

Agriculture (PhD)

Graduate Student Handbook
2021-2022

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Clemson® University

DEPARTMENT OF AGRICULTURAL SCIENCES

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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://www.clemson.edu/graduate/files/pdfs/gs_policy_handbook.pdf) (https://www.clemson.edu/graduate/files/pdfs/gs_policy_handbook.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

The purpose of the Doctor of Philosophy (Ph.D.) in Agriculture is to develop leaders of professions in agricultural systems and agricultural education. This will be accomplished by preparing graduates for academic and technically demanding agricultural positions in academic, government and the private sectors of the economy. Specifically, this degree is designed to add significant depth to an individual's understanding of pedagogy and scholarship in agricultural and natural resources, as well as technological and policy-based issues. The target audience of the doctoral program will include, but will not be limited to, secondary agricultural educators and cooperative extension agents seeking to pursue post-secondary academic education. Professionals from agricultural industries and governmental agencies are also expected to be potential candidates in the agricultural systems management or the agricultural education concentrations for the Ph.D. program.

Goal

The PhD in Agriculture has several primary objectives. The Program works to develop a foundation for each student's personal philosophy of the research process by synthesizing and evaluating appropriate philosophical models. The Program aims for students to organize, conduct, and evaluate activities that further the profession's missions, provide growth opportunities for its practitioners, and foster development of a vision. In addition to this, students will be able to monitor the development of trends and administration of policies in and outside of the related disciplines and explain their impact or potential impact. Finally, the Program looks to develop graduates' skills in scholarly research and writing for their respective professions.

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

1. students will be able to apply knowledge of philosophical and historical foundations of agricultural education and agricultural systems to develop personal philosophy statements.
2. students will be able to demonstrate advanced knowledge/expertise in agricultural education or agricultural systems management.
3. students will demonstrate and participate in intellectual/ organizational aspects of their respective professions.
4. students will conduct independent research resulting in an original contribution to knowledge in agricultural education and agricultural systems management professions.

What Graduates do

Ph.D. — Concentration in Agricultural Education

The primary focus of agricultural education programs in universities across the U.S. is to prepare agriculture teachers for secondary school programs. A continued shortage of secondary agriculture teachers results in additional pressure on these teacher education programs. Employment areas for PhD graduates include: 4-H youth specialists, community college faculty, extension county and district directors, historical center directors, non-profit organization directors and university instructors and faculty.

Ph.D. — Concentration in Agricultural Systems Management

Traditionally, university programs with faculty teaching in undergraduate agricultural systems management were found in every state at Land-Grant Universities. Employment areas for PhD graduates include: university instructors and faculty, Extension specialists, extension county and district directors, and as researchers at various companies such as John Deere, ADM, Bayer, CAT, etc.

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: 3 years for a PhD 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 PhD 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.

GRE Score:

Combined scores of the two objective sections (verbal and quantitative) of the Graduate Record Examination (GRE) should be 300 if taken on or after 8/1/2011. Applicant score on the analytical writing section of the GRE should be 3.5 or higher. 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

The course requirements for the PhD in Agricultural Systems Management concentration covers a diverse subject matter with respect to expertise. Subject matter covered under this Program range from natural resources, power and machinery, instrumentation and controls, to precision agriculture. With this diverse subject matter, the faculty prefer that flexibility be in the curriculum so that students can take courses in their subject area with the approval of the Major advisor. The basic statistics and methodology courses meet the fundamentals we wish all these students have and then based on the dissertation focus, tailor the courses to meet those needs.

Number of Credit Hours Needed

A doctoral degree program in Agriculture shall consist of a minimum of 30 (MS equivalent) + 36 semester hours of graduate credit (18 hours of which must be dissertation research) approved by the student's Graduate Advisory 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 doctoral degree.

Core Courses

All doctoral students must register for seminar for two semesters. Seminar taken during the MS degree does not count towards the two required for a PhD.

Courses Outside Discipline

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 approved by your Graduate Advisory Committee 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 PhD in 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 PhD in Agriculture degree.

Advisory Committees

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

Preliminary Exams

Not Applicable

Comprehensive Exam

The comprehensive examination will serve to assess your ability to apply the knowledge assimilated in coursework to problems in an area of specialization. Examination questions will be prepared by your Graduate Advisory Committee and will normally be selected from material covered in courses typically included in a master's plan of study as well as PhD coursework. Your Major Advisor coordinates all aspects of your comprehensive exam.

You should take these {written and oral} examinations no later than 18 months after you matriculate into the PhD program. Part-time students or students having extenuating circumstances may request a variance on the timing of the exam. You must take written and oral exam(s) as part of your comprehensive examination. Material covered on the comprehensive exam is at the discretion of your Graduate Advisory Committee.

Grading the Comprehensive Exam

All members of the examining committee for a given exam will grade your performance on that exam and report the results to your Major Advisor. Grades of Pass or Fail will be assigned for each exam based on the consensus of each examining committee. You will be required to meet any deficiencies on written exams before proceeding through the PhD program.

Expectations for Thesis/Dissertation

An oral defense given at least three weeks before graduation will serve to examine your dissertation research. (See deadlines set by the Graduate School for the specific date for each term at www.grad.clemson.edu/deadlines.php.) You are required to provide a broad and penetrating interpretation of your research project and conclusions. Your committee members should receive a final draft copy of the dissertation at least ten working days before the examination. This examination will be conducted under the authority of your Graduate Advisory Committee. All faculty members will be invited to participate in the defense and to provide comments to your Graduate Advisory Committee. It is also required by the time of defense that candidate submit at least TWO peer-reviewed manuscripts.

Successful completion of this defense and your dissertation will result in a recommendation (GS7D Form) by your Graduate Advisory Committee to the Graduate School that the PhD degree be awarded. Unsatisfactory performance on the final defense will result in a requirement for complete re-examination (with or without recommendations for additional work) or dismissal. You must also be prepared to answer basic questions about your discipline beyond your area of specialization. You will be expected to have in-depth knowledge in your selected research area. In addition, you are also expected to be ready to answer all pertinent questions in the area based on the courses taken at the time of the examination that the panel deems relevant to the area of the proposed area of research. The list of specific topics will be given to you after your Graduate Advisory Committee has reviewed your manuscript.

You must also be able to critique/defend approaches and methodologies you used and others cited in the literature.

Additional Requirements

Required Core Courses

A doctoral degree program in Agriculture shall consist of a minimum of 30 (MS equivalent) + 36 semester hours of graduate credit (18 hours of which must be dissertation research) approved by the student's Graduate Advisory 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 doctoral degree.

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

1. STAT 8020 - Statistical Methods II (3 credits)
2. AGED 8300 - Effective Teaching Methods in Postsecondary Agriculture (3 credits)
3. EDF 8770 - Experimental and Nonexperimental Research Methods in Education I (3 credits)
4. EDF 9790 - Qualitative Research in Education (3 credits)
5. AGED 8690 – Seminar (2 credits)
6. STAT 8040 OR STAT 8050 - Sampling OR Design and Analysis of Experiments (3 credits)
7. AGED 9910 - Doctoral Dissertation Research (18 credits)

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

1. STAT 8020 - Statistical Methods II (3 credits)
2. AGM 9910 - Doctoral Dissertation Research (18 credits)

The course requirements for the PhD in Agricultural Systems Management concentration covers a diverse subject matter with respect to expertise. Subject matter covered under this Program range from natural resources, power and machinery, instrumentation and controls, to precision agriculture. With this diverse subject matter, the faculty prefer that flexibility be in the curriculum so that students can take courses in their subject area with the approval of the Major advisor. The basic statistics and methodology courses meet the fundamentals we wish all these students have and then based on the dissertation focus, tailor the courses to meet those needs.

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.