Graduate Council
Mississippi State University

Number: 1
Date: August 24, 2012


Guest: J. Nail

1. Graduate Council Chair Dr. Juan Silva asked for a motion to approve the Graduate Council minutes of April 27, 2012.

2. Dr. David Morse pointed out that he was present at the meeting and even made a motion. He should not be noted as absent.

3. Dr. David Lewis made a motion to approve the minutes with the noted change. The motion was seconded by Dr. Dan Reynolds. Graduate Council approved the April 27, 2012 minutes.

4. University Committee on Courses and Curricula (UCCC)

   No report – Dr. Angi Bourgeois was unable to attend the meeting. However, five proposals were submitted for Graduate Council review.

   Dr. Silva asked for a motion to approve the modification to a minor in the masters and Ph.D. in Computer Science. Both proposals had been reviewed by a Graduate Council Subcommittee consisting of Drs. Tim Barnett, PC. Cinnella and Rafael Hernandez.

   Dr. Cinnella made a motion to approve the modifications to the minor for both the master’s degree and the Ph.D. in Computer Science. The motion was seconded by Dr. Morse.

   Discussion followed. Graduate Council approved both proposals by acclamation.

   Dr. Silva asked for a motion to approve the modifications to the master’s degree in Agriculture (Agricultural Economics) and in Agricultural & Extension Education as well as the combined bachelors and master’s degree in Agriculture. All three proposals had been reviewed by a Graduate Council Subcommittee consisting of Drs. Dwight Hare, Russell Carr and Wes Schilling.
Dr. Hare made a motion to approve the modifications to all three programs. The motion was seconded by Dr. Dan Reynolds.

Discussion followed. Graduate Council had no issues with the modifications to the master’s degrees in Agriculture (Agricultural Economics) and in Agricultural & Extension Education but had questions regarding the combined bachelors and master’s degree program in Agriculture. There was a discrepancy in the wording of how many hours of undergraduate work may be taken when. One place in the proposal states “in the last semester” while another place states “in the last year” which is a huge difference.

Dr. David Lewis amended the motion on the table as follows: Graduate Council made a motion to approve the modifications to the master’s degree in Agriculture (Agricultural Economics) and in Agricultural & Extension Education and table the combined bachelors and master’s degree in Agriculture. Dr. Scott Roberts seconded the motion.

Graduate Council tabled the combined bachelors and master’s degree in Agriculture proposal and approved the modifications to the two master’s degrees by acclamation.

5. Report from the Office of the Graduate School (OGS)

Dr. Louis D’Abramo, Dean of the Graduate School, presented the following report:

- **Staff**
  Ms. Raimeka Brown resigned from her position as Admissions Assistant for distance graduate students, effective August 2, 2012. We are currently selecting candidates to interview from 112 applications for the position.

- **Spring 2012 Graduation**
  A total of 487 graduate students applied for spring graduation and 410 actually graduated. That breaks town to 339 Master's, 9 Educational Specialists, and 61 Ph.D.'s plus one Ed.D.

- **Summer 2012 Graduation**
  A total of 377 graduate students applied for summer graduation and a total of 352 were academically cleared to graduate (310 Master's, 14 Educational Specialists, and 28 Ph.D.s. Some students who were cleared may still not graduate due to unpaid fees. A final count from the Registrar's Office was not available in time for this report.

- **Applications**
  A total of 5,263 applications for graduate school were process in 2011-2012 academic year. 203 less than that of 2010-2011. Slight decrease in the total number of students admitted for fall 2012 when compared to the fall 2011. Applications and admissions of international students increased slightly and domestic students decreased slightly. Domestic applications and admissions decreased principally due to decreases in Distance Education and at the Meridian campus (20 % decrease). Domestic admissions decreased
for all three campuses. The application fee increased from $40 to $60, effective July 1, 2012.

- **Graduate School Enrollment**
  The unofficial real time count for fall 2012 enrollment of graduate students is 3,580, 246 less than last year. The decrease (6.9 %) is primarily attributed to a reduction in the number of new graduate and unclassified students enrolled for fall 2012. Next Friday, August 31, is the 10th day of class which will be the date used to report the official enrollment number.

- **ESL Courses are now campus 1**
  An ESL course can be included in the first 9 hours of a student's course registration. However, when the number of hours exceeds 9 and an ESL course is included, 12 hours being an example, then the students will be charged tuition for the additional 3 hours for the ESL course. The additional tuition charge when 9 hours (tuition is waived for the first 9 hours) is exceeded and an ESL is part of the schedule, is due to the fact that International Education that provides the ESL service is a self-supporting unit.

- **International Fulbright Students**
  Mississippi State University has six new international Fulbright students on campus for the fall 2012 semester.

  1. Mohammad Al Boni from Syria - MS in Computational Engineering
  2. Job Otieno Bonyo from Kenya - PhD in Mathematical Sciences
  3. Anara Kozhokanova from Kyrgyzstan - PhD in Computer Science
  4. Rosanne Carreras de Leon from Dominican Republic - MS in Biological Sciences
  5. Gina Paola Rico Mendez from Colombia - PhD in Public Policy and Administration
  6. Carlos Cabrera from Dominican Republic - MS in Agriculture (Animal Nutrition)

  Suha Gharrawi from Iraq will be graduating in Fall 2012, followed by Ibrahim Abdoulahi from Niger (Spring 2012) and Hok Roth from Cambodia (Fall 2013 - he passed his prelims last fall). Zadia Codabux from Mauritius only has a Fulbright scholarship through summer 2013, after that she has to find her own funding. Nadeem from Pakistan is on track to graduate in December 2014, he is getting a PhD in Computer Science.

- **International Teaching Assistant (ITA) and Graduate Teaching Assistantship (GTA) Orientation; Classroom Certification**
  The International Teaching Assistant Workshop, the General Teaching Assistant Workshop and Microteaching Simulation/Classroom Certification Evaluation were held during the time period of August 6 through August 16. A total of 247 students (a new record) participated among the three program components, setting a new record for the largest group of first-time GTAs participating in the program. A total of 57 graduate students participated in the International TA Workshop (a new record), held August 6-10, 2012; 55 of the 57 (96.5%) passed the Classroom English evaluation to advance to the GTA workshop. Graduate students who participated in the General Teaching Assistant Orientation numbered 247 held August 13 through15, 2012. A total of 233 students
participated in the Microteaching Simulation/Evaluation for Classroom Certification component of the workshop to be classified as either TA2 or TA3. There were two paths for orientation, classroom or laboratory teaching. The laboratory orientation was designed for GTAs who are specifically involved in laboratory teaching for the Departments of Geosciences, Biology, Physics and Chemistry and was directed by Dr. Deb Mlsna in the Department of Chemistry. A total of 62 faculty volunteered to serve as judges and we are indebted to their unselfish time commitment to graduate students from all colleges and departments. The CTL contributed to the orientation by providing MyCourses workshops for a large number of the new GTAs. The GTA Orientation for the spring 2012 semester is scheduled for January 4 and 5.

- "Find Your Feet" Orientation for New International Graduate Students and new Graduate Student Orientation
  56 new international graduate students attended the orientation held on August 17 from 9-11 a.m. at Swalm Eastman Auditorium. A total of 145 new graduate students attended the New Graduate Student Orientation during the afternoon of Friday, August 17. Thereafter, they had the option to attend a Graduate Student Fair sponsored by the Mitchell Memorial Library.

- Graduate Recruitment Assistance Grants (GRAGs)
  Reports for GRAGs awarded in AY 2011-12 are due to Karin Lee by September 30th. The RFP for GRAGS for the upcoming year will be sent out the week of September 11. Grants range from $1,500 to $2,000 and strategies that involve departmental cost sharing are preferred.

- Preparing Future Faculty
  We received 53 applications for participation in the 2012-2013 Preparing Future Faculty Program that is conducted in collaboration with the Center for Teaching and Learning, University Libraries and Dr. Meghan Millea who is organizer for the Maymester capstone class for the program. Interviews have been conducted and selection of the participants should be made soon. This is the third year of this very popular program.

- Travel Assistance Grants for Graduate Students program (TAGGS)
  An announcement concerning the Travel Assistance Grants for Graduate Students program (TAGGS) was made August 15 for the travel period of November 1, 2012 through April 30, 2013. Applications are not processed for decisions until all the required documents have been received. Awards will be made until all of the funds have been exhausted.

- Fulbrights for Graduate Students
  Fulbright Informational Workshop on Thursday, Sept. 13 from 1-2 PM, room 330 in the Union. Lee Rivers, a representative from Institute of International Education, will be here to discuss Fulbright opportunities, especially focusing on U.S. Student Program for graduate students. The workshop is jointly sponsored by the Office of the Graduate School and International Institute.
• **Honor Code Policy and Academic Grievance Policy for Graduate Students**
  The Academic Grievance Policy for Graduate Students which started in the Graduate Council about 2 years ago is in the form of an AOP and is before the Dean’s Council with minor modifications being made. Associate Deans Council reviewed AOP 12.07 Student Honor Code Policy this week. There was some discussion about the single sanction of expulsion for graduate students who violate the policy, but it was approved with minor editorial changes. The AOP will move forward to Deans Council for consideration.

• **Academic Integrity Week – October 29, to November 2, 2012**
  The Office of the Graduate School intends to participate in Academic Integrity Week that is being planned by the Student Honor Code Council Office. OGS is planning to sponsor a roundtable forum for graduate students focusing on the ethical conduct of research.

• **Brochure for Recruitment of International Graduate Students**
  The Office of the Graduate School is collaborating with the International Institute in the preparation of a brochure for the recruitment of international graduate students.

6. **Report from Graduate Student Association (GSA)**

   GSA President Thomas Sellers presented the following report:

   GSA has set all the dates for the monthly meetings and is now awaiting confirmation of classroom space for a location. After some discussion, the GSA meeting time was changed to 5:15 p.m. so students can make their 6 p.m. classes. GSA will be creating a Student Graduate Council which will consist of one student representative from each graduate program. Every department can nominate a graduate student to represent them on the Student Council as well as a Graduate Ambassador. The Student Graduate Council will help GSA with the Graduate Student Symposium and Graduate Student Week.

1. **Old Business**

   a) **Number of non-research credits with an S grade allowed on Program of Study (Silva – Subcommittee Report)**

   Dr. David Monts had agreed to chair the committee and Drs. Russell Carr and Juan Silva had agreed to serve as members at the last Graduate Council meeting in April. Dr. Monts is no longer serving on Graduate Council but submitted a written report.

   Dr. Silva stated that the recommendation of the subcommittee is to allow for 9 hrs. of S grades. Discussion followed. It was decided that a more detailed review of the issue is required in terms of how many S grades will be allowed on the Program of Study.

   Dr. Silva asked for a third person to serve on the subcommittee. Dr. Lara Dodds volunteered to serve as a committee member.
2. New Business


Mr. James Nail from the Office of Thesis and Dissertation Format Review in the Mitchell Memorial Library informed Graduate Council about an oversight in the 6th edition of the Standards for Thesis and Dissertation. Sections 5.3, 5.5, and 5.3.6 still have the old wording which conflicts with Section 5.1.2. that details the revised wording regarding font size requirements for tables of figures. He also handed out brochures about the Office of Thesis and Dissertation Format Review.

b) Student Dismissal from a Graduate Program  (D’Abramo)

Dr. D’Abramo stated that a student who is dismissed from a graduate degree program remains dismissed unless an appeal is granted and the student is reinstated into the degree program. The key word is reinstated. A student cannot simply reapply and be readmitted to the same program he/she was dismissed from after sitting out for some time. The student can be admitted to any other graduate program but not the one he/she was dismissed from. Dr. D’Abramo encouraged departments to use probation to get a student’s attention when academic performance or non-productivity are an issue. He stated that he will impose effective Spring 2013 that no student who has been dismissed from a graduate program can be readmitted into the program he/she was dismissed from.

c) Time Limit for Dismissal Appeals  (D’Abramo)

Dr. D’Abramo stated that another problem with dismissals is the time frame in which dismissals can be appealed by the student. Currently, there is nothing in the Graduate Bulletin that gives guidelines as to how long a student has to file an appeal which can lead to major problems if too much time elapses between the dismissal and the filing of an appeal. There are clear time guidelines for students to file a grade appeal (AOP 13.14 - Appeals associated with the fairness of grades must be filed with the instructor’s department head within 30 calendar days of the beginning of the next regular semester (Fall, Spring) following the term in which the grade is assigned. Hearings for grade appeals will not be scheduled during the summer session.) Dr. D’Abramo asked Graduate Council members for input to draft a statement in the Graduate Bulletin that addresses the time limit for a student to file an appeal of dismissal. He suggested a time limit for the student to initiate the appeal within two terms after the dismissal.

Discussion followed. The question was raised whether the statement should also address the time allotted to administration to process the request. Associate Dean Dr. Karen Coats volunteered to draft a statement for review at the next meeting that will encompass all the concerns voiced.

d) GRE/GMAT requirement for all Graduate School applications (D’Abramo)
Dr. D’Abramo asked to table this issue until a later date.

In the absence of other business, the meeting adjourned at 2:45 p.m.

The date for the next Graduate Council meeting has been set for Friday, September 28, 2012 at 1:30 p.m. in 611 Allen Hall.
NOTE: This form is a cover sheet that must accompany the degree program change proposal. The actual proposal should be prepared in accordance with format requirements provided in the Guide and Format for Curriculum Proposals published by the UCCC. Both cover sheet and proposal should be submitted, along with all required copies, to UCCC, Mail Stop 9699 (244 Magnuder Street, 2nd Floor), Phone: 325-0831.

College: Agriculture & Life Sciences  Department: School of Human Sciences
Contact Person: Kirk A. Swortzel  Mail Stop: 9745  E-mail: kswortzel@ais.msstate.edu  Date: February 1, 2012
Nature of Change: Modification
Program will be offered at: Starkville (Campus 1)

Current Degree Program Name: Master of Science  Effective Date: Upon Approval
Major: Agricultural and Extension Ed  Concentration:

New Degree Program Name: Master of Science
Major: Agricultural and Extension Ed  Concentration: Teaching and Leadership

Summary of Proposed Changes:
Change from options to concentrations to allow for more accurate degree audits in CAPP.

Michael C. Newman
Department Head

Chair, College or School Curriculum Committee

Dean of College or School

Chair, University Committee on Courses and Curricula

Chair, Graduate Council (if applicable)

Chair, Deans Council

SACS Letter Sent
1. Catalog Description

Current Catalog Description

M.S. Program of Study/Completion Requirements

A minimum of 30 hours of coursework in a planned program of study must be completed for the M.S. degree. A minimum of one-half the total credit hours on the program of study must be at the 8000 level. Students wishing to complete a thesis must take at least 6 credit hours of research/thesis (6 of these credit hours substitute for coursework hours) and an approved statistics course.

The required courses for the leadership emphasis are: AIS 8803 or AIS 8703, AIS 8403, AIS 8503, AIS 8413, AIS 8801, and AIS 8203 or AIS 8205. The remaining courses in the leadership option may be a combination of approved electives or those to comprise a minor. A faculty member from the minor area should also be a member of the student’s graduate committee.

Depending on the courses taken at the undergraduate level, a student in the teaching emphasis may be required to take 3-6 additional hours of prerequisite coursework. Specific course requirements for the teaching option are EPY 6035 or AIS 8693, EDX 8173, AIS 8503, AIS 8403, AIS 6113, AIS 6403, and AIS 8606. Faculty in the Department of Agricultural Information Science and Education must approve substitutions for any of the above courses. A student must have earned at least a 3.00 GPA on coursework taken on the program to be eligible to student teach. An Application for Admission to Student Teaching form must be submitted to the Director of Clinical/Field Based Instruction one semester prior to student teaching. The student must submit a Praxis-Principles of Learning and Teaching (PLT) score of at least 152 to the Mississippi State University College of Education to meet graduation requirements and to the Mississippi Department of Education to obtain licensure. To be eligible for graduation, students must also have a 3.00 GPA after admission to the program.

To secure a Mississippi educator’s license, the student must request that ETS send a copy of his or her score on the Principles of Learning and Teaching (PLT) to Mississippi State University (Code R1480) or to MSU Meridian (Code R3336). It is imperative that the student retains the originals of test scores in a safe place.

In accordance with statutory provisions, the Mississippi Department of Education, Jackson, Mississippi, has adopted the rules and regulations on issuing and renewing teaching licenses, which are set forth in Guidelines for Mississippi Educator Licensure, July 1999. The licensure program is applicable to all teacher licenses. Satisfactory completion of any teaching curriculum offered by the College of Education will enable the graduate to apply for teaching licensure in Mississippi, but this institution can neither waive any licensure requirements nor authorize substitutions for mandatory courses. Mississippi State University has submitted and received approval for its programs. Consequently, a student who plans to transfer from another university or college to the College of Education should consult with the Director of Clinical/Field-Based instruction or an advisor in the College of Education to ascertain the general education, professional educational, and specialized education courses which must be completed to obtain a teaching license in the field or fields of his or her choice. Since teacher licenses are issued by the Mississippi Department of Education only, and not by the teacher education institutions, applications for licensure and original test scores must be filed with the Mississippi Department of Education by the applicant. Information concerning teacher licensure can be obtained from the Office of Clinical/Field-Based Instruction.

A written or oral final comprehensive examination is required for the student in the non-thesis option. A student in the thesis option must pass a final thesis defense and submit the thesis.
2. Proposed Catalog Description

M.S. Program of Study/Completion Requirements

A minimum of 30 hours of coursework in a planned program of study must be completed for the M.S. degree. A minimum of one-half the total credit hours on the program of study must be at the 8000 level. Students wishing to complete a thesis must take at least 6 credit hours of research/thesis (of these credit hours substitute for coursework hours) and an approved statistics course.

The required courses for the leadership concentration are: AIS 8803 or AIS 8703, AIS 8403, AIS 8503, AIS 8413, AIS 8801, and AIS 8263 or AIS 8203. The remaining courses in the leadership concentration may be a combination of approved electives or those to comprise a minor. A faculty member from the minor area should also be a member of the student's graduate committee.

Depending on the courses taken at the undergraduate level, a student in the teaching emphasis may be required to take 3-6 additional hours of prerequisite coursework. Specific course requirements for the teaching concentration are EPY 6033 or AIS 8693, EDX 8173, AIS 8503, AIS 8403, AIS 6113, AIS 6403, and AIS 8606. Faculty in Agricultural Information Science and Education must approve substitutions for any of the above courses. A student must have earned at least a 3.00 GPA on coursework taken on the program to be eligible to student teach. An Application for Admission to Student Teaching form must be submitted to the Director of Clinical/Field Based Instruction one semester prior to student teaching. The student must submit the minimum Praxis II - Principles of Learning and Teaching: Grades 7-12 (PLT) score as required by the Mississippi State University College of Education to meet graduation requirements and to the Mississippi Department of Education to obtain licensure. To be eligible for graduation, students must also have a 3.00 GPA after admission to the program.

To secure a Mississippi educator's license, the student must request that ETS send a copy of his or her score on the Principles of Learning and Teaching (PLT) to Mississippi State University (Code R1480) or to MSU Meridian (Code R3336). It is