact date of the deadline for filing the GS2 Plan of Study can be found at <https://www.clemson.edu/graduate/students/deadlines.html>. A student can amend the GS2 Plan of Study if academic plans change. The final version of the GS2 Plan of Study is important because Enrolled Student Services determines the student's eligibility for graduation by checking each course listed against the student's transcript.

Please refer to <https://www.clemson.edu/graduate/students/plan-of-study/index.html> for more information about the GS2 Plan of Study.

F. Apply for Graduation

Students must complete the 'Apply for Graduation' form at the beginning of their last semester. The form is accessed through iRoar account, under the Student Record menu.

G. M.S. En Route to PhD

PhD students may earn an M.S. in Economic Analytics en route to a PhD in economics. PhD students will have to satisfy the Minimum Requirements of the program as detailed in section II. A. above. If the requirements have been met, students need to complete for 'GS2-14: Master's en route to Doctoral' degree curriculum form. The form must be approved at various levels. Students then must apply for graduation through their iRoar account (Choose "Apply for Graduation" under the "Student Record" menu).

H. Academic Probation

A graduate student must have a grade point average (GPA) of 3.0 or better, on a scale of 0 to 4, to earn any graduate degree from Clemson University. A student who does not maintain a GPA of at least 3.0 is put on academic probation or may be dismissed from MS in Economic Analytics program. There are two levels of academic probation: R1 for those on probation for the first time and R2 for after the first time. Students who are placed on probation because their GPA has fallen below 3.0 are expected to raise their GPA to at least 3.0 within nine credit hours. Although students who fail to do so may be dismissed from their program at this point, those who make excellent progress may be given another chance to do so within the next nine credit hours. Students who are placed on academic probation must file a Graduate Student Plan for Success (GSPS), which must be signed by the graduate coordinator and approved by the Graduate School. The GSPS can be found under the tab "All Forms". The student has the responsibility to contact the coordinator of the MS in Economic

Analytics program for discussion about and approval of the Plan for Success.

IV. Plan for a Bachelor to Master's in Economic Analytics

A. Overview of Plan for BA or BS to MS in Economic Analytics

The Bachelor-to-Graduate Plan allows undergraduate economics majors (BA or BS) at Clemson to take graduate-level courses during their undergraduate studies. These courses can count toward earning an MS in Economic Analytics. **Note:** A maximum of 12 credit hours of graduate courses may be taken while an undergraduate (a request has been submitted to increase the maximum to 15 credits).

Credit Requirements

- Bachelor's Degree: 120 credits
- Master's Degree: An additional 30 graduate-level credits
- Combined Degree: A total of 150 unique credits (no credits can double counted)

Dual-Use Graduate Courses

- Students can enroll in graduate courses that fulfill requirements for both the bachelor's and master's degrees.
- *Example:* An economics major may take the 6000-level version of Cost-Benefit Analysis (ECON 6280) instead of the undergraduate ECON 4280. This course can count toward the major's elective requirement (9 or 12 credits for the BA/BS) while also contributing 3 graduate-level credits toward the MA.

Course Substitutions

- Approved graduate courses may serve as electives for the bachelor's degree.
- Approved 8000-level courses can be substituted for required undergraduate courses in economics.
- However, 6000-level counterparts of 4000-level courses that are specifically required for the bachelor's degree (e.g., ECON 4050) cannot be counted toward the MA requirements.

For more information, please see section "1.3. Special Applicant Categories" in the Graduate School's Policy Handbook regarding the Combined Bachelor's/Master's degree.

B. Eligibility and Admission Requirements

Undergraduate economics majors who have earned at least 90 credits at Clemson and a grade point average of 3.40 are eligible to submit a Bachelor-to-Master plan for approval. The online application and its requirements for admission, such as GRE scores, are waived for Clemson students with approved Bachelor's-to-Master's plans to pursue the MS in Economic Analytics.

Economic majors should consult both their undergraduate academic advisor and the graduate program coordinator of the master's program, Tom Evans (tevans6@clemson.edu) prior to applying.

To be admitted to the program students must complete the GS6-Bachelor-to-Graduate form (<https://gradapply.clemson.edu/register/GS6>).

C. Approval of Plan and Acceptance into Graduate Program

The students' undergraduate advisor, Chairperson of the Economics Department, graduate coordinator of the masters' program, and an official of the Graduate School all must approve the plan.

Once the GS6-Bachelor-to-Graduate form is signed and submitted to the Graduate School, the Graduate School tracks a student's progress until graduation with a bachelor's degree in economics. Upon completion of the undergraduate degree in economics and meeting the required GPA, the student is officially and automatically accepted into the MS in Economic Analytics. Upon graduation with the BA or BS in Economics and meeting the GPA requirement, students are sent letters that inform them of their full acceptance into the MS in Economic Analytics program. Their status in iRoar is then updated to graduate student.

D. Enrolling in Master's Credits While a Bachelor's Student

Until the time that the student graduates with a bachelor's degree, they must complete a GS6 form every semester that lists all the master's classes they want to take. The GS6 form should be completed while students are enrolling for bachelor's classes.

E. Graduate Program Requirements of the Bachelor-to-Master Plan

The curricular requirements for the MS component of the Bachelor-to-Master plan are identical to those for the MS in Economic Analytics (see above for Minimum Requirements).

V. Other Educational and Career-Related Resources at Clemson

In addition to the courses that our department offers in economic analytics and data analysis, the Clemson Visualization Lab has had workshops in data visualization and analytics. See <https://sites.google.com/g.clemson.edu/vizlab/home?authuser=0> for details.

Palmetto Cluster is Clemson University's high performance computing resource. People who run the Palmetto Cluster offer training in R, Python, and machine learning in these languages, among other things. See <https://docs.rcd.clemson.edu/training/category/workshop-catalog> for the catalog. The Clemson Center for Geospatial Technologies (CCGT) currently offers eleven free workshops to train students in geographic information systems and enable them to earn certificates. Graduate students can access services and programs of Clemson's Center for Career and Professional Development. Clemson has "great career services" among colleges and universities in the U.S. according to the 2021 Princeton Review, and has earned this superlative rating for the past ten years. Clemson also ranked 3rd best among public universities for internships, according to the Review. The Michelin Career Center, which is part of the Center for Career and Professional Development, has various informational services for graduate students. The Graduate School has its own set of online resources for professional development and career planning called Grad360°. The graduate coordinator and departmental chair occasionally provide our students with information about job openings.

To improve their study methods, time management, and test preparation, graduate students can use resources of the Academic Success Center, such as success strategy worksheets. The beautiful and spacious new buildings of the Wilbur O. and Ann Power College of Business also enhance the education and professional development of our graduate students.