Agriculture (MS)

Graduate Student Handbook
2023-2024

Contents

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)

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)

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

Overview of Program

The Master of Science in Agriculture (M.S.) is designed as an applied research degree program that will fulfill the needs of the agricultural and natural resource sectors of the South Carolina Economy. The M.S. program will offer both a thesis and non-thesis option. Graduates will contribute significantly to improving the technical and economic competitiveness of agribusiness, advancing economic development and growth, and the educational needs of the state. The program offers two-degree concentrations in (1) Agricultural Systems Management and (2) Agricultural Education. The first option allows a student to focus on the design and maintenance of equipment and processes critical to the long-term sustainability of these industries. The second option provides students the opportunity to combine their previous knowledge of agriculture and natural resource management with educational principles to better serve client needs ranging from educating youth to educating the farm community. The M.S. program provides advanced training and education to students interested in expanding their knowledge and expertise in the promotion and growth of South Carolina's agricultural economy and/or the protection and efficient management of the state's valuable environmental and natural resources.

Agricultural Education Concentration:

A 2018 Needs Assessment of secondary agricultural educators in South Carolina found that the majority are in their first ten years of their career. Secondary agricultural educators seeking a Master's often desire to strengthen their professional standing in their profession. Teachers seeking advancement in their positions will benefit from research methods coursework (AGSC 8890) as well as program development (AGED 6400). Senior faculty in secondary agricultural education programs

serve as leaders in the program's accreditation review and coursework earned at the master's level will assist those teachers in providing needed assessment and benchmark development. Employers of the secondary agriculture teachers earning a Master's of Agricultural Science include Career and Technology Educator (CTE) Directors with skills for their teachers to develop community needs assessment and an advisory committee that will guide in the program development/revision process. Others seeking the agricultural education concentration would include cooperative extension agents. One of the roles of a cooperative extension agent is to link Change Agents and Opinion Leaders to the farmers. Part of the program in the agricultural education concentration will engage students in coursework and applied activities to strengthen this concept (AGED 8010).

Agricultural Systems Management Concentration:

Agricultural Systems Management undergraduate degrees across the country (or similar named programs such as the Agricultural Mechanization and Business Program at Clemson University) are very diverse programs that cover a wide range of subject matter. Subject matter consists of courses such as electrical system design, building structures, land surveying, irrigation design, hydraulic system design, computer controls, material handling and processing, soil and water conservation, ventilation design, waste management, business/marketing/finance, etc. Due to this broad depth of knowledge that typical Bachelor's degrees provide, both students and employers would like to have the opportunity for more specialized education. By having a Master level degree option, students would be able to specialize in a particular area of interest. With the course requirements as set forth with this proposed concentration in Agricultural Systems Management, students would be able to tailor their individual coursework around a particular field of interest. By having this more focused advanced degree, marketability to employers would increase and these students would be able to field more advanced positions within firms, not just entry level. For employers, these individuals with their focused degree and broad undergraduate knowledge base make excellent team/project managers. They have an understanding of each member of the team yet have the ability to focus all talents on the overall objective of the project at hand.

Goal

The Masters Degree in Agriculture has several primary objectives. The Program delivers academic and technical knowledge and experiences needed for success in a technological agricultural industry and world. The Program builds upon students' prior knowledge to enhance the use and understanding of quantitative and qualitative data collection skills. In addition to these skills, the program strives to increase students' capacities to communication in both written and oral forms. To broaden their knowledge, the Program seeks to have students recognize their role in society and the social and cultural consequences of practice in their profession. And as part of any graduate degree, the Program focuses on developing scientific literacy by independently assessing, interpreting, and summarizing literature and other sources of knowledge on a research topic.

