

GRADUATE PROGRAMS  
IN  
AGRICULTURAL AND APPLIED ECONOMICS  
AT  
TEXAS TECH UNIVERSITY

**September 2002**

This handbook contains a summary of requirements and information of special interest to students in Agricultural and Applied Economics, but does not substitute for the Graduate Catalog of Texas Tech University. All students should familiarize themselves with the requirements and regulations in the current Graduate Catalog.

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## **INTRODUCTION**

Graduate study in Agricultural and Applied Economics offers programs leading to a (1) Master of Science in Agricultural and Applied Economics with both thesis and non-thesis options, (2) Master of Agriculture in Agricultural Business Management, (3) joint Master of Science and Doctor of Jurisprudence in cooperation with the Law School and (4) Doctor of Philosophy. Two options are offered for the Doctor of Philosophy in Agricultural Applied Economics program. The first option, allows graduate students to select a minor of their choice in areas such as Business Administration, Finance, Mathematics, Public Administration, Statistics, Sociology, or other possible areas of study. The second option, allows graduate students to select a minor in Family Financial Planning, a joint Ph.D. program between the Department of Agricultural and Applied Economics and the College of Human Sciences. Completion of the Doctoral program with a minor in Family Financial Planning qualifies graduates to take a test administered by the Certified Financial Planning Board of Standards to become Certified Financial Planners. Both Doctor of Philosophy in Agricultural Applied Economics program options entail requirements detailed in this brochure??All graduate programs in Agricultural and Applied Economics are an integral part of the teaching and research components of the department. The department also participates in an M.B.A. program in Agricultural Business Management.

Graduate programs in Agricultural and Applied Economics seek to satisfy the following objectives: (1) to provide an in depth education in the concepts, principles, methods, and methodology of economic science as applied to the agribusiness and the natural resource complex and (2) to instill knowledge and understanding concerning applications of principles and methods to contemporary problems. Therefore, the study of economic theory, economic and agricultural institutions, and quantitative and other research methods is

emphasized in the graduate programs, with emphasis placed on analysis and decision making for problem solutions. The problems may be concerned with production, finance, business, resources, marketing, trade, or other areas. The programs prepare students equally well for employment in the private and public sectors. The department and the University commit substantial physical, financial, and faculty resources to provide the appropriate atmosphere, physical facilities, course offerings, research opportunities, and teaching experiences necessary for the intellectual development of the student.

Graduate students are expected to achieve professional development through utilization of the environment provided and through their own initiative in seeking and creating learning situations with fellow students, faculty, and the intellectual community of the University. To improve rapport between faculty and students and to facilitate the assignment of students to advisors, entering students are urged to visit with all the department's faculty during their first semester.

Although certain prerequisites and minimum requirements must be met, the graduate programs generally stress flexibility to meet the interests, needs, and capabilities of individual students. Competency in the subject matter areas of Agricultural and Applied Economics and the supporting disciplines of Economics, Mathematics, and Statistics is expected. Students may choose among a variety of specializations which range from basic investigation into quantitative research methods to applied work in management, marketing, resource economics, agricultural finance, international trade, rural development, production economics and policy.

### **ADMISSION REQUIREMENTS**

Three general categories of criteria are used to evaluate all applicants for admission and award of competitive scholarships in the Department of Agricultural and Applied Economics: (1) Academic records: All academic records are?

considered?—specifically the last 60 hours of undergraduate course work for the M.S. or of the last degree for the Ph.D. (2) Test Scores: Scores on the General Test of the Graduate Record Examination (GRE) which should be no more than five years old. Each score is considered separately, with percentile scores viewed by broad major. No test score will be the sole criterion for making admission decisions. Test of English as a Foreign Language (TOEFL) is also required for students whose native language is not English. (3) Individual Profile: Profiles may include recommendations, research background, motivation, multilingual proficiency, undergraduate institution, presentations, portfolios, interviews, work experience, demonstrated commitment to a particular field of study, community involvement, and family and socioeconomic background. Applications for admission to the graduate program must include (a) all prior university transcripts, (b) official GRE scores, (c) three letters of recommendation, and (d) TOEFL score for students whose native language is not English. Students without complete applications will not be allowed to register for classes beyond the first semester. This policy complies with HB 1641 adopted by the Texas Legislature.

**STEPS IN APPLYING FOR ADMISSION  
TO GRADUATE PROGRAMS OF THE  
DEPARTMENT OF  
AGRICULTURAL AND APPLIED ECONOMICS**

1. Contact Graduate Admissions, Graduate School, Texas Tech University, Lubbock, TX. 79409-1030 (Tele. 806-742-2787; FAX 806-742-1746; e-mail [gradschool@ttu.edu](mailto:gradschool@ttu.edu); web address <http://www.ttu.edu/~gradsch/>) to obtain instructions for applying for admission to the Graduate School. Once application instructions are received, submit required materials. These include an application form, official copies of transcripts, and an official copy of the GRE scores. For international students, an official copy of

the TOEFL scores is also required. A non-refundable graduate application fee of \$50.00 is required for U.S. citizens and permanent residents of the United States. Foreign students will pay \$60.00, unless they were undergraduates at Texas Tech, in which case they will pay the domestic application fee of \$50.00. This fee must be submitted with the Graduate Application for Admission to Texas Tech and will be required before the application can be processed.

2. Contact the Graduate Program Coordinator, Department of Agricultural and Applied Economics, Texas Tech University, Lubbock, TX 79409-2132 (Tele. 806-742-2821; FAX 806-742-1099; E-mail [aaec@ttu.edu](mailto:aaec@ttu.edu)) to obtain an application packet if you do not already have one. The application and the graduate handbook are also available on our web page at <http://www.aeco.ttu.edu/Grad-program/steps.htm>. Submit the required materials to the Graduate Program Coordinator. These materials include a Graduate Application Personal Data Form (attached) and copies of your transcripts (these may be photocopies). GRE scores and TOEFL scores, if appropriate, are requested on the information form. The department also requires three (3) letters of recommendation, preferably from persons qualified to evaluate your potential for successful graduate program completion. These letters should come to the Departmental Graduate Coordinator directly from the persons sending your references.
3. Once your applications are complete for both the Graduate School and the Department of Agricultural and Applied Economics, each unit will evaluate your application. In the interim, you may contact the department with any questions you may have.

## **THE MASTER'S DEGREE PROGRAMS**

The Department of Agricultural and Applied Economics offers programs leading to a Master of Science (M.S.) with thesis and non-thesis options and a Master of Agriculture (M.Ag.) in Agricultural Business Management, and a joint Master of Science/Doctor of Jurisprudence (M.S./J.D.) for students accepted by both the Graduate and Law Schools.

The M.S. degree in Agricultural and Applied Economics provides training in economic theory and its application to the agricultural and resource sectors of the economy and helps students identify the basic nature of problems and to conduct and interpret research. Students who select the thesis option are expected to demonstrate competency by satisfactorily completing a thesis based on original research. An oral examination covering both the research and course work is required.

The M.Ag. program in Agricultural Business Management is designed to provide graduate professional training without a research orientation. It is for students interested in managerial or service careers in agriculture and related industries. Those who select this option normally do not plan to do graduate work beyond the Master's Program. The minimum thirty-six (36) credit hours are required both from Agricultural and Applied Economics and from other departments, with considerable flexibility permitted to meet special interests.

The joint M.S.-J.D. degree is structured so that qualified students can obtain a non-thesis M.S. degree in Agricultural and Applied Economics and a J.D. degree from the Law School in four years, rather than the five that would be required if each degree were pursued separately. This degree provides students who want to practice law in an agricultural and/or natural resource setting with graduate training in economics as applied to rural areas and/or the natural resource sector. Those who select this option must be admitted to both the Law School and the Graduate School. The LSAT exam

may be taken in lieu of the GRE.

For the M.S. with thesis candidate, this is generally your first experience in actually doing as opposed to hearing about research. Consequently, candidates need considerable guidance from their major professor and graduate advisory committee. The student may be following up on ideas generated by the major professor or committee members. If the student is working on funded research, it is likely that the major professor wrote the proposal and was awarded a grant or made a successful bid on a contract well before the student arrived. The student's role is often cooperative with his/her advisor rather than as an independent analyst. Research is learned through intimate involvement in a structured process. This may be the only exposure to research if the M.S. is the terminal degree. Regardless of career objectives, the student should be able to understand the research process and thus be better able to critically review and use scientific literature in the future.

Most M.S. research programs allow latitude for a student to suggest changes in design, data collection, and analysis. Most of the interpretations of the data should be the student's. The major professor and graduate advisory committee provide guidance, comments and suggestions, but responsibility for the final result remains with the student. The degree of originality shown during the M.S. program is often used as an indication of probable aptitude for a Ph.D. level program.

### **Prerequisites**

Students who undertake a program of study leading to the M.S. or M.Ag. degree must have completed an accepted bachelor's degree program including the following courses or their equivalents with a grade of B or better:

- ? Intermediate Microeconomic Theory (AAEC 3315, ECO 3312, or equivalent)
- ? Production Economics (AAEC 3316 or

- equivalent)
- ? Statistics (AAEC 3401 or equivalent)
- ? Basic Calculus (Mathematics, AAEC 4312, etc.)
- ? Intermediate Macroeconomic Theory (ECO 3311 or equivalent)
- ? In addition, computer literacy (micro-computer and mainframe) is expected of all applicants.

A student who has not completed the above requirements will be asked to do so before embarking on graduate level coursework. A student who is deficient in other subjects, in the judgment of the Departmental Graduate Faculty, may be required to satisfy additional prerequisites. The credit hours earned in satisfying prerequisites will not be counted toward the M.S. or M.Ag. degree program.

### **Requirements for the Masters Program**

The Masters program in Agricultural and Applied Economics consists of a minimum of thirty (30) hours of graduate credit for the M.S. thesis option, and 36 hours of graduate credit for the M.S. non-thesis option and the M.Ag.

### **Course Explanations**

#### **AAEC 5301-Special Study in Agricultural and Applied Economics:**

A graduate student may take as many undergraduate courses as desired. AAEC 5301 is designed to give graduate credit on these courses. The course may be used as many times as appears appropriate; however, only 6 hours of AAEC 5301 is allowed toward the degree program. Undergraduate courses that can be taken for graduate credit as AAEC 5301 are normally restricted to the 4000 series (senior level). Whenever AAEC 5301 is used in this manner, the student is responsible for additional work beyond undergraduate

requirements. Undergraduate courses taken for leveling work cannot be used as a part of the student's degree program even if they are taken as AAEC 5301. Requests for exceptions to the rule must be initiated by the student and approved by the student's advisory committee in writing.

### **AAEC 5321-Research Methodology in Economics**

Activities required prior to enrolling in AAEC 5321:

1. Each student must have arranged for a faculty research advisor.
2. Each student must have a topic area identified (at least a general field in which he/she wants to conduct research, but the more specific the better).
3. Each student should have at least initiated the literature review on the topic identified; this is not an absolute must, but having started the literature review would be a substantial benefit to the student.

### **AAEC 6000-Thesis:**

A M.S. Candidate who elects the thesis option is required to register for a minimum of 6 credit hours of AAEC 6000. A thesis based on original research work by the candidate is required. A thesis proposal must be defended at least 14 weeks prior to expected graduation. The proposal must outline the research in reasonable detail and must be approved by the student's graduate committee (see the section on "Thesis and Dissertation Proposals" on page 25 for further details). The student is expected to prepare an abstract of the thesis, not to exceed 600 words, for distribution to the faculty in the department and have copies of the thesis available for faculty examination at least 10 working days prior to the final examination.

Table 1

<b><i>M.S. Degree Program in Agricultural &amp; Applied Economics</i></b>			
Course Number	Course Title	Thesis Option	Non-thesis Option
		Credit Hours	
AAEC 5303	Adv. Production Econ.	3	3
AAEC 5307	Applied Econometrics-I	3	3
AAEC 5310	Adv. Market Analysis	3	3
AAEC 5321	Research Methodology	3	—
ECO 5311	Adv. Macroecon. Anal.	3	3
ECO 5312	Adv. Microecon. Anal.	3	3
AAEC 6000	Master's Thesis	6	—
AAEC Electives		6	12
General Electives		—	9
<b>Total Credit Hours</b>		<b>30</b>	<b>36</b>

Note: MS-Thesis students wishing to choose a specialization can choose between two areas of emphasis:  
 1) Agribusiness & Trade or  
 2) Resource Policy and Development.

