

DEPARTMENT OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES

GRADUATE STUDENT HANDBOOK

August 2013, Version 1

INTRODUCTION

You have been accepted by the Graduate School and the Department of Agricultural and Environmental Sciences to pursue a Master of Science (MS) Thesis option, Master of Science

Non-thesis option, or Doctorate of Philosophy (PhD) degree.

recognizes you as an independent, motivated individual who will achieve your goal of becoming a professional scientist/agricultural economist. While enrolled here and after you graduate, you

Conditional Graduate Status

A student who exhibits one or more of the following at the time of application to graduate studies may be admitted as a conditional student with the approval of the Dean of Graduate Programs: (1) a deficiency in curricular requirements in the field in which study is desired, or (2) a deficiency in admission requirements set by the College or Department, or (3) a CGPA of less than **3.00** but greater than **2.70**, upon the recommendation of the Department Head and College Dean. Additionally, a student with an incomplete transcript may be admitted conditionally for **one semester only**.

THE MAJOR ADVISOR

For the greatest success, you must work in an area that is of interest to you, and with an advisor whose focus area is compatible with your interest. Your Major Advisor is the key person in your graduate program. In many cases, the research area you choose will be related to an on-going research project.

Your Major Advisor has an obligation to help you attain your highest intellectual level. Through years of productive work and experience, your advisor has earned the privilege of guiding graduate students. This individual has gained perspective and breadth of knowledge, which is available to you.

Communication between you and your Major A

2. On completion of the academic program and thesis, the final oral examination shall be administered by the Advisory Committee and two additional members selected in consultation with the Major Advisor. The thesis should be presented to the committee members at least two weeks before the scheduled oral examination date. This examination shall determine the

relate the research findings to the pertinent literature.

b. Enrollment Expectation---

Credit Hours Per Session			
Graduate Statue	Fall	Spring	Summer
Full-Time*	12	12	6
1/4 Research or Teaching Assistant (working 10 hr/wk)	9	9	6
3/8 Research or Teaching Assistant (working 15 hr/wk)	9	9	6
1/2 Research or Teaching Assistant (working 20 hr/wk)**	9	9	6
3/4 Research or Teaching Assistant (working 30 hr/ wk)	3	3	3
Full-time Staff or Faculty	3	3	3

*A Graduate student not receiving a Research or Teaching Assistantship or one who is enrolled in the Occupational Therapy program. **Departments and Advisory Committees may assign no more than 18 credit hours total for the three terms.

D. Credit Hour Requirements

Satisfactory completion of at least 30 hours of graduate courses for credit is also required before a student may be recommended for the MS degree. A **maximum of nine (9) semester hours** may be transferred from graduate courses taken at other university provided the student has grades of “**B**” or better in these courses. For students who are pursuing a second Master's degree at Tuskegee University nine hours of credit are transferable from courses taken to fulfill the requirements of the first degree. **Correspondence course credits are not acceptable.**

Graduate Credit for Undergraduates

An undergraduate student who requires less than 15 credit hours of course work for the completion of requirements for the baccalaureate degree may select certain courses for graduate credit provided the cumulative grade point average is 3.00 or above. These courses must be

courses are usually listed at the 500 level. An undergraduate student may not enroll in 600 level courses. A grade of "B" or better in such courses is required for application to graduate credit. A student who meets the requirements and petitions for graduate credit can apply these courses for graduate credit only after being admitted to the Graduate Program, and after the department in which the study will be pursued accepts the work for graduate credit. **NOT MORE THAN NINE (9) SEMESTER HOURS OF SUCH WORK MAY BE COUNTED TOWARD AN ADVANCED DEGREE.**

E. Thesis

The thesis problem area for the MS degree program is chosen by the student in consultation with the Major Advisor, subject to approval by the graduate Advisory Committee. In general, the

INTELLECTUAL PROPERTY

Students and Graduate Assistants, with or without monetary compensation working on any

PARKING

Parking is available and arrangements must be made with Campus Security to obtain the necessary decals/permits. Graduate students must adhere to the university policy for Student Parking.