The student learning outcomes based on these objectives are as follows:

1. Students will be able to demonstrate advanced knowledge/expertise in agricultural education or agricultural systems management.
2. Students will demonstrate quantitative/qualitative skills in the use of data collection and analysis techniques to conduct research in agricultural education or agricultural systems management.
3. Students will develop written and oral communications of quality, as consistent with the focus of the agricultural education and agricultural systems management professions.
4. Students will demonstrate and participate in intellectual/ organizational aspects of their respective professions.
5. Students will conduct independent research resulting in an original contribution to knowledge in agricultural education and agricultural systems management professions.

What Graduates do

Concentration in Agricultural Education

Graduates earning a Master's in Agriculture with a concentration in Agricultural Education are often hired into many facets of agricultural service and education in South Carolina. Those seeking a career in the cooperative extension service are informed that a master's degree is preferred and many of those decide to seek a Master's in Agricultural Education. A lot of our coursework at the graduate level aligns with many of the responsibilities cooperative extension agents have so the Master's in Ag Ed has traditionally been favored by many. An overwhelming majority of those employed with the cooperative extension completed their graduate work with Clemson's agricultural education program. Agricultural Educators in secondary and post-secondary schools across South Carolina are also strongly encouraged to complete a master's degree. The Master's also impacts professional development for the secondary agriculture teachers as it increases their pay, keeping them in the profession.

Concentration in Agricultural Systems Management

Graduates earning a Master's in Agriculture with a concentration in Agricultural Systems Management also have a variety of career options throughout the agricultural production/services sectors. Positions often include managers in production or processing and equipment operations. Some of the businesses include farm and industrial equipment companies, food processing plants, cotton gins, construction companies, grain and seed companies, livestock feeding operations, irrigation companies and manufacturers. Over the past several years, even though we have been able to place nearly all of our undergraduate students into the job market, one issue many employers

have mentioned is while they love the breadth of knowledge our students have, it would be great if they had more in-depth knowledge into a particular area that the employer focused on.

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 Agriculture.

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 Agriculture 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. You are **required to** identify a faculty member willing to serve as your major advisor and indicate that in your application.

GRE Score:

Admitted students usually have a combined score of 300 or higher, for verbal and quant and 3.5 or higher for analytical writing. Any applicant with a total GRE score (Verbal and Quantitative combined) or an analytical writing score below these levels must be able to submit exceptional supporting materials to have a competitive application (transcript, reference letters, and other supporting documents such as published papers).

GPA:

A cumulative grade point average of 3.0 from undergraduate degree institution and Master's degree institution (if applicable).

TOEFL (international students):

Because of the strong communication component of graduate degree programs, non-native speakers of English should have a minimum TOEFL score of 80. IELTS can be taken in lieu of TOEFL. Minimum score accepted on the IELTS is 6.5.

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, with a delay in student VISAs, international students should apply a month earlier than these deadlines.

Support Mechanisms

Students are typically funded through RAs and TAs. 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

A master's degree program in Agriculture shall consist of a minimum of 30 semester hours of graduate credit (6 hours of thesis research) and must include core courses and be approved by the student's Graduate Advisory Committee. For the Master of Science (MS) degree, at least one half of the total graduate credit hours required by the Graduate Advisory Committee, exclusive of thesis research, must be selected from courses numbered 8000 or above.

Prerequisite courses must be completed before admission as a graduate student, whereas corequisite courses may be taken concurrently but must be completed before receipt of the master's degree.

It is expected that a student may choose non-program courses as part of their plan of study. These decisions are normally made with your major advisor and are designed to enhance your understanding of your emphasis area. Credit received for graduate-level courses taught by other departments may also be counted toward your degree, provided those courses involve subject matter that is relevant to your degree program.

You should consult with and receive approval from your major advisor before taking such classes with the intention of having them count toward a graduate Agriculture degree. If you are supported on either a research or teaching assistantship, you must obtain approval from your Major Advisor prior to taking any such class while working toward a graduate Agriculture degree.

Non-Thesis Option

Master's students may be permitted to elect the non-thesis option of the Agriculture MS program. In this event, the master's degree program consists of a minimum of 30 semester hours of graduate coursework. A minimum of 15 hours must be at the 8000-level or above.