*Agribusiness & Trade emphasis*

Students in Agribusiness & Trade emphasis must choose two courses from AAEC 5312, AAEC 5316, and AAEC 5318 toward their six hours of electives.

*Resource Policy & Development emphasis*

Students in Resource Policy & Trade emphasis must choose two courses from AAEC 5302, 5308, and 5309 toward their six hours of electives. AAEC and general electives should be selected in consultation with student's major professor.

Table 2

<b><i>M. of Ag-Agricultural Business Management Degree Program</i></b>		
Course Number	Course Title	Credit Hours
AAEC 5303	Adv. Production Econ.	3
AAEC 5307	Applied Econometrics-I	3
AAEC 5310	Adv. Market Analysis	3
AAEC 5312	Agribusiness Analysis	3
AAEC 5318	Finance & the Ag. Bus. Sector	3
AAEC and/or ECO Electives <sup>a</sup>		6
General Electives <sup>b</sup>		15
<b>Total Credit Hours</b>		<b>36</b>

<sup>a</sup> Economics electives must be from ECO 5311 and ECO 5312.

<sup>b</sup> Fifteen hours of the general electives must come from areas outside of Agricultural and Applied Economics and include at least three disciplines.

Table 3

<b><i>M.S.-J.D. Joint Degree Program<sup>a</sup></i></b>		
Course Number	Course Title	Credit Hours
AAEC 5303	Adv. Production Econ.	3
AAEC 5307	Applied Econometrics-I	3
AAEC 5310	Adv. Market Analysis	3
AAEC 5312	Agribusiness Analysis	3
AAEC 5318	Finance & the Ag. Bus. Sector	3
AAEC and/or ECO Electives <sup>b</sup>		9
Law School Electives		12
<b>Total Credit Hours</b>		<b>36</b>

<sup>a</sup> Consult with the Law School to determine the program of study in law.

<sup>b</sup> Economic electives must be from ECO 5311 and ECO 5312

### **AAEC 6301-Advanced Special Problems in Agricultural & Applied Economics**

Students in the M.S. non-thesis program may choose to complete a research project as an AAEC elective and produce a report of that research. Non-thesis students must enroll in AAEC 6301 only once, during the semester when the research report is completed.

### **Electives**

A candidate for the Master of Agriculture degree must select 15 hours of graduate-level courses from areas other than Agricultural and Applied Economics, with approval of the student's graduate committee. There are, however, no such restrictions for an M.S. candidate. M.S. candidates should select electives only after consulting with their major professor.

### **Substitution for Core Courses**

Except for extremely unusual situations, which are judged by the student's graduate committee to be beyond the control of the student, substitutions for core courses are not permitted. Requests for substitutions in the core courses must be initiated by the student. Such requests must be recommended in writing by the student's graduate committee and approved by the Graduate Coordinator.

### **Mathematics**

Proficiency in basic calculus is a prerequisite for the graduate program. All students, and particularly those intending to continue their graduate training, are encouraged to increase their mathematical proficiency by taking courses such as MATH 1380, MATH 2380, ECO 3313, or MATH 5304 and MATH 5305.

### **Final Examination**

All M.S. candidates, except for those enrolled in the M.S.-J.D. Joint Degree program, will be required to pass a written examination over applications of microeconomic and macroeconomic theory, research methodology, quantitative methods, and related subject matter areas. Examination procedures will be specified by the Departmental Graduate Faculty.

The student's graduate committee of all M.S. candidates will conduct an oral examination after all other requirements for the degree have been completed. The chairperson of the student's graduate committee must establish an examination date and notify the other members of the student's graduate committee and faculty in the department at least 5 working days prior to the final examination. The student is expected to defend the thesis and demonstrate an ability to discuss issues of importance in the chosen areas of specialization.

## **PARTICIPATION IN THE MBA PROGRAM**

The department cooperates with the College of Business Administration (COBA) in their offering of a Master's of Business Administration (MBA) with a concentration in Agricultural Business Management. The degree is awarded by the COBA with the department cooperating in the program.

Students in this program are advised by the COBA in their MBA core and by the Department Graduate Coordinator in their Agricultural and Applied Economics Concentration. Concentration in Agricultural Business Management can be satisfied by taking 12 hours from the following AAEC courses: AAEC 5302 or AAEC 6302, AAEC 5310, AAEC 5301 (3 hours maximum), AAEC 5317, and AAEC 5318.

The MBA requires that certain prerequisites be met and that leveling courses be taken if undergraduate course work was not completed in selected areas. Students with no economics or business courses may have to take up to 24 credit hours of leveling work. Prerequisites and program requirements for the MBA/Agricultural Business Management program are available from:

***Graduate Programs Office  
College of Business Administration  
Texas Tech University  
Lubbock, Texas 79409-2101  
(806) 742-3184 OR  
FAX: (806) 742-2099  
1-800-882-6220***

## **THE DOCTOR OF PHILOSOPHY DEGREE PROGRAM**

The doctoral program in Agricultural and Applied Economics is designed to develop a broad based competence in advanced economic theory, techniques of quantitative analysis, and public administration of agricultural and economic issues.

Two options are offered for the Doctor of Philosophy in Agricultural Applied Economics program. The first option, allows graduate students to select a minor of their choice in areas such as Business Administration, Finance, Mathematics, Public Administration, Statistics, Sociology, or other possible areas of study. This program has been designed to take advantage of the strengths of the Department and areas of interest to students. The second option, allows graduate students to select a minor in Family Financial Planning, a joint Ph.D. program between the Department of Agricultural and Applied Economics and the College of Human Sciences. Completion of the Doctoral program in Agricultural Applied Economics program with a a minor in Family Financial Planning qualifies graduates to take a test administered by the Certified Financial Planning Board of Standards to become Certified Financial Planners.

Each candidate is expected to demonstrate competency by satisfactorily completing (1) a comprehensive written examination in each specialty field chosen, (2) a dissertation demonstrating original, independent scholarly research, and (3) a final oral examination.

Attainment of a Ph.D. brings the expectation that the individual can serve as a faculty member or researcher. Therefore, the Ph.D. candidate is generally involved in generation of original ideas and proposal writing, and sometimes in seeking of research funding. The Ph.D. student must show command of the scientific literature, the ability to define and solve a research problem, skill at research design, and competence in data analysis.

### **Departmental 99 Hour Ph.D. Program Policy**

Effective January 1998, each full-time student is expected to complete all the requirements of the doctoral program with a maximum total of 99 credit hours. Ph.D. students who have 99 or more hours of doctoral credit will not be eligible for scholarships, fellowships or graduate student assistantships from funds administered by the Department or University. International students may have difficulty in maintaining student visa's under these conditions.

To monitor Ph.D. student progress and accumulation of credit hours, a list will be circulated to graduate faculty each semester listing current accumulated hours for all doctoral candidates. Major professors with concerns that doctoral students are not making adequate progress should notify the Department graduate coordinator or chair so that corrective measures can be implemented early in the program. Failure to make academic progress necessary for completion of the doctoral program in 99 hours could justify dropping a student from the Ph.D. program.

### **Ph.D. Time-Line and Semester Study Load**

The department expects students to complete their program within 7 full semesters and 3 full summer sessions. The proposed time-line and semester study load for doctoral students are as follows:

- 9 hours/semester for the first two full semesters
- 12 hours/semester for the next five full semesters
- 3 hours/summer session (with 2 summer sessions per summer)

Exceptions to the above policy are at the discretion of the Graduate Program Committee of the department.

Table 4

**Option #1****Ph.D. Program in Agricultural & Applied Economics -  
Minor of Student's Choice**

Course Number	Course Title	Credit Hours
AAEC 5303	Adv. Production Econ.	3
AAEC 5307	Applied Econometrics-I	3
AAEC 5316	International Ag. Trade & Policy	3
AAEC 5321	Research Methodology	3
AAEC 6302	Food, Ag., & Nat. Res. Policy	3
AAEC 6305	Dynamic Eco. Optimization	3
AAEC 6308	Adv. Natural Res. Econ.	3
AAEC 6310	Demand & Price Anal.	3
AAEC 6311	Applied Econometrics-II	3
ECO 5311	Macroecon. Th. & Pol.	3
ECO 5312	Microecon. Anal.	3
AAEC 8000	Dissertation	21
Required AAEC & ECO Electives		12
Minor		15
Free Electives		9
<b>Total Credit Hours</b>		<b>90</b>

Note: A maximum of 6 hours of piggyback courses are allowed toward elective requirements.

Table 5

**Option #2****Ph.D. Program in Agricultural & Applied Economics -  
Minor of Family Financial Planning**

Course Number	Course Title	Credit Hours
AAEC 5303	Adv. Production Econ.	3
AAEC 5307	Applied Econometrics-I	3
AAEC 5316	International Ag. Trade & Policy	3
AAEC 5321	Research Methodology	3
AAEC 6302	Food, Ag., & Nat. Res. Policy	3
AAEC 6305	Dynamic Eco. Optimization	3
AAEC 6308	Adv. Natural Res. Econ.	3
AAEC 6310	Demand & Price Anal.	3
AAEC 6311	Applied Econometrics-II	3
ECO 5311	Macroecon. Th. & Pol.	3
ECO 5312	Microecon. Anal.	3
AAEC 8000	Dissertation	21
Required AAEC & ECO Electives		12
CEED 5371	Adv. Family Fin. Plan.	3
CEED 5372	Family Asset Mgmt. Alloc.	3
CEED 5373	Prof. Pract. In Family Fin. Plan.	3
CEED 5394	Adv. Family Ret. Plan.	3
CEED 5395	Adv. Family Risk Mgmt.	3
CEED 5398	Adv. Family Estate Plan.	3
FIN 5325 or CEED5362	Sem. Sec. Anal & Inv./Family Fin. Plan.	3
ACCT 5311	Income Tax Accounting	3
Total Credit Hours		90

**Prerequisites**

The student shall have completed the requirements for an M.S. degree or its equivalent before admission to the doctoral program. Furthermore, students admitted to the program with a Master's degree but without having done an analytical thesis will be required to gain research experience as a leveling requirement unless the student's advisory committee specifically waives the requirement. A student who obtains an M.S. Degree in the department and wishes to continue in the

doctoral program must apply for admission to the Ph.D. program.

### **Preliminary Examination**

As early in the doctoral program as possible, the student will undergo a preliminary examination (oral, written, or both). This examination will serve as the basis for further counseling of the student. Its results will be reported to the Graduate School on forms entitled "Doctoral Degree Plan." This examination should occur within the first year of the Ph.D. program.

### **Credit Hour Requirements**

The doctoral program requires a minimum of 70 credit hours of course work beyond the baccalaureate degree and at least 21 credit hours for dissertation. The doctoral program requires credit hours from the five areas:

1. Required Core Courses (33 credit hours)
2. Dissertation (AAEC 8000) (21 credit hours)
3. Required Electives from Agricultural and Applied Economics and/or Economics (12 credit hours)
4. Minor (15 credit hours)
5. Free Electives (9 credit hours)

### **Required Core Courses**

A candidate must take thirty-three (33) credit hours of the following classes. See Graduate Catalog for the title and a detailed description of courses listed.

1. Agricultural and Applied Economics-AAEC 5303, 5307, 5316, 5321, 6302, 6305, 6308, 6310, 6311.
2. Economics-ECO 5311, 5312.

### **Minor and Electives**

A candidate must take twelve (12) credit hours of electives chosen from Agricultural and Applied Economics and /or Economics and nine (9) credit hours of electives must come from areas other than Agricultural and Applied Economics and Economics. Areas recommended to satisfy this requirement include the following: Business Administration, Mathematics, Public Administration, Sociology, or technical agriculture.

Each candidate must concentrate in a minor area outside the department and successfully meet the requirements of the minor department. Requirements usually include successful completion of a minor comprehensive examination. Note that these requirements will be different if enrolled in the Doctor of Philosophy in Agricultural and Applied Economics program with a minor in Family Financial Planning (see Tables 4 and 5).

### **Dissertation**

A candidate must complete at least twenty-one (21) credit hours of dissertation credit.

### **Courses Recommended for Required Electives, Electives, and Minor**

The courses listed below are recommended by the department for use in meeting both required and general electives in Agricultural and Applied Economics and supporting disciplines, where applicable. See the Graduate Catalog for the title and detailed description of courses listed.

1. Agricultural and Applied Economics (AAEC)- 5308, 5312, and 5318.
2. Economics (ECO)- 5302, 5313, 5320, 5323, 5324, 5325, 5328, 5329, 5332, 5333, and 5334.
3. Agriculture (AGSC)- 5301, and 5302; ANSC 5303,

- 5304, and 5401; (ENTO)- 5304, 5307, and 5309;  
(PALA)- 5301, 5304, and 5303; (PSS)- 5323, 5333,  
5334, 5335, and 7000; (RWFM)- 5306, 5310, 5311,  
5312, 5314, and 5315.
4. Business Administration (ACCT)- 5300, and 5301;  
(FIN)- 5320, 5321, 5323, and 5333; (MGT)- 5370,  
5371, and 5384; and (MKT)- 5361, 5362, 5368,  
6352, and 6353.
  5. Mathematics (MATH)- 5304, 5305, 5306, and  
5307.
  6. Political Science (POLS)- 5336, 5370, 5372, 5376,  
and 5378 or Public Administration (PUAD)- 5340,  
5342, 5345, and 5348.
  7. Sociology (SOC)- 5303, 5311, 5312, 5313, 5314,  
5327, and 5349.

### **Residence Requirement**

Regardless of the amount of graduate work completed elsewhere, each doctoral student must complete at least one year of graduate work in each of two consecutive semesters of an academic year. Students holding half-time graduate assistantships may satisfy the requirement by 9 hours of work in each long term and 6 hours in the summer. Upon petition to the Graduate School, however, other patterns of residence may be approved if they include completion of at least 24 semester hours in continuous enrollment during a given 12 month period. The plan for completing this requirement should be approved by the Graduate Dean prior to beginning residence, especially if the normal pattern for residence is not being proposed.

### **Final Examination**

All doctoral candidates are required to pass a public oral examination which is usually over the general field of the dissertation. Candidates should consult the Graduate Catalog

for the last date for scheduling the examination in a given semester. The final examination cannot be administered any sooner than four months after the qualifying exam has been passed. The examination may not be administered until at least three weeks have elapsed following the candidate's submission to the Graduate Office of the notification form giving the time, place, and other information pertaining to the examination. (This form is available from the Graduate Office.) A copy of the dissertation must be given to both the advisory committee and Graduate School representative at least ten working days prior to the final examination. After the final examination, the major professor will send a written notification of the results to the Graduate School.

### **FINANCIAL ASSISTANCE**

A limited number of graduate assistantships are awarded on a competitive basis each year to qualified graduate students. Teaching assistantships require the student to serve as instructor for undergraduate courses or laboratories under faculty supervision. Research assistantships require the student to assist on one or more designated research projects under faculty supervision. Research assistantships are available only to students in the M.S.-thesis option and the PhD. program. Research assistantships may relate directly to the thesis or dissertation research. Master's degree students who have accepted graduate research assistantships or other research monies shall not be eligible for the M.S. non-thesis or M.Ag. options. Any exceptions shall be ruled on by the Departmental Graduate Committee.

Half-time graduate assistantships require that the student work 20 hours per week. Assistantships are considered half-time employment and the student is responsible for the hours of work and research results. A graduate assistant does not accrue annual leave. Each graduate assistant is required to register for 12 credit hours each semester and 6 credit hours for each 6-week summer term. A graduate assistant is

expected to remain free from other outside employment.

The assistantship stipends follow University guidelines and are subject to change each year. Students must maintain a B average or better and perform assigned duties in a satisfactory manner to retain a graduate assistantship. Performance is reviewed each semester.

A limited number of scholarships are available on the basis of need and academic achievement. Contact the Departmental Graduate Coordinator for more information.

## **DEPARTMENTAL POLICIES**

### **M. S. Semester Study Load**

All M. S. full-time students enrolled in the graduate program of the department must be enrolled for at least 12 hours of graduate credit during the long semester and 6 hours during each summer session whenever they are in residence. A candidate may satisfy this requirement by enrolling in AAEC 5301, 6000, or 7000. No more than 6 hours of AAEC 6000 for thesis students may be included in the M.S. degree program. no more than 3 hours of AAEC 5301 for non-thesis students may be included in the M.S. degree program. These rules apply to every semester up to and including the semester of the thesis defense. If completion occurs during a semester after the semester of the defense, you must register for at least one credit hour during the semester of graduation.

Examples of exceptions to full-time enrollment are as follows:

- a) Students who are full-time employees of Texas Tech University;
- b) Students requested by the department to teach more than half-time;
- c) Students lacking only one or two courses to complete non-thesis degree requirements;
- d) Students off-campus completing degrees on a part-

time basis.

The maximum credit load for students on research assistantships is 12 semester credit hours. Non-resident tuition has been customarily waived for students with RA or TA appointments of 50% or greater.

### **Advisory Committee**

A major professor should be selected during the student's first semester in the graduate program. The student and major professor will jointly select other members of the graduate committee. Advisory committees must have a minimum of three faculty members, one from outside the department, for students in both the M.S. program and the M. Ag. program; and a minimum of four members, one from outside the department, for Ph.D. students. It is the student's responsibility to become acquainted with department faculty members and to select a major professor. Both the major professor and the advisory committee should be selected as early as possible in the graduate program, so the Departmental Graduate Coordinator can notify the Dean of the Graduate School.

### **Degree Plan**

The student should also file a degree plan by the end of the first semester of graduate study. The student and major professor should work out a tentative plan, which will be discussed and approved by the full advisory committee. Degree plans must be signed by the Department Graduate Coordinator.

### **Research Topic**

Students working on M.S.-thesis and Ph.D. degrees should begin discussions on possible research topics with their major

advisors and committee members as early as the first semester in their program.

### **Thesis and Dissertation Proposals**

Prior to conducting thesis and dissertation research each M. S.-thesis and Ph.D. candidate will present a thesis or dissertation proposal to his/her graduate committee. Under supervision of your major professor, you should define an original research problem and write a detailed proposal. The proposal should consist of a title, a statement of the problem and rationale for the proposed research, a statement of objectives, hypotheses to be tested, a review of the literature, and a detailed description of the design, data analysis, and procedures of the study. Proposals must also include a conceptual framework that applies relevant economic theory to an analysis of the research problem. You should be aware that your proposal will be judged largely on the basis of whether the study design and procedures are likely to permit fulfillment of the stated objectives.

After your major professor has approved the proposal, you should distribute copies to the members of your graduate advisory committee. The committee should be allowed at least two weeks to read and evaluate the proposal prior to your committee meeting.

### **Committee Meeting**

With the assistance of your major professor, you should prepare a short oral presentation based on the thesis or dissertation research proposal to be presented to your committee. This presentation is expected to be formal and scholarly. You should include in your presentation a clear rationale for the proposed research, a concise statement of objectives, hypotheses, and a detailed description of the design and methods of the intended study. You should be prepared to defend your proposal during a question-and-answer period

following the presentation. One purpose of this presentation is to give you experience in oral presentation and evaluation of your performance.

When members of the graduate advisory committee have finished questioning, they will arrive at a consensus as to whether, and under what conditions the proposal should be accepted. Your proposed list of required course work is also scrutinized in relation to previous course work, current research, and career objectives. You must comply with any suggested changes and stipulations before admission to candidacy.

### **GPA Requirements**

Students in the graduate program must maintain a minimum GPA of 3.0. Additionally, a grade of C in any graduate course is unacceptable. In the event that a Master's student receives two or more C course grades, or a Ph.D. student receives one C course grade, or otherwise gives evidence of questionable academic performance, the student's candidacy will be re-evaluated.

Graduate students taking undergraduate leveling courses are expected to make A grades. Some B grades may be acceptable, but a C grade in any prerequisite course will normally result in denial of admission to the graduate program.

### **M.S. and Ph.D. Comprehensive Examinations**

The purpose of the comprehensive examination is to test the student's ability to integrate knowledge from various subject matter areas, as well as course work and prior and current literature, and apply appropriate concepts and tools to issues and problems relevant to the discipline. Students in the M.S. and Ph.D. programs, except for those enrolled in the M. S.-J.D. Joint Degree program may take the comprehensive examinations twice a year. These dates are established by the Departmental Graduate Examination Committee.

The written comprehensive examination is administered and evaluated by the Departmental Graduate Examination Committee and is graded on a pass/fail basis. A student in the M.S. program may take the examination twice, but a second failure will terminate his/her graduate program. The Ph.D. comprehensive examination consists of two parts given on separate dates. The first part emphasizes microeconomic topics, and the second part emphasize macroeconomics, policy, research methodology, and quantitative methods. Each part of the examination is graded separately on a pass/fail basis. A third part of the Ph.D. comprehensive examination may be required by the minor department. A second failure in any part will result in termination of the student's Ph.D. program.

### **Research and Its Reporting**

You are encouraged to maintain close contact with your major professor and other members of your graduate advisory committee during the research and writing phases of your thesis or dissertation. Such contact serves two functions: (1) it allows you to benefit from the expertise of individual committee members and perhaps avoid pitfalls or wasted time and (2) it informs graduate committee members of your research progress. You are particularly urged to confer with members of your graduate advisory committee at critical points in your research program--e.g., when you have finished collecting data and are about to start analyzing results and when you are considering the broad organization of your thesis or dissertation.

### **Preparation of Thesis or Dissertation**

In preparing even the earliest draft of the thesis or dissertation, you should have the typescript conform with the style currently accepted by the Graduate School. The Texas Tech University Publication Guide for Graduate Students is

helpful.

### **Defense of Thesis or Dissertation**

A M.S. or Ph.D. candidate who has fulfilled all course work requirements, who has passed comprehensive examinations, and who with the major professor's approval has submitted a draft of the thesis or dissertation to the graduate committee must pass a final examination to complete the degree program. The final examinations include an oral presentation of your research (defense seminar) which is open to the public. The presentation is expected to be of a quality suitable for delivery at a scientific meeting.

After the graduate advisory committee has reviewed your records and has examined you verbally, they determine whether to recommend conferral of an advanced degree. You will be advised immediately of the committee's decision. The committee has the option of indicating conditional approval, in which case you must meet the specified conditions. Members of the graduate advisory committee indicate ultimate approval by signing the cover page of the thesis or dissertation.

### **Final Requirements for Graduation**

Students who are within four months of completing their graduate degree programs are advised to consult the Graduate Catalog and personnel in the Graduate School for information on fees, disposition of the departmentally approved thesis or dissertation, and graduation deadlines. Students wishing to participate in commencement exercises are particularly urged to contact the Graduate School for annually updated information on graduation deadlines. Students are responsible for meeting all deadlines for graduation.

## **OTHER PROFESSIONAL OBLIGATIONS**

### **Integrity:**

Advancement of knowledge depends on the generation of original reliable information. Using someone else's ideas or data without proper credit or producing fictitious information impedes the progress of science and is a major ethical infraction. Scientists must be scrupulously honest with themselves and with those who use the results of their work. Consequently, even a hint of plagiarism or fictitious data will cause a cloud of suspicion over your relationship with professors and peers. Proof of such activity will be grounds for immediate dismissal from the program.

### **Academic Honesty:**

The University expects graduate students to maintain the highest standards of research honesty. Research fraud is an act of deception; it is different from error. The term fraud is used here to include a broad range of deceptive practices including:

1. Falsification of data - the intentional and unauthorized altering or inventing of any information or citation, including the purposeful omission of conflicting data with the intent to falsify;
2. Plagiarism - knowingly representing the words or ideas of another as one's own.
3. Misappropriation of other's ideas - the unauthorized use of privileged information (such as violation of confidentiality in peer review, however obtained).

Research fraud may be reported either during or after a graduate student's program has been completed. If found guilty of research fraud you will be given a penalty which may include: (1) reprimand; (2) warning or probation; (3)

suspension; (4) expulsion; (5) request to rewrite thesis or dissertation or correct and reanalyze data and resubmit and re-defend thesis or dissertation; (6) loss of financial assistance; and/or (7) revocation of degree.

### **Professional Societies:**

Graduate students are encouraged to join and participate in the activities of pertinent professional societies. Most societies have reduced dues for students. In addition to reading journals and newsletters, you should attend professional meetings whenever possible. Departmental transportation will often be available to off-campus events of these societies. Students serving on committees or delivering papers will usually be able to obtain at least partial travel expenses from a research project or department operating funds.

### **Seminars:**

Student attendance is expected at all departmental seminars. A major purpose of seminars is to acquaint you with department personnel, research and other scholarly activities. Seminars also afford you with opportunities to present your ideas for peer and faculty review.

### **Informal Social and Other Learning Opportunities:**

Alert graduate students will find that there are as many, if not more, opportunities for learning from fellow students as from classes or conferences with professors. You will gain the most from your graduate years by taking every opportunity to talk with students having experience from other parts of the U.S. and the world. You can learn a great deal by sharing work efforts, and traveling to different study areas with other students or professors. The department will try to facilitate these opportunities for interaction, but these interchanges will not be forced. However, students who quietly keep to

themselves, working only on individual research, will gain only a fraction of the experience that sociable, widely inquiring students will be able to obtain. Life long professional ties can be built among fellow students that enhance long-term chances for success.

### **Publication of Research:**

A thesis or dissertation is not considered a publication. These documents are not readily accessible to the research and scientific community, nor to the general public. Anyone who receives a graduate degree from a publicly funded institution of higher education has an obligation to make the results of his/her research available to the public that paid the tax dollars or donated the money that enabled the research to be accomplished. Consequently, every student is expected to get at least the main elements of their research into a widely available journal. The stature of the department and its continuing ability to attract research funds depends on this process. Maintenance of departmental stature is of overall value to all past and potential recipients of graduate degrees. Present graduates draw on the past departmental reputation as they vie for positions in the current job market.

You are encouraged to write your research in a form acceptable for publication as soon after completion of degree requirements as possible. However, this task becomes more difficult the longer it is delayed.

### **Offices and Computers:**

Once assigned office space, it is your responsibility to utilize it to the fullest. Office space and desks are at times a scarce resource. If desks are used only as book storage areas or as "part-time" study areas, you will be asked to share the desk with another student or possibly to find a carrel in the library. People in a low priority category occupying desk space may be displaced by one in a higher priority category

without desk space. The University Library has available a number of carrels with lockable book shelves. You may wish to occupy one of these until departmental office space and a desk become available.

The department has computer facilities which include access to World Wide Web and are available to all graduate students. All students must inform their major professors about any relocation of computers and related equipment. Secretaries' computers may never be used by graduate students.

### **Copying and Office Supplies:**

The department makes every effort to support graduate research to the fullest extent possible. However, there are some stipulations placed on the use of office supplies and equipment provided by the State of Texas. General office supplies (e.g. paper, pens, etc.) are available to faculty and staff. They are available to graduate students only by special request from their graduate advisors and for use only on departmental business, not for the student's course or personal use.

The department copy machines are restricted to staff and faculty use (including material prepared for courses taught by Teaching Assistants). Graduate students gain access to the copy machines only when approved by the student's research advisor. The copy machines are intended to support research and teaching activities and not intended for copying course work material or books (commercial copy centers are located both on campus and throughout the city for copying personal material).

### **Vacations:**

Part-time research and teaching appointments do not carry provisions for vacation or sick leave. Arrangements for absences from campus or field sites should be worked out between you and your major professor. You should indicate when you expect to be absent. If intended leave conflicts with departmental needs you may expect to have requests for leave denied. Student holidays are provided for undergraduates and do not apply for graduate students employed by the university. All leave time must be approved by your major professor.

**Mail:**

Mail boxes are established for each graduate student. Please see the departmental secretaries for establishing a new box or leaving a forwarding address.

**Keys:**

Appropriate keys are obtained from the departmental secretaries. Students are required to sign for keys. It is illegal to duplicate University keys or have unauthorized keys in your possession. After the completion of your program, the keys should be returned to the department.

**APPENDIX A**

**Abbreviated Summary of Major Steps Required for the Master's Degree**

	<b><u>Action</u></b>	<b><u>Initiated Through</u></b>	<b><u>Approved By</u></b>	<b><u>Time</u></b>
1.	Apply for Admission	Graduate Admissions	Graduate Dean	3 months before enrollment
2.	Obtain Major Professor	Departmental Coordinator	Departmental Coordinator	Prior to registration
3.	Set up Graduate committee	Major Professor		During first semester enrolled
4.	File for "Program M.S. Degree"	Graduate Committee	Graduate Dean	During first semester enrolled
5.	Take Comprehensive Exam	Student	Graduate Committee	After completion of course work
6.	Defend Thesis Proposal	Major Professor		At the discretion of Graduate Committee
7.	File "Application for Admission to Candidacy for the Masters Degree"	Departmental Graduate Coordinator	Graduate Dean	No later than 4 months before graduation
8.	File changes in degree (if necessary)	Departmental Graduate Coordinator	Graduate Dean	As they are determined
9.	File "Statement Intention to Graduate"	Graduate Dean		Semester of graduation*
10.	File official Thesis title	Graduate Committee	Graduate Dean	Semester of graduation*
11.	Pay Diploma fee, & send copy of receipt to Graduate School	Bursar's Office		Semester of graduation*
12.	Schedule final oral examination	Major Professor		Semester of graduation*

**APPENDIX A (continued)**

**Abbreviated Summary of Major Steps Required for the Master's Degree**

	<b><u>Action</u></b>	<b><u>Initiated Through</u></b>	<b><u>Approved By</u></b>	<b><u>Time</u></b>
13.	Submit copies of thesis to Graduate School	Graduate Committee	Graduate Dean	Two weeks prior to graduation
14.	Take signed thesis copies for binding	Graduate School		Semester of graduation*
*	See Graduate Catalog for specific deadlines in each graduation period.			

**APPENDIX B**

**Abbreviated Summary of Major Steps Required for the Ph.D. Degree**

	<b><u>Action</u></b>	<b><u>Initiated Through</u></b>	<b><u>Approved By</u></b>	<b><u>Time</u></b>
1.	Apply for Admission	Graduate Admissions	Graduate Dean	At least 3 months before enrollment
2.	Plan first semester and obtain Major Professor	Departmental Graduate Coordinator	Department Graduate Coordinator	Prior to registration
3.	Set up doctoral advisory committee	Major Professor	Graduate Dean	During first semester enrolled
4.	Take preliminary examination	Student's Graduate committee		Ordinarily within the first year
5.	File "Doctoral Degree Plan" Form	Major Professor	Graduate Dean	After evaluation of preliminary examination
6.	Take Qualifying Exam (Major and Minor)	Major Professor & Comprehensive Exam. Committee		After approval of Doctoral Proposal and completion of course work
7.	Ph.D. Dissertation proposal defense	Major Professor and Dissertation Advisory Committee		After passing the written qualified examinations
8.	Recommendation for admission to Ph.D. candidacy	Major Professor	Graduate Council	After passing the written qualified examinations
9.	File "Statement of Intention to Graduate"	Graduate Dean		Semester of graduation (By specified date)*
10.	File official title of dissertation	Major Professor		Semester of graduation (By specified date)*

**APPENDIX B (continued)**

**Abbreviated Summary of Major Steps Required for the Ph.D. Degree**

	<b><u>Action</u></b>	<b><u>Initiated Through</u></b>	<b><u>Approved By</u></b>	<b><u>Time</u></b>
11.	Pay diploma fee. Take copy of receipt to Graduate School	Bursar's Office		Semester of graduation (By specified date)*
12.	Schedule oral defense of dissertation	Major Professor	Graduate Committee	After committee approves draft
13.	File Final examination notification form with Graduate School		Graduate Dean	3 weeks prior to defense
14.	Stand for oral defense of dissertation	Dissertation Advisory Committee	Graduate Dean or a Representative	Semester of graduation (By specified date)
15.	File report of final examination	Major Professor		Semester of graduation (By specified date)
16.	Submit dissertation and abstracts to Graduate School	Dissertation Advisory Committee		Semester of graduation (By specified date)
17.	Take dissertation copies to PrinTech	Graduate School		Semester of graduation (By specified date)*

\* See Graduate Catalog for specific deadlines in each graduation period.

## APPENDIX C

### GRADUATE COURSES IN AGRICULTURAL AND APPLIED ECONOMICS\*

AAEC 5100 <sup>a</sup>	Graduate Seminar
AAEC 5301	Special Study in Agricultural and Applied Economics
AAEC 5302	Food and Agriculture Sector Public Policy
AAEC 5303	Advanced Production Economics
AAEC 5307	Applied Econometrics I
AAEC 5308	Natural Resource Economics
AAEC 5309	International Economic Development in Food and Fiber Sectors
AAEC 5310	Advanced Market Analysis
AAEC 5312	Agribusiness Analysis
AAEC 5313	Microcomputer Applications in Agribusiness and Research
AAEC 5315	Property Appraisal
AAEC 5316	International Ag. Trade & Policy
AAEC 5317	Financial and Commodity Futures and Options
AAEC 5318	Finance and the Agribusiness Sector
AAEC 5320	Agribusiness Law
AAEC 5321	Research Methodology in Economics
AAEC 6000 <sup>b</sup>	Master's Thesis
AAEC 6301	Advanced Special Problems in Agricultural and Applied Economics
AAEC 6302	Food, Agriculture, and Natural Resource Policy Analysis
AAEC 6305	Dynamic Economic Optimization
AAEC 6308	Advanced Natural Resource Economics
AAEC 6310	Demand and Price Analysis
AAEC 6311	Applied Econometrics II
AAEC 7000 <sup>b</sup>	Research
AAEC 7200	Teaching Practicum
AAEC 8000 <sup>b</sup>	Doctor's Dissertation

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\*Graduate course names and numbers may be revised.

<sup>a</sup> The second digit shows the credit hours given for each course

<sup>b</sup> These are variable credit hour courses, and may be repeated

**APPENDIX D**

**GRADUATE FACULTY IN AGRICULTURAL  
AND APPLIED ECONOMICS**

Emmett W. Elam, Associate Professor;  
Marketing, Price Analysis; Ph.D.,  
University of Illinois.

Don E. Ethridge, Professor and Chairperson;  
Price Analysis, Resource and  
Production Economics, Policy, Ph.D.,  
North Carolina State University.

M. Dean Ethridge, Adjunct Professor;  
International Economic  
Development, Policy, Ph.D.,  
University of California - Berkeley.

Wyatte L. Harman, Adjunct Professor;  
Production and Resource  
Economics, Ph.D.,  
Oklahoma State University.

Phillip Johnson, Associate Professor;  
Agricultural Finance, Production  
and Resource Economics; Ph.D.,  
Texas Tech University.

Thomas O. Knight, Professor,  
Production Economics, Risk  
Management, Policy, Ph.D.,  
University of Missouri - Columbia

Vernon Lansford, Assistant Professor  
Production and Resource  
Economics, Ph.D.  
University of Missouri-Columbia

Conrad Lyford, Assistant Professor;  
Agribusiness, Marketing; Ph.D.,  
Michigan State University.

**APPENDIX D** (continued)

**GRADUATE FACULTY IN AGRICULTURAL  
AND APPLIED ECONOMICS**

Jaime Malaga, Assistant Professor;  
Marketing, International Trade; Ph.D.,  
Texas A&M University.

Sukant K. Misra, Associate Professor;  
Agribusiness Management,  
Marketing, Price Analysis; Ph.D.,  
Mississippi State University.

Samarendu Mohanty, Assistant Professor;  
Agricultural Trade and Policy; Ph.D.,  
University of Nebraska - Lincoln.

Octavio A. Ramirez, Associate Professor;  
Econometrics, Management; Ph.D.,  
University of Florida.

Roderick M. Rejesus, Assistant Professor;  
Production Economics, Risk  
Management, Policy, Ph.D.  
University of Illinois—Urbana, Champaign

Eduardo Segarra, Professor;  
Production and Resource  
Economics; Ph.D.,  
Virginia Polytechnic  
Institute and State University.

David Willis, Assistant Professor;  
Resource and Environmental  
Economics; Ph.D.,  
Washington State University.

## Web site

For more information  
about the department  
please visit the  
department of Agricultural  
and applied  
economics homepage at  
**<http://www.aeco.ttu.edu>**.

or email us at  
**[aaec@ttu.edu](mailto:aaec@ttu.edu)**.