USE OF UNIVERSITY EXPERIMENTATION VEHICLES

Students will be allowed the use of University vehicles in the process of carrying out their

license and **MUST HAVE SUCCESSFULLY COMPLETED THE DEFENSIVE DRIVING COURSE**

Appendix

NON-THESIS PROJECT APPROVED BY:

Major Professor

Committee Member

Committee Member

Committee Member

Dean of College

Dean of Graduate Programs

FOR:

Student

Title of Non-Thesis Project

CURRICULUM SHEET FOR GRADUATE STUDENTS

CORE CURRICULUM FOR MASTER OF SCIENCES in Agricultural and Resource Economics non-thesis DEGREE.

REQUIRED CORE COURSES 14 credits):

AGEC 0615	Quantitative Methods (or equivalent or EVSC 0501 Biostats II)	3 credits
AGEC 0505	Agribusiness Management	3 credits*
AGSC 0600	Non-Thesis Graduate Project Seminar I	1 credit
AGSC 0604	Non-Thesis Graduate Project Seminar II	1 credit
IBSC 0601	Research Ethics in Bioscience	3 credits*
AGSC 0699	Non-Thesis Graduate Project	3 credits
ECON 0512	Introduction to International Trade	3 credits
TOTAL CORE		17 credits

*Courses in discipline approved by Advisory Committee may be substituted for these courses.

AREA OF CONCENTRATION **9 credits**

Students are required to complete 12 credits from his/her respective concentration of which **6 credit hours must be in courses at 600 or above.**

ELECTIVES **6 credits**

Students are required to complete 6 credit hours of electives comprising any graduate level courses 500 or above outside his/her respective concentration approved by the Advisory Committee.

TOTAL CREDIT HOURS REQUIRED 32 credits

AGRICULTURAL AND RESOURCE ECONOMICS (AGEC)

AGEC 0553	Macroeconomics and Applications in Agriculture	3 credits
AGEC 0604	Microeconomics Theory and Applications to Agriculture	3 credits
AGEC 0622	Research Methodology	3 credits

****Note: At the time of program development the listed courses comprise AGEC courses; however, any courses developed hereafter and meet the requirements indicated may be used to fulfill the concentration requirement indicated above.**

VII.

AGSC 0699. NON-THESIS GRADUATE PROJECT. 1st and 2nd Semesters, Summer, 3 credits. Research , preparation and production of final project paper under the directions of a major advisor. Students in this program will be required to select research problems on a specific topic concentrating on the investigation of problems in agricultural, environmental and related sciences.

ECON 0512. INTRODUCTION TO INTERNATIONAL TRADE. 2nd Semester. Lect. 3, 3 credits. This course explores concepts, analytical tools and their applications to international economics. Introduction to theory and empirical foundations of international trade and factor movements. The theory of multi-country, multi-commodity trade. Problem of international disequilibrium. Public and private barriers to trade and monopoly of international trade. Search for economic stability and growth through international cooperation. International monetary funds. International monetary system. Role of international trade and aid in economic development.

CONCENTRATION COURSES

AGRICULTURAL AND RESOURCE ECONOMICS (AGEC)

AGEC 553. MACROECONOMICS AND APPLICATIONS IN AGRICULTURE: 1st Semester. Lect. 3. An advanced look at theory and applications to agriculture of the circular flow framework, supply and demand in the macroeconomy, labor and factor markets, aggregate real supply and demand analysis; effects of fiscal and monetary policy on the price level, real output, and unemployment; budget deficits, and stability of the banking system. Prerequisites: ECON 353.

AGEC 604. MICROECONOMICS THEORY AND APPLICATIONS TO AGRICULTURE: 2nd Semester. Lect. 3. This is an advanced microeconomics course that develops the theoretical structure of microeconomics principles and application to economic policy and decision making. The course covers the microeconomics of consumer choice, theory of the firm, general equilibrium, welfare economics, externalities and public goods. Prerequisites: ECON 352.

AGEC 622. RESEARCH METHODOLOGY. 2nd Semester. Lect. 3. Selection, planning and conduct of research; alternative approaches, role of theory, beliefs and values; critical appraisal

CURRICULUM SHEET FOR GRADUATE STUDENT

CORE CURRICULUM FOR MASTER OF SCIENCES in Animal Sciences non-thesis
DEGREE.

REQUIRED CORE COURSES 14 credits)E STUDENT

APSC 600 ADVANCED REPRODUCTION PHYSIOLOGY. 1st Semester. Lect. 3, Lab 3, 4 credits. This course presents materials associated with recent advances in research mammalian reproduction to include; application of biotechnology and embryo transfer. Students will be required to conduct an approval res

CURRICULUM SHEET FOR GRADUATE STUDENT

CORE CURRICULUM FOR MASTER OF SCIENCES in Environmental Sciences non-thesis DEGREE.

REQUIRED CORE COURSES 14 credits):

EVSC 0501	Biostats II (or equivalent or AGECE 0615 Quantitative Methods)	3 credits
AGECE 0505	Agribusiness Management	3 credits*
AGSC 0600	Non-Thesis Graduate Project Seminar I	1 credit
AGSC 0604	Non-Thesis Graduate Project Seminar II	1 credit
IBSC 0601	Research Ethics in Bioscience	3 credits*
AGSC 0699	Non-Thesis Graduate Project	3 credits
TOTAL CORE		14 credits

*Courses in discipline approved by Advisory Committee may be substituted for these courses.

AREA OF CONCENTRATION **12 credits**

Students are required to complete 12 credits from his/her respective concentration of which **6 credit hours must be in courses at 600 or above with a maximum of 3 credits for EVSC 695.**

ELECTIVES **6 credits**

Students are required to complete 6 credit hours of electives comprising any graduate level courses 500 or above outside his/her respective concentration approved by the Advisory Committee.

TOTAL CREDIT HOURS REQUIRED 32 credits

ENVIRONMENTAL SCIENCES

EVSC 0504	Environmental Science II	3 credits
EVSC 0507	Introduction to Geographic Information Systems	3 credits
EVSC 0510	Soil Physics	3 credits
EVSC 0520	Introduction to Epidemiology	3 credits
EVSC 0522	Introduction to Toxicology	3 credits
PLSS/EVSC 0555	Soil Chemistry	3 credits
PLSS/EVSC 0590	Soil/Environmental Microbiology	3 credits
EVSC 0626	Soil Testing and Plant Analysis	3 credits
EVSC 0695	Special Topics in Environmental Sciences	3 credits

CONCENTRATION COURSES

ENVIRONMENTAL SCIENCES

EVSC 0504. ENVIRONMENTAL SCIENCE II. 2nd Semester. Lect. 3, 3 credits. Problems related to the presence of biologically active substances and potential hazardous synthetic chemicals in the environments. Strategies in minimization and management of these hazards will be discussed. Pesticides, radiation hazards, industrial chemical and potential biological hazards will be considered. Prerequisites: CHEM 0320 or Permission of Instructor.

EVSC 0507. INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS. 1 Semester. Lect. 2, Lab 1, 3 credits. Introductions to GIS concepts. Basic theoretical concepts, computer cartography, database systems, getting maps into digital form and geocoding. Familiarity with Arc-GIS software.

PLSS 0510. SOIL PHYSICS. 2nd Semester (Even years). Lect. 3, 3 credits. Theory and practice of quantifying soil particle and pore distributions, soil structure, soil water content, soil water potential, saturated and unsaturated flow, infiltration, drainage, energy balance, evapotranspiration and irrigation.

EVSC 0520. INTRODUCTION TO EPIDEMIOLOGY. 1st Semester, Lect. 3, 3 credits. This course is designed to teach students how to study the determinants and distribution of disease frequency in human populations, along with the associated risk factors. Students will study how to design a research project, ethics involving data collection and dissemination, descriptive epidemiology, quantitative measures and terminology. Completion of this course will allow the students to devise and applying epidemiologic principles to address relevant environmental health problems in their communities.

PLSS 0522. PHYSIOLOGY OF PLANT GROWTH AND DEVELOPMENT. 2 Semester. Lect. 3, Lab 3, 3 credits. Dealing with all essential and beneficial nutrient elements, absorption, translocation and their metabolic association in plants.

EVSC 0555. SOIL CHEMISTRY. 1st Semester, even years. Lect. 3, 3 credits. Theory and practice of the inorganic chemical reactions involved in soil development and nutrient availability and cycling; topics include chemical ion exchange equilibria and kinetics, colloidal systems, solubility diagrams and oxidation reduction. Prerequisites: CHEM 0231, 0232, PLSS 0210. Same as PLSS 0555.

EVSC 0590. SOIL/ENVIRONMENTAL MICROBIOLOGY. 1st Semester, Odd year. Lect. 3, 3 credits. Description, location, taxonomy, abundance and significance of the major groups of soil microorganisms, major biochemical transformations carried out by the organisms; major biochemical transformations carried out by the soil micro flora and their relationships to soil fertility and environmental pollution are examined. Prerequisites: CHEM 0320 or Permission of Instructor. Same as PLSS 0590.

PLSS 0631	Advanced Fruit Science	3 credits
PLSS 0650	Phytohormone and Vitamins	3 credits
PLSS 0676	Physical Chemistry and Mineralogy of Soils	3 credits
PLSS 0680	Advanced Plant Breeding	3 credits
PLSS 0681	Advanced Vegetable Crops	

include chemical ion exchange equilibria and kinetics, colloidal systems, solubility diagrams and oxidation reduction. Same as EVSC 0555.

PLSS 0565. BIOTECHNOLOGY. 2nd Semester. Lect. 2, Lab 6, 4 credits. Same as Biology 565. This course is designed to introduce advanced undergraduates and graduate students to basic recombinant DNA techniques including growth and manipulation of phases and their bacterial hosts; isolation, quantitation, and electrophoretic analysis of DNA; restriction and ligation of DNA; cloning in lambda; MS and plasmid vectors; site-specific mutagenesis. The focus of the course is hands-on experimentation; however, time will be devoted to discussion of application of these and other techniques to variety of research problems. By the end of the course, me students should have a working knowledge of basic recombinant technology, should have an introductory knowledge of more specialized techniques, and should be familiar with me terminology and resource literature of genetic engineering.

PLSS 0590. SOIL/ENVIRONMENTAL MICROBIOLOGY. 1st Semester, Odd year. Lect. 3, 3 credits. Description, location, taxonomy, abundance and significance of the major groups of soil microorganisms, major biochemical transformations carried out by the organisms; major biochemical transformations carried out by the soil micro flora and their relationships to soil fertility and environmental pollution are examined. Prerequisites: CHEM 0320 or Permission of Instructor. Same as EVSC 0590.

Guidelines for Preparation of Special Project Paper and Manuscript for the Master of Science - Non-Thesis Option.

General Directions and Format

Please submit one copy of your project paper to the office of the Department Head margins, font size 12 Times New Roman font, and no right-margin justification in Microsoft Word.

A. Format

materials and methods); results and discussion (or results separate from discussion), and conclusion (i.e., a summary of major findings, implications, and/or recommendations).

Citations within Text

All references must be cited within the text. This can be done in several ways, for example, (1) in

tly, in
name followed by a comma and publication year, and then

place the year followed by a comma as well as the page number in parentheses. Quotation marks should be used for short quotes. For long quotes, authors should indent quote and use single space.

The authors should make sure that there is a one-to-one correspondence between the citations (names and years) in the text and those in the References.

Tables

Tables should be placed on separate pages after references (single-spaced). Smaller font size (not below 10-point) is allowed for tables. **Please keep tables simple. Do not “box” tables.** Indicate positions of tables in text as follows, for example (Table 3).

M -Income Countri
Agricultural Economic Report No. 224, USDA-Economic Research Service. Washington, DC:
U.S. Government Printing Service.

Paper Presented at Conference (Not Published):

Kone- ion Profiling of Differentially
Expressed Genes in Yam (*Dioscorea rotundata*) During Post-
at the 61st Annual Professional Agricultural Workers Conference, Tuskegee University,
Tuskegee, AL.

Nelson, M.C., A Jakes, J. Whitehead, and E. Knight. (2003).

Agricultural Workers Conference, Tuskegee University, Tuskegee, AL.

Newspaper:

29, p. 5A.

Thesis and Dissertation:

vironmental Sciences, Tuskegee
University, Tuskegee, AL.

-Supported Programs on the
Economic Performance of Low-
Dissertation, Department of Political Science, Auburn University, Auburn, AL.

Internet/Online Citations:

Online Journal Article:

U -Grant
Journal of Extension 43 (5).
<http://www.joe.org/joe/2005october/index.shtml> [Retrieved November 19, 2005].

Online Non-journal Document:

