

HANDBOOK OF

POLICIES AND PROCEDURES FOR

GRADUATE PROGRAMS

IN THE

DEPARTMENT OF AGRICULTURAL & APPLIED ECONOMICS

UNIVERSITY OF MISSOURI

REVISED

August 2010

TO: Agricultural Economics Graduate Students

Welcome to graduate study at the University of Missouri (MU). I hope your graduate study at MU will be both challenging and stimulating. It is intended to prepare you for a rewarding career in academia, agricultural business, government or international agriculture.

The graduate program provides the opportunity for you to complete a strong coursework and research program in one of a variety of subject matter areas. We have many exciting and visible research and outreach programs and I would encourage you to become acquainted with the breadth of activities taking place in both Agricultural & Applied Economics and the Division of Applied Social Sciences so that you can take advantage of them while you are here. The Department's policies for the graduate program are explained in this Handbook. It should be used in conjunction with the [Graduate Catalog](#). I urge you to become familiar with both.

Some of your best sources of information are your fellow graduate students and the files of the Department Graduate Student Organization. We urge you to work with its officers and become an active participant in the organization. Best wishes in your program.

Sincerely,

Michael Nolan
Division Leader

jlp

TABLE OF CONTENTS

Introduction.....	1
Selection of Advisers	1
Course Load	2
Graduate School Forms for the MS and PhD Degrees	2
Masters Programs.....	3
Agricultural Economics (with thesis)	3
Agricultural Economics (nonthesis)	4
Approval of Graduate Program of Study (M-1 Form).....	5
MS Thesis Oral Committee (M-2 Form)	6
MS Thesis and Non-thesis Examination (M-3 Form).....	6
Transition from the MS into the PhD Program.....	7
PhD Program.....	8
The PhD Core	8
Qualifying Examination.....	9
Qualifying Exam Results and Doctoral Program Committee (D-1 Form)	10
Plan of Study for the Doctoral Degree (D-2 Form)	10
General Fields and Specializations	11
Second-Year Paper Requirement.....	11
Dissertation Proposal and Comprehensive Examination (D-3 Form)	12
Final Examination (Doctoral Dissertation Defense) (D-4 Form)	16
Teaching Experience.....	16
Graduate Assistantships	17
Research Responsibilities	17
Research integrity	18
Teaching Responsibilities	19
Graduate Student Evaluation	19
Evaluation Criteria	20
Evaluation Procedures	21
Feedback and Appeals	21
Academic Program Evaluation, Termination Procedures and Appeals.....	23
Termination Due to Failing Required MS and PhD Exams	23
Termination Due to Poor Grades	24
Termination Due to Insufficient Progress.....	24
Termination Procedures	24
Appeals	25
Use of Departmental Offices and Facilities	26
Graduate Student Organization.....	26
Appendix: Required Forms for MS and PhD Programs	27

GRADUATE STUDENT HANDBOOK

DEPARTMENT OF AGRICULTURAL AND APPLIED ECONOMICS
UNIVERSITY OF MISSOURI

Introduction

This handbook explains policies and procedures for graduate programs in the Department of Agricultural & Applied Economics. You should also consult the Graduate Catalog on the Graduate School web site at <http://gradschool.missouri.edu> for other University procedures to supplement those given here.

This handbook is designed to aid you in planning and executing your graduate program. The program should be developed as soon as possible in consultation with your faculty adviser. Information presented below outlines the department's role in graduate education as well as your responsibilities.

Changes to the policies and procedures are made from time to time by the departmental faculty, including the Graduate Studies Committee. Any subsequent changes will be reported in revisions of, or supplements to, this handbook.

Selection of Advisers

In consultation with the Graduate Studies Committee, the Director of Graduate Studies assigns each new student a temporary adviser. If you are awarded a departmental assistantship, the faculty member you will work for will act as your temporary faculty advisor. During the first year in the program, you should become familiar with the research programs of the faculty in the department. When you choose a permanent adviser, the adviser will assist you in designing a program of study and, subsequently, supervise the development of your thesis/technical paper or dissertation. You will choose a committee and will need to make sure all paperwork is filed in a timely manner. Your advisor can assist you in choosing committee members and completing forms for the Director of Graduate Studies and Graduate School.

Course Load

According to the Graduate School catalog, the minimum credit hours for fulltime enrollment status are 9 hours in the fall and spring semesters and 4 hours in the summer. If you are not on an assistantship or fellowship, the maximum registration in the Graduate School is 16 credit hours per semester or 9 credit hours for the summer session.

If you are receiving a half-time or quarter-time assistantship, the maximum number of credits you may carry is 12 credit hours during the fall or spring semester and the minimum number is 6 hours. During the summer the maximum is 6 credit hours and the minimum is 3 hours. Generally students register for 9 credits during the fall and spring semesters and 3 hours during summer.

PhD students who have completed their comprehensive exam may enroll for 2 hours for each fall and spring semester and 1 hour for summer.

Note that the number of hours you carry may impact financial aid status. In addition, if you are an international student, check with the International Center about the minimum enrollment requirement to maintain your visa status.

Graduate School Forms for the MS and PhD Degrees

The Graduate School requires that MS and PhD students turn in specific forms which demonstrate progress through the graduate program. You are responsible in ensuring that all forms are completed and turned in to the Graduate School. The Graduate School will not allow you to graduate unless all forms are on file at the Graduate School.

The forms for the Masters degree are designated M-1, M-2, and M-3. For the doctoral program the forms are designated D-1, D-2, D-3 and D-4. All forms are available from the department secretary for graduate programs, the Director of Graduate Studies, the Graduate School's website at <http://gradschool.missouri.edu> and the Blackboard website at <http://blackboard.missouri.edu>. The general procedure is that when you have completed each form and obtained your adviser's signature, you should submit the form to the graduate studies secretary for signature of the Director of Graduate Studies and transmission to the Graduate School. Information about the content of forms and timing of their completion is below and in the appendix.

Masters Programs

Two options are available for the Master of Science (MS) program: An MS in Agricultural Economics with thesis and an MS in Agricultural Economics without thesis.

The undergraduate prerequisites for the thesis and nonthesis MS options are: (1) at least 9 semester hours credit in economics, agricultural economics or equivalent, (2) a course in differential calculus, and (3) a statistics course. If you have limited background in agricultural economics, you may be required to take certain courses without graduate credit (regardless of the course number) to correct these deficiencies.

A minimum of 30 credit hours of graduate credit must be completed for either the MS degree with thesis or the MS degree without thesis. Other Graduate School degree and residency requirements for the MS program are the same for both options: (1) At least 24 graduate credit hours must be taught by MU faculty, (2) At least 15 hours must be in courses numbered at the 8000 or 9000 level; and (3) No more than 12 credit hours of the 30 hour minimum can be in a combination of Research or Problems courses. You are responsible for making sure that coursework meets the departmental and Graduate School requirements.

Agricultural Economics (with thesis)

The minimum program for the MS degree with thesis is 30 hours as follows:

- Econ 7351 Intermediate Microeconomics (Econ 7332 may substitute)
- Econ 7353 Intermediate Macroeconomics
- Econ 7371 Introduction to Econometrics or equivalent (e.g., Stat 7510 Applied Statistical Models I)
- 6 hours of AgEcon 8090 Masters Thesis Research
- 15 hours of electives

Note that 9 of the 15 hours of electives must be at the 8000 or 9000 level, and no more than 6 of the 15 hours of electives can be in AgEcon 8085 Masters Problems or AgEcon 8090 Masters Thesis Research.

If you are seriously considering pursuing a PhD in Agricultural Economics, Economics or a related field, you should take courses that will best prepare you for PhD studies. Specifically, you should substitute the micro and macro theory courses with more advanced theory courses, such as Econ 8451 Microeconomic Theory and Econ 8453 Macroeconomic

Theory. In addition, you should take as electives Econ 7370 Quantitative Economics and Stat 7710 Introduction to Mathematical Statistics.

A consenting three-member committee, which includes your adviser and consists of at least one member from outside the department, supervises and approves the thesis research and administers the final oral examination (explained below). The MS thesis has at least two major objectives. The first is to teach you how to assemble data, formulate a researchable hypothesis, organize and analyze data, and write a substantial paper reporting the results of the research. The second is to provide research data and results in a form useful and accessible to professionals and/or the general public at this and other institutions, including policymakers.

To produce a thesis which achieves the degree and major objectives, you should consider the following general guidelines. First, the MS thesis should be prepared with the organization, degree of analysis, and style of presentation that can be readily converted into a professional publication. Second, the thesis should be consistent with a standard format that includes a clear statement of the economic problem and research objective(s), and a thorough review of the literature. You should work closely with your adviser concerning the nature and style of analysis and writing. Note that length is not the determining factor in approval of a thesis. A thesis should cover what is needed at the appropriate level of detail, which is determined by the adviser and committee.

Agricultural Economics (nonthesis)

If you have accepted a graduate research assistantship or fellowship from the Department of Agricultural & Applied Economics, you are not eligible to enroll in the nonthesis MS program. Exceptions shall be ruled by the Graduate Studies Committee.

The minimum program for the MS degree without thesis is 30 hours as follows:

- Econ 7351 Intermediate Microeconomics (Econ 7332 may substitute)
- Econ 7353 Intermediate Macroeconomics
- Econ 7371 Introduction to Econometrics or equivalent (e.g., Stat 7510 Applied Statistical Models I)
- 21 hours of electives

Note that 15 of the 21 hours of electives must be at the 8000 or 9000 level, and no more than 12 of the 21 hours of electives can be in AgEcon 8085 Masters Problems. You may enroll in

AgEcon 8450 Masters Non-Thesis Research, but these credits do not count toward the required 30 hours of coursework.

In addition to meeting these specific course requirements, you are required to prepare a technical research paper that must be approved by a committee consisting of your adviser and two other faculty members of the department as approved by the Director of Graduate Studies. The quality of the research and writing of is paper is expected to be comparable to that of the MS thesis. However, unlike the Masters Thesis, the nonthesis technical paper is not submitted to the Graduate School, and a public, oral defense of the paper is not required. Your committee will hold a defense of your paper.

Approval of Graduate Program of Study (M-1 Form)

Your graduate program of study is an outline consisting of the courses you have and will take as a graduate student and a plan to complete the thesis or nonthesis writing requirements. It should be developed in consultation with your adviser and committee during your first year in the program in order to ensure that you will meet graduation requirements. Approval of your graduate program of study is at the discretion of the major adviser, the Director of Graduate Studies and Dean of the Graduate School. The proposed program of study for thesis and non-thesis MS students should be placed on the **Program of Study for Master's Degree (Graduate School form M-1)** and then submitted to the major adviser. When the major adviser's signature has been obtained, the form is submitted to the secretary for graduate studies for the signature of the Director of Graduate Studies and transmission to the Graduate School.

The department exercises selection standards in reviewing the program of study of students with mediocre undergraduate records, or those experiencing some difficulty in their initial graduate courses. The proposed program of study (M-1 form) will not be approved by the Director of Graduate Studies if you have not demonstrated the ability to do satisfactory masters-level work, such as indicated by course grades.

You should always have a current copy of your Program of Study form. If you wish to change your program, you must consult with your major adviser. The change must be recorded on a Program of Study Substitution Form, approved and signed by the major adviser, and approved by the Director of Graduate Studies who will then submit a copy to the Dean of the Graduate School. All forms are available from the Graduate School website at

<http://gradschool.missouri.edu> as well as on the department's graduate student section on Blackboard at <http://blackboard.missouri.edu>.

MS Thesis Oral Committee (M-2 Form)

The MS thesis examining committee consists of at least three faculty members, which includes your adviser and at least two other members, one of whom must come from outside of the Department of Agricultural & Applied Economics. You should consult with your adviser in choosing committee members, but you must then seek each proposed committee member's acceptance. The selection of the thesis committee is formalized by completing the **Request for Thesis Committee (Graduate School form M-2)** and submitting it to your adviser, the Director of Graduate Studies and the Graduate School for approval. The committee is appointed for the express purpose of ascertaining that your academic accomplishments merit the MS degree, and that the successful completion of the courses in your program of study has resulted in a unified and coordinated effort in your training as an agricultural economist. The M-2 Thesis committee form is only required for students writing a thesis; non-thesis students do not complete the M-2 form.

MS Thesis and Non-thesis Examination (M-3 Form)

MS students writing a thesis defend their research in an oral examination, the purpose of which is to give you an opportunity to demonstrate your accomplishments before a representative group of faculty. The oral examination generally consists to two parts. The first part is a seminar presentation of your thesis research and is open to faculty and graduate students. The second part is restricted to you and your examining committee. During the examination, you may be asked questions based on subject matter included in coursework taken for the degree as well as your thesis research. The examination ordinarily will involve one and one-half to two hours. Suggestions for preparation for the examination may be obtained from your adviser. The report of the results of the examination is made to the Director of Graduate Studies and the Graduate School on the **Report of Master's Examining Committee (Graduate School form M-3)**. In addition to the electronic copy submitted to the Graduate School, you must also provide an abstract of your MS thesis to the Director of Graduate Studies and one hard-bound copy for the departmental library.

Students completing a non-thesis paper must also pass an examination of their research, but this is done before your committee; it is not open to the public. During the examination, you may be asked questions based on subject matter included in coursework taken for the degree as well as your paper. The committee may ask you to begin the examination by making an oral presentation of your paper. The examination ordinarily will involve one and one-half to two hours. Suggestions for preparation for the examination may be obtained from your adviser. Like the MS thesis results, the results of the non-thesis examination are reported to the Director of Graduate Studies and the Graduate School on the **Report of Master's Examining Committee (Graduate School form M-3)**.

Students who fail the MS thesis or non-thesis examination will be terminated from the program.

Transition from the MS into the PhD Program

Students admitted into the MS program may be considered for a change of degree program (MS to PhD). However, such a change will become official only after all requirements of the MS degree have been completed and if PhD course prerequisites are met (see list below). Specifically, you must complete courses listed on the Program of Study (Graduate School M-1) and the Masters thesis. MS students who wish to transition into the PhD program should notify the Director of Graduate Studies by completing the **Application for Change from MS to PhD Degree Program** form (available on Blackboard or from the Director of Graduate Studies or graduate programs secretary), and the request will be transmitted to the Graduate Studies Committee, which reviews and makes all acceptance decisions. The funding decision for the PhD is separate from the funding decision for the MS, so if you have funding for your MS there is no guarantee that you will receive funding for the PhD, even if you are accepted into the PhD program.

MS students who have been accepted for the PhD program are expected to place first priority on completion of the Master's thesis. Any coursework beyond that listed on their Master's Program of Study must be approved by the thesis adviser, temporary PhD adviser, and the Director of Graduate Studies.

PhD Program

Minimum requirements for admission into the PhD program are a Bachelor's degree (BA or BS) or equivalent; undergraduate GPA 3.0; GRE verbal plus quantitative 1100. For foreign applicants: TOEFL 550 paper-based, 213 computer-based or 80 internet-based.

Prerequisites for the PhD program include: (1) Intermediate microeconomics, (2) Intermediate macroeconomics, (3) Quantitative mathematical economics, (4) Econometrics or regression and correlation analysis, (5) Statistics and (6) Calculus. If you have not met the prerequisites, you are required to complete this material before being formally admitted into the program. It is assumed that the basic concepts of probability theory, hypothesis testing, and regression analysis are understood and can be appropriately applied.

The University of Missouri requires a minimum of 72 credit hours beyond the baccalaureate degree for the PhD. If you are admitted into the program with a Masters degree from accredited institutions other than the University of Missouri, you may receive credit towards the PhD program requirements for your Masters program. A recommendation to this effect should be made by your Doctoral Program Committee to the Director of Graduate Studies and the Graduate School Dean using form D-2 (Program of Study form). In no case shall more than 30 credit hours from your Masters degree program be credited to your doctoral studies.

The minimum program for the PhD degree is the following:

PhD core (7 courses)	21
Field or specialization courses	6
Doctoral dissertation research (AgEcon 9090)	12
Electives	<u>33</u>
Total	72

In order to satisfy the University's residency requirement, you must complete at least two 9 hour semesters or three 6 hour semesters in an 18 month period at the University of Missouri. In addition, beyond the courses listed in the PhD core, you must take at least 6 credit hours within the Department of Agricultural & Applied Economics.

The PhD Core

The core is designed to give you a solid foundation in economic theory and quantitative methods, with an emphasis on applications to problems relating to agriculture, development,

natural resources, and policy. Specific courses for the PhD core are the following:

- AgEcon 9040 Advanced Microeconomics Theory & Applications I
- AgEcon 9042 Advanced Microeconomics Theory & Applications II
- AgEcon 8050 Economics of Institutions and Organizations
- AgEcon 9230 Welfare Economics
- Econ 8472 Econometric Methods I
- Econ 8473 Applied Econometrics or another 8000 or 9000 level empirical methods course appropriate to your chosen specialization (e.g., Econ 9473 Econometric Methods II, Econ 9474 Econometric Methods III, Econ 9476 Microeconometrics, Econ 9477 Time Series, Psych 9710 Multivariate Statistics in Psychology, Psych 9720 Latent Variable Models in Statistical Analysis)
- AgEcon 8010 Research Methodology

The typical sequencing of PhD core courses is as follows:

Year 1 Fall Semester

Advanced Micro I
Economics of Institutions and Organizations
[Elective]

Year 1 Spring Semester

Advanced Micro II
Welfare Economics
Econometrics I

Year 2 Fall Semester

Second econometrics/methods course
[Field course]
[Elective]

Year 2 Spring Semester

Research Methodology
[Field course]
[Elective]

Qualifying Examination

After completing the first year sequence, you must pass a written qualifying exam administered by a committee formed under the direction of the department's Graduate Studies Committee. The exam will cover the content of the first-year PhD core courses (both microeconomic theory courses, new institutional economics, welfare economics and basic econometrics).

The exam is given in late May or early June following the first complete year of studies, with a retake, if needed, offered in August. The exam will be graded on three levels: pass, marginal pass or fail. If you fail the exam in May, you must retake the exam in August. If you fail the exam in August you may not continue in the PhD program. However, you may consider the following options: (1) completing the Masters degree in Agricultural Economics if you have not already done so; (2) applying and transferring to another doctoral program in the university (e.g., Public Affairs, Rural Sociology, etc); or (3) appealing the decision to terminate you from the PhD program. The procedures for appealing termination from the program are outlined in another section of this handbook.

Qualifying Exam Results and Doctoral Program Committee (D-1 Form)

Following successful completion of the qualifying exam, you should complete a **Qualifying Examination Results and Doctoral Committee Approval Form (Graduate School Form D-1)**. The purpose of this form is to show your name as it should appear on the diploma, and indicate the correct degree, degree program, minor or collateral field (if applicable), previous degrees, results of the qualifying process, and your Doctoral committee members including adviser. This form is also used for the Graduate School to notify departments if your official transcript(s) have not yet been received.

The Doctoral Program Committee consists of four graduate faculty members, three of whom must come from the Department of Agricultural & Applied Economics and one faculty member external to the Department. In addition, the chair of your committee (your thesis advisor) and at least one other member of the committee must be members of the doctoral faculty. The doctoral committee is expected to approve your Program of Study, recommend credit for Masters courses if applicable and administer the comprehensive examination and the dissertation examination. Moreover, it is expected that all committee members will be intimately involved in your program.

Plan of Study for the Doctoral Degree (D-2 Form)

Sometime during your second year (summer between first and second year is best), you should develop your graduate program of study in consultation with your advisor and Doctoral Program Committee. Your program of study includes courses you have completed and expect to

take at MU, including the PhD core, field and specialization courses, and electives, as well as proposed transfer courses and credits for your MS degree (if applicable). After you have developed your plan of study, you must complete the **Plan of Study for the Doctoral Degree Form (Graduate School Form D-2)**, obtain your advisor's signature, and then submit it to the graduate studies secretary or Director of Graduate Studies. The Director of Graduate Studies will review the program and suggest any changes needed to meet departmental and Graduate School requirements. The program of study and D-2 form will then be sent to the Graduate School.

General Fields and Specializations

As a PhD student, you must choose a specialization in one of three general field areas offered by the Department of Agricultural & Applied Economics: Agribusiness, Public Policy Analysis, and Resources and Development. You must complete a minimum of 6 credit hours of coursework designated for your field area. Specific areas of specialization within the fields are determined in consultation with your adviser and Doctoral Program Committee.

As part of the comprehensive exam, you will be tested for competence in your field area in agricultural economics. Competence includes the ability to apply general economic theory and quantitative methods to agriculturally-related problems and issues. Additional information on the comprehensive exam is given below. In addition to minimum course requirements, competency in economics can and should be obtained through elective coursework, reading professional literature including books, journals, reports and other publications, plus attendance at seminars and involvement in research projects or selected individual study.

Second-Year Paper Requirement

The PhD is an academic degree that signifies competency in theoretical, empirical, or applied research. You gain experience in research by doing it. Therefore, to help you gain confidence in developing and conducting independent research, you must write a research paper of publishable quality during the second year of your program. This paper must be "sole authored," meaning that it cannot be co-authored with your adviser or other faculty member or student. The paper should involve original work, either theoretical or empirical. It should not be merely a literature review, a reformulation of an existing publication (e.g., to update a regression analysis of a published paper with new data), or an abridgement of your MS thesis (although the

paper could be based on, or build from, your thesis research). You may, of course, seek advice from your adviser or other members of the faculty as to what constitutes the appropriate scope and quality of exposition for your paper. The second-year paper may be used as a chapter in your dissertation (e.g., one of three essays in a three-essay dissertation, if that is acceptable to your committee). Because publications are important in the academic job market, the second-year paper requirement will also contribute to your future employability if you publish it. At a minimum, submitting the paper to a peer-reviewed academic journal sends a positive signal to prospective employers.

The paper is due mid July of the summer after your second year in the program, submitted as an electronic file and hard-copy to the Director of Graduate Studies. It will be judged as either acceptable or unacceptable by an examining committee consisting of members of the Graduate Studies Committee. If the paper is judged unacceptable, the committee will provide comments on what you need to do to make the paper acceptable and when you should turn in the revision. You will not be allowed to complete the comprehensive examination and dissertation proposal until your second-year paper is judged acceptable by the review committee. To gain presentation experience and to gain additional input on your work, you are strongly encouraged to give a research seminar on your paper as part of the Lunch and Learn program of the Department.

Dissertation Proposal and Comprehensive Examination (D-3 Form)

You are required to write a dissertation on a subject approved by your Doctoral Program Committee. Your dissertation must include original research and be your own work. Your research and the written dissertation must conform to all Graduate School requirements. It is your responsibility to be familiar with these requirements (see <http://gradschool.missouri.edu/policies/doctoral/requirements/dissertation.php>). The members of the Doctoral Program Committee review the dissertation and affirm that the dissertation is ready for defense. Once the committee approves the dissertation in its written form, then you may schedule the final examination and oral defense of the dissertation.

In preparation for dissertation research you must prepare a dissertation proposal, take a written comprehensive examination and an oral examination. According to Graduate School policies, all three components of the procedure must be completed within **one month** of each

other. The written and oral exam and dissertation proposal will be evaluated by your Doctoral Program Committee. Results of the comprehensive examination and proposal defense are reported on the **Doctoral Comprehensive Examination Results Form (Graduate School Form D-3)**. Once the D-3 form is signed and turned in to the Graduate School, you are allowed to indicate your status as ABD (“all but dissertation”). You must be currently enrolled and the University must be in session at the time you take the comprehensive exam.

Dissertation Proposal

You prepare your dissertation proposal after completing the D-2 (Plan of Study) form. It must be completed, and the D-3 form signed, at least **seven months** before you expect to defend your dissertation.

The dissertation proposal summarizes and motivates your research objectives and outlines how you will achieve them. As such, the dissertation proposal serves two functions. First, it helps you organize your plans for conducting independent research. Second, it helps your dissertation committee (a) understand your research and how it contributes to the literature, and (b) assess the quality of the proposed research and the feasibility of completing it. One of the biggest challenges for a PhD student is defining a question that is narrow enough that it can be completed in reasonable period of time. A proposal of 20 to 25 double-spaced pages is generally adequate for describing your research plans. Specific details, such as length, content, and format of the proposal document, should be determined in consultation with your advisor and committee. Dissertation proposals should also be just that – proposals of what you plan to do and how you plan to do it; they should not be summaries of completed or nearly completed research projects. You should interact with your advisor and committee members early enough while working on your proposal so that they can have input in the research.

There are two types of dissertations. The appropriate form for your dissertation will be based on discussions between you and your committee.

The first type of dissertation is organized around a single topic and typically is a lengthy monograph of your research findings. The advantage of the single-topic (monograph) dissertation is that research efforts can be focused on one topic. A disadvantage is that turning the monograph into one or more published research articles in peer-reviewed journals may

require substantial re-writing. Some PhD candidates turn their single-topic monographs into published books rather than shorter research articles.

The second type of dissertation is a compilation of three narrow-topic essays that are loosely related to a single, general theme or topic. This theme should be explained in an introduction to the three essays. The dissertation should also contain a concluding chapter summarizing findings and collective contributions to the literature. The length and scope of each “essay” is typically comparable to a single published research article, so the three-essay dissertation essentially means that PhD candidates are writing three journal publishable-quality papers. The advantage of the three-essay dissertation is that it is relatively easy to submit articles to peer-reviewed journals after the dissertation research is completed. A disadvantage for PhD students may be finding and maintaining a research focus on each essay.

The dissertation proposal generally consists of five parts: (1) an introduction, (2) a focused review of the literature, (3) the theoretical or conceptual framework, (4) the methods and procedures you will use, and (5) an evaluation of likely problems and solutions. The components of the proposal can be modified to reflect your specific research objectives. For example, if you are writing a three-essay dissertation, you should present a specific research objective along with a justification, literature review and proposed methods for each essay.

The purpose of the introduction is to explain the general research topic your project relates to as well as the specific research question you plan to study and why the project is important.

The literature review is a summary of existing (published) research that is related to your project. You use the literature review to demonstrate your mastery of the literature and to position your research within existing scholarship. Therefore, in addition to reviewing what is already known about your general topic, you also want to explain what gaps exist within the literature so that it is clear to readers what your research contribution is – that is, how and where your research fits into the body of published knowledge.

The conceptual framework is an overview of the economic theory or models that you plan to use or develop for your research. If your research has an empirical component, you will also use the conceptual framework to generate tentative hypotheses that will allow you to answer your overall research question. The framework will also guide the data you will collect and the methods and procedures you will use in analyzing them.

The purpose of the methods and procedure section is to describe how you will accomplish your study, what data and analytical (e.g., regression) tools you will use and why. This section is particularly important for dissertation work that is empirical. If you are collecting original data, you need to explain how you intend to collect the data. If you are using existing data, you need to explain where the data will come from.

In the final section of the proposal you make an assessment of what problems you may likely encounter and tentative plans for overcoming those problems.

Comprehensive Examination

After you submit the proposal to your committee, your dissertation advisor will work with the other committee members to draft the written exam. The content of the written exam should be individualized based on your field specialization/coursework and the dissertation topic. Although these guidelines for the written exam have been developed by the GSC, the dissertation committee may modify them after notifying the student.

The exam should consist of 4-5 questions drawn from your area of specialization. You will typically have 3-4 hours to complete the exam in a room set aside for that purpose. The exam should be closed book. The committee grades the exam and if necessary will have a meeting to evaluate the overall performance on the exam and to determine follow-up issues/questions for the oral exam.

Oral Defense of Proposal

The oral portion of your exam is not open to the public, but includes only the members of your Doctoral Program Committee. During the oral exam, you will formally present your proposal to your dissertation committee. The purpose of the proposal presentation to your Doctoral committee is to give you input on your plan for completing the dissertation. Questions during the oral examination can include questions on the proposal such as refining the research question, methods, etc., as well as follow-up questions from the written examination.

Your dissertation committee must vote to pass you and approve the dissertation plan (proposal) with no more than one dissenting or abstaining vote. If the committee does not pass you or votes to fail you, the committee should provide you with instructions on improving the proposal or what remedial measures are required to pass the exam. This should generally be

completed within 90 days of the oral exam. If the vote of the committee is “fail,” you must wait at least 12 weeks before taking the comprehensive exam a second time. If you fail the comprehensive exam a second time you are disqualified from completing the doctoral program.

Final Examination (Doctoral Dissertation Defense) (D-4 Form)

The policy of the Department of Agricultural & Applied Economics is that all final PhD exams are open to the faculty and graduate students of the department. Any person attending a PhD final exam may, at the discretion of the chair of your dissertation committee, ask you questions. The time and location of PhD final exam shall be forwarded to the graduate secretary and Director of Graduate Studies at least one week before the date of the exam.

The oral examination generally consists to two parts. The first part is a seminar presentation of your thesis research and is open to faculty and graduate students. The second part is restricted to you and your examining committee. During the examination, you may be asked questions based on subject matter included in coursework, fields of specialization, and dissertation research. The examination ordinarily will involve one and one-half to two hours, but it could last longer than two hours. Suggestions for preparation for the examination may be obtained from your adviser.

Your dissertation committee will report its decision to the Director of Graduate Studies and Graduate School on the **Report of the Dissertation Defense Form (Graduate School Form D-4)**. In order to obtain a signature from the Director of Graduate Studies on the D-4 form, you must attach to the form an abstract of the dissertation.

Instructions for preparation of the final form of the dissertation are available from the Graduate School at <http://gradschool.missouri.edu>. In addition to the electronic copy submitted to the Graduate School, you must also provide an abstract of your doctoral dissertation to the Director of Graduate Studies and one hard-bound copy for the departmental library.

Teaching Experience

If you are pursuing an academic or college-level teaching career, you should plan early in your PhD program of study for teacher development and teaching opportunities. This may include, but should not be limited to, participating in university and professional conference-based teaching workshops, taking teaching preparation courses such as AgEd 8350 (College

Teaching of Agriculture), working as a teaching assistant, and co-teaching a course with a faculty member. You should work with your advisor and the Director of Graduate Studies in developing and implementing a plan to give yourself adequate teaching experience.

Graduate Assistantships

Assistantship appointments are primarily one-half and one-quarter time equivalents. Half-time assistants are expected to work 20 hours per week on average and quarter-time assistants are expected to work 10 hours per week on average during the period of their appointment. Variation in demands of research projects and demands of student coursework and examinations may cause the weekly workload to vary from the average. Therefore, specific expectations need to be agreed upon in advance with the student's advisor. Graduate research assistants are expected to work during University breaks (including summers) but are entitled to two weeks vacation each year. Vacation schedules should be discussed approved by the adviser before making vacation arrangements.

Generally, an MS graduate assistant will be employed for two years and a PhD graduate assistant will be employed for three years on a departmental assistantships regardless of the fraction of employment (1/4 or 1/2 time). Extensions of the three year limit for PhD students will be considered on a case-by-case basis. Reapplication to the Graduate Studies Committee for a PhD assistantship is necessary for those MS assistants desiring to be considered for admission to the PhD program.

Research Responsibilities

Most graduate research assistantships are funded through grants and contracts. A limited number are funded by the department. Students receiving departmental assistantships work on duties assigned either by the department or by the student's advisor. If the advisor is unable to provide research experience for a student during a particular semester, then he or she should inform the Director of Graduate Studies who will assign a temporary work adviser.

Students receiving assistantships paid from a grant or contract do a specific piece of research for the funder, with dates for completion attached. The exact tasks will depend on the needs of the project and the professor. As skills develop graduate research assistants may be expected to contribute more to the conceptualization of the research. Students may also be

assigned some teaching assistant duties to free up the professor's time for research.

Because the thesis or dissertation research topic is decided in consultation with the adviser and Doctoral committee, if a student is receiving an assistantship, the student is encouraged to find a topic that is consistent with the source of funding and research assistant activities he or she is engaged in. However, if the student's desired thesis or dissertation topic does not fit within the current guidelines of the grant or contract funding the student's assistantship, the student may seek his or her own grant for funding the thesis or dissertation research. If such a grant also provides assistantship funds for the student, the student will be taken off of the faculty member's grant funding (i.e., students are not allowed to have two half-time assistantships – one paid by the faculty member or department and the other paid by a grant received by the student). As long as a student is receiving a departmental or grant/contract funded assistantship, the student is expected to complete the specified work requirements even while writing their thesis or dissertation. In addition to working on the assistantship, graduate assistants should use breaks and summers to work on thesis or dissertation research. A major expectation for students receiving an assistantship is that students will finish the degree within two years for a masters degree and three to four years for a PhD.

Research integrity

Plagiarism is a very important issue in academia. Exact words from another author need to be in quotation marks and all ideas from others need to be cited. As a person reads your writing they should be able to tell whether an idea is: 1) assumed to be general knowledge, 2) ideas from others, 3) exact words from others, 4) your own ideas.

Data integrity is very important. All steps in the use and manipulation of data should be discussed with your professor and documented, both what was done and why. The student must leave a copy of all data files and analysis programs with the professor. Some journals require submission of the datasets when an article is published. Some journals require that you keep surveys for 5 years after the publication date of journal articles.

It is expected that you will submit papers to professional meetings, write extension bulletins, research reports and/or journal articles. It is expected that you will publish from your thesis or dissertation an article that would be submitted to an academic or other scholar publication as soon as you can incorporate any feedback from the defense. A publication before

you graduate will greatly help you on the job market.

Standards for credit on publications differ by discipline and from university to university. Formulating the research problem, providing funding for the research, designing the research, conducting the actual research and analyses, and writing up the research are all parts of the research process. Publications by the professor should include credit for the contributions of the graduate research assistant. Generally it is expected that publications from the thesis or dissertation will include the advisor, and perhaps other committee members, as co-author(s). This will depend on the relative contribution of the student and committee members to the components indicated above. In addition, any data developed for the project and used in the thesis or dissertation will usually have joint ownership.

Teaching Responsibilities

In the belief that students can profit from different experiences, each PhD student on assistantship, and others who desire it, may be assigned to a teaching assistant role (classroom or extension) early in their program. The faculty member to whom the student is assigned is responsible for the student's supervision while in the teaching role. The department offers an opportunity for PhD students to participate in a teaching training program that culminates in the student teaching or co-teaching a course (see the section above on this.)

Masters students on assistantships may be assigned to classroom teaching assistance for one semester subject to the student's availability and the needs of the departmental teaching program. Any student assistant, regardless of assignment, may be called upon to assist his/her adviser with instructional duties from time to time.

All graduate students, especially those who hold assistantships, are encouraged to participate in the extension activities of the department. Students may be assigned to faculty members whose primary responsibility is in extension. Not only are students expected to assist in this area but also they are expected to gain a well-balanced set of professional experiences in their graduate programs.

Graduate Student Evaluation

This section describes procedures for evaluations of graduate students in the Department of Agricultural & Applied Economics. Evaluations are of two types – evaluations of work

performance of graduate students receiving assistantships and general evaluations of student progress through the graduate program. Graduate School policies take precedence over departmental policies (e.g., see “Performance & Renewal Evaluation Criteria: Graduate Assistants” at <http://gradschool.missouri.edu/financial/assistantships-fellowships/assistantships/evaluation.php>). Work and progress evaluations will generally take place at the end of the Spring semester and will be repeated annually, although they may be done more frequently if the advisor or graduate student believes additional feedback is necessary.

Evaluation Criteria

According to the MU Graduate School, “*The responsibilities of the graduate assistantships and the method by which students will be evaluated should be provided in writing to the student by the immediate supervisor at the beginning of the assistantship.*” Because clear expectations minimize the potential for conflict, students should work closely with their advisor or work supervisor to ensure that they understand what assigned duties and responsibilities are.

Students may be removed from a graduate assistantship for one of the following reasons:

- (a) poor academic performance (GPA < 3.25);
- (b) not satisfying the average hourly work requirements;
- (c) poor performance on assigned duties (teaching and/or research).

Poor performance on assigned duties relates to the following specific evaluation criteria, as recommended by the Graduate School:

- *Prompt, efficient and accurate completion of assigned tasks*
- *Ability to work independently once tasks are explained*
- *Ability to analyze problems and find solutions*
- *Student evaluations for instructional and tutoring assignments in courses, laboratory and clinical settings*
- *Cooperation with mentor, director, and other assistants*
- *Professional and ethical behavior in all assigned tasks and duties including course studies and research.*
- *Opportunities for improving performance should also be outlined*

The student’s adviser or work supervisor will provide input concerning the student’s work as a research assistant and/or teaching assistant (if applicable) and in non-required research

work, etc. The student's academic advisor (if different from the work supervisor) will provide feedback on academic progress through the graduate program. The evaluation will be based on course grades, research (thesis, dissertation, as well as independent research) and professional activities such as serving on departmental committees. The evaluation of academic performance may also include input from faculty and others who have had substantial contact with the student during the evaluation period. The evaluation should focus on positive accomplishments as well as shortcomings in the student's work.

Evaluation Procedures

According to Graduate School policies, all graduate students are expected to submit an annual progress report. The annual progress report and accompanying evaluation will be used to determine whether you are making satisfactory or unsatisfactory academic progress

The Director of Graduate Studies will send an evaluation form to all graduate students at the end of each Spring semester. Once completed, the student sends the form to his or her work supervisor and academic advisor (usually these are the same person). Ideally the advisor and/or work supervisor should meet with the student to discuss performance on assigned assistantship duties and progress in the graduate program. The advisor and work supervisor complete the evaluation form and send it to the Director of Graduate Studies. Failure to submit an annual report may result in a hold being placed on your ability to register for fall semester courses or a delay in the renewal of assistantships. In addition to the department's evaluation form, graduate students are encouraged to submit an annual report using the web-based reporting system at <https://gradschool.missouri.edu/policies/progress/annual-review/progress-system/>.

The signed evaluation forms and any reviews by the academic advisor, work supervisor, or Graduate Studies Committee will be placed in the student's file. A copy of the signed feedback statement(s) and evaluation will be sent to the Graduate School for any students deemed to be making insufficient academic progress.

Feedback and Appeals

Although concerns regarding work performance or progress through the academic program are noted at the time of the annual review, at any time during an assistantship the supervisor may deem the student's performance as not satisfactory. Prior to making such a

determination, the supervisor should work informally with the Director of Graduate Studies (or Department Chair if the Director of Graduate Studies is the supervisor) and the student to resolve the matter. However, if a negative evaluation of the student is made, the following procedures should be followed:

- An oral warning shall be issued to the student during a meeting that includes the student, the supervisor and the Director of Graduate Studies (or Department Chair if the Director of Graduate Studies is the supervisor). The purpose of the meeting is to indicate to the student what the problem is and what he or she must do to return to satisfactory status.
- After an initial review period of no less than 30 days and no more than 45 days following delivery of the oral warning, a progress review meeting shall be held that includes the student, the supervisor and the Director of Graduate Studies (or Department Chair if the Director of Graduate Studies is the supervisor). If the supervisor deems the problem has been corrected, the matter ends. If the problem has not been corrected to the supervisor's satisfaction, the supervisor shall provide a written warning that documents the specific problem or offense and indicates expectations and acceptable standards of performance. The written warning should specify a review period of not less than 30 days and a copy of the written warning shall be given to the student and to the Director of Graduate Studies who will put it in the student's file. The student has the right to have a written response to the warning placed in the student's file.
- At the end of the review period, the supervisor will either document that the performance has been improved or that it has not been improved. In the latter case, the assistantship will be terminated, effective at the end of the term in session at the end of the review period (Fall, Winter or Summer terms). Written notice shall be provided by the supervisor to the student and to the Director of Graduate Studies who will put it in the student's file.

Students have the right to appeal termination of assistantships. To initiate the appeals procedure, the student should submit a written request to the Director of Graduate Studies and the Department Chair. The appeals procedure will then follow as outlined below in the case of termination from the academic program.

Academic Program Evaluation, Termination Procedures and Appeals

Throughout this section, reference is made to the Graduate Catalog. Because Graduate School rules change periodically, the most current Graduate School Catalog takes precedence over the policies presented here if there is a conflict in policies (see <http://gradschool.missouri.edu/policies/progress/>).

According to Graduate School policies, the Graduate School will place on probation students whose semester GPA falls below 3.0. The department also has the right to place on probation and to dismiss from the graduate program any graduate student who is deemed to be making insufficient academic progress or whose work is not of the quality required. The Director of Graduate Studies must inform the Graduate School as soon as the department places the student on probation. The Director of Graduate Studies will notify the student and the Graduate School when the student is being dismissed from the program. Dismissal may occur at any time during a student's work toward a graduate degree. A student may initiate an appeal of the dismissal by first working through the department's appeal procedure (outlined below). If the appeal at the department level is denied, then the student may initiate the Graduate School's appeal process (a description of the appeal procedures is available on the Graduate School's website).

If a student is placed on probation by the department, he or she will be given an opportunity to correct the deficiencies underlying the probation. The letter of probation specifies what the student must do to correct the deficiencies as well as the amount of time to do so (minimum of 30 days). The probationary letter clearly informs the student that he or she will be terminated from the degree program unless the specified corrective action is successfully completed within the allotted time.

Termination Due to Failing Required MS and PhD Exams

For the MS program, students must successfully complete and defend their thesis or non-thesis technical papers. For the PhD program, students must pass a written qualifier following the first year of courses, and a written and oral comprehensive exam. PhD students must also successfully defend their dissertation. The procedures and evaluation criteria for these exams are described in previous sections of this handbook. Students who fail any of these exams, as noted

on the MS examination form (M-3), the PhD qualifying exam form (D-1), comprehensive exam form (D-3), or dissertation defense form (D-4), will be dismissed from the program.

Termination Due to Poor Grades

The GPA in the Graduate School is based on the student's entire graduate record at MU. To remain in good standing, a graduate student must maintain a cumulative GPA of 3.0 or better (exclusive of courses 8085/9085, 8450 and 8090/9090). At the end of each semester, graduate students with a GPA below 3.0 are placed on probation by the Graduate School. If at the end of the following semester the GPA is 3.0 or better, the probationary status is removed. A student on probation failing to raise the cumulative GPA to 3.0 may, on the recommendation of the Director of Graduate Studies or Graduate Studies Committee, be allowed a second and final probationary semester. A student is subject to dismissal upon failure to raise the cumulative GPA to 3.0 by the end of the second probationary semester, or at any time that the semester or cumulative GPA falls below 2.0. To graduate, a student must have an overall GPA of 3.0 in all graduate courses taken at MU.

Termination Due to Insufficient Progress

The Masters degree must be completed within a period of eight years beginning with the first semester of enrollment into the graduate program. The doctoral degree should also be completed within eight years and within five years of passing the comprehensive examination. Time spent in the armed services will not count toward the eight-year limit.

Before the expiration of the eight-year period, any student requiring additional time must submit a written request for an extension to the Graduate School. The request must include a written endorsement by his or her advisor and the Director of Graduate Studies. Note that the extension may entail a revision of the candidate's program to update course work and research.

Termination Procedures

In keeping with current Graduate School policies, the department can dismiss a student for the reasons discussed under Termination Due to Failure of Required MS and PhD Exams, Termination Due to Poor Grades and Termination Due to Insufficient Progress, and other reasons after the student has been placed on probation for at least 30 days and has failed to correct the

deficiencies stated in the letter of probation. The Dean of the Graduate School must be informed by the Director of Graduate Studies as soon as the student is notified and the probationary period begins. Dismissal is made by sending a letter to the student, with copies sent to the Dean of the Graduate School and the Department Chair.

Appeals

A student may appeal termination from the graduate program. In order to do so, the student must inform in writing the Department Chair, Director of Graduate Studies, and the Dean of the Graduate School. A student may also appeal a decision to be removed from a graduate research or teaching assistantship. The appeals procedure outlined here are the same for termination from the graduate program and termination of an assistantship or fellowship.

The appeal will be held by a committee of seven members of the department's Graduate Faculty. These include the Director of Graduate Studies and four other members of the Graduate Studies Committee and two other members of the department's Graduate Faculty. If a member of the Graduate Studies Committee or Director of Graduate Studies at any time was also a member of the student's MS or PhD committee, that faculty member is automatically recused from the appeals committee, and is replaced by another member of the department's graduate faculty.

Upon notification by the student of his or her request for an appeal of dismissal from the program, the Department Chair will call a meeting of the seven-member appeals committee. The Department Chair will appoint the two members of the graduate faculty to serve on the appeals committee with the five members of the Graduate Studies Committee and substitutes for any members who are recused. The appeals committee will meet with the student. The meeting will generally be held within 30 days following notification of the appeal. The Chair of the Graduate Studies Committee will act as chair of the appeals committee.

The student is free to receive help from others in presenting a case but must inform the department and GSC Chairs in advance if persons not affiliated with the Department of Agricultural & Applied Economics will attend the hearing. The student's adviser and members of the student's MS or doctoral committee will be asked to present their cases, including any dissenting opinions. An appeal is successful if four (a majority) of the appeals committee accept the appeal.

If a student's appeal fails at the departmental appeals meeting, the student can either accept the termination or appeal the termination to the Graduate Faculty Senate's Committee on Graduate Student Appeals.

If the student does not file a request for appeal within 30 days, the termination will be considered to have been completed. Students requesting reviews of such termination decisions after the 30-day deadline will instead be considered as requesting reinstatement in the program. Departmental procedures regarding reinstatement are identical to admission procedures.

Use of Departmental Offices and Facilities

The department will supply, insofar as space and resources permit, a desk for work on research projects and/or study to all graduate assistants. Desks will be assigned to other students as they are available. Assignment of office space is done by the Graduate Student Organization (GSO) under guidelines approved by the faculty.

Personal computers are available to further departmental programs. Departmental equipment may not be used at any time for private purposes. Paper, pencils, and other supplies are available only for uses that contribute to the research, teaching, and extension programs of the department.

Graduate students are encouraged to make appropriate use of departmental and university computing facilities and services. These services can be used for both research and coursework assignment. Students should consult with advisers about the services available.

Graduate Student Organization

The Graduate Students of Agricultural Economics organization (GSAE) is composed of all of the graduate students in the Agricultural Economics Department. It assigns desks and office space to graduate students, provides orientation for incoming students, plans social activities, and represents graduate students on departmental committees and in numerous other ways. It is an essential part of the Department. Graduate students are encouraged to participate actively in the organization. Effective participation, including holding office in the organization, can demonstrate leadership and collegiality to prospective employers.

Appendix: Required Forms for MS and PhD Programs

All original documents are maintained in the Graduate School's official student files. Each form is completed at the departmental level, routed for required signatures, and forwarded to the Graduate School, 210 Jesse Hall. Each form is then reviewed by the Graduate School, receives the Dean's signature if approved, and a copy is returned to the department. If changes need to be made or if signatures are missing, corrective measures will be requested of the department. If any faculty signatures are illegible, we ask that departments print correct spelling of the signature. It is recommended that students retain a copy of all forms that they submit to the Director of Graduate Studies. Forms are available from the Graduate School at <http://gradschool.missouri.edu>, on the department's graduate student organization on Blackboard at <http://blackboard.missouri.edu>, and from the Director of Graduate Studies or graduate programs secretary.

M-1 Form: Program of Study for the Master's Degree: This form is required of all master's degree students. The purpose of this form is to plan the program of study the student will follow, including recommended hours of transfer credit. The form is signed by the adviser, members of the committee, the Director of Graduate Studies and submitted to the Graduate School by the end of the second semester in order to facilitate the certification of degree completion later.

M-2 Form: Request for Thesis Committee: This form is required only for students who will write a thesis. Students completing a non-thesis technical paper do not need to submit this form. The purpose of this form is to have an official record of the student's master's committee and to insure that the configuration of the committee meets stated requirements. This form is signed by the adviser, members of the committee, the Director of Graduate Studies and submitted the Graduate School by the end of the second semester.

M-3 Form: Report of the Master's Examining Committee: This form is required of all master's degree students, the purpose of which is to have an official record of the final examining process, whether it is a thesis defense, presentation of a project, or master's comprehensive examination. The form is signed by the adviser, committee members, Director of Graduate Studies and submitted to the Graduate School.

D-1 Form: Qualifying Examination Results and Doctoral Committee Approval Form: The purpose of this form is to show the student's name as it should appear on the diploma, and indicate the correct degree, degree program, minor or collateral field (if applicable), previous degrees, results of the qualifying process, and the members of the doctoral committee including adviser. This form is also used by the Graduate School to notify departments if a student's official transcript(s) have not yet been received. This form also serves as an official record of the members of a student's doctoral committee and insures that the configuration of the committee meets stated requirements. It is also used to report results of the PhD Qualifying Process. This form is signed by the adviser, committee members, Director of Graduate Studies and submitted to the Graduate School no later than the end of the third semester.

D-2 Form: Plan of Study for the Doctoral Degree Form: The purpose of this form is to plan the program of study which the student will follow and certify that all committee members approve the program, including the recommended hours of transfer credit. This form is signed by the adviser, committee members, Director of Graduate Studies and submitted to the Graduate School by the end of the third semester (shortly after passing the qualifying examination).

D-3 Form: Doctoral Comprehensive Examination Results Form: The purpose of this form is to record the official result of the doctoral comprehensive examination. This form is signed by the adviser, committee members, Director of Graduate Studies and submitted to the Graduate School within one month of exam completion.

D-4 Form: Report of the Doctoral Dissertation Defense Form: The purpose of this form is to record the official results of the dissertation defense. It is recommended that this form be taken to the defense, along with the dissertation approval page (printed on the required cotton bond paper) so that committee members can sign both forms for students who successfully defend their dissertation. This form is signed by the adviser, committee members, Director of Graduate Studies and submitted to the Graduate School.