For the MS non-thesis option, students are expected to work with their committee chair to develop a deliverable upon completion of their studies. This deliverable can be completion of a written and/or oral exam, a project-based presentation at a professional meeting or conference, a special report, an Extension circular, annotated bibliography, curriculum on determined subject, instructional manual, training guide, design aid, handbook on a specified topic, needs assessment or other products as determined between the graduate student and their advisor/committee.

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

Candidates for a master's degree must pass a final defense at least three weeks prior to the date of the convocation at which the degree is to be conferred. The final date for this examination is established each semester by the Graduate School. The examination is conducted by your Advisory Committee, but all faculty members are invited to participate. It is also required by the time of defense that candidate submit at least ONE peer reviewed manuscript.

You are required to send an abstract title, abstract, date, time and place, along with a listing of your committee members, via email to the Program Coordinator and the Graduate School two weeks prior to your defense. The Program Coordinator will notify the program faculty and other students in the program of the time and place of the examination at least ten days prior to the scheduled time.

The final defense, which is normally oral, demands a broad and penetrating interpretation of your research project, the reading list and/or your major and minor areas. The defense normally begins with a formal, departmental seminar followed by an oral examination administered by your advisory committee members.

Additional Requirements

Required Core Courses

A master's degree program in Agriculture with Thesis option shall consist of a minimum of 30 semester hours of graduate credit (6 hours of thesis research) and must include core courses and be approved by the student's Graduate Advisory Committee. For the Master of Science (MS) degree, at least one half of the total graduate credit hours required by the Graduate Advisory Committee, exclusive of thesis research, must be selected from courses numbered 8000 or above. Prerequisite courses must be completed before admission as a graduate student, whereas co-requisite courses may be taken concurrently but must be completed before receipt of the master's degree.

For the Agricultural Education concentration, the core courses consist of:

1. STAT 8010 — Statistical Methods I (3 credits)
2. AGED 8210 — Theories and Practices of Adult Education (3 credits)
3. AGSC 8890 — Research Methods in Agricultural Sciences (3 credits)
4. AGED 8010 — Systems for Technology Transfer (3 credits)
5. AGED 8910 — Clinical Research in Agricultural Education (6 credits)

For the Agricultural Systems Management concentration, the core courses consist of:

1. STAT 8010 — Statistical Methods I (3 credits)
2. AGM 8000 — Research Methodologies & Philosophy (3 credits)
3. AGM 8910 — Master's Research (6 credits)

A master's degree program in Agriculture with non-Thesis option shall consist of a minimum of 30 semester hours of graduate credit and must include core courses and be approved by the student's Graduate Advisory Committee. For the Master of Science (MS) degree, at least one half of the total graduate credit hours required by the Graduate Advisory Committee, exclusive of thesis research, must be selected from courses numbered 8000 or above. For the MS non-thesis option, students are expected to work with their committee chair to develop a deliverable upon completion of their studies. This deliverable can be completion of a written and /or oral exam, a project-based presentation at a professional meeting or conference, a special report, an Extension circular, annotated bibliography, curriculum on determined subject, instructional manual, training guide, design aid, handbook on a specified topic, needs assessment or other products as determined between the graduate student and their advisor/committee.
Prerequisite courses must be completed before admission as a graduate student, whereas co-requisite courses may be taken concurrently but must be completed before receipt of the master's degree.

For the Agricultural Education concentration, the core courses consist of:

1. STAT 8010 — Statistical Methods I (3 credits)
2. AGED 8210 — Theories and Practices of Adult Education (3 credits)
3. AGSC 8890 — Research Methods in Agricultural Sciences (3 credits)
4. AGED 8010 — Systems for Technology Transfer (3 credits)
5. AGED 8040/8041 — Special Problems/ Special Problems Laboratory (6 credits)

For the Agricultural Systems Management concentration, the core courses consist of:

1. STAT 8010 — Statistical Methods I (3 credits)
2. AGM 8000 — Research Methodologies & Philosophy (3 credits)

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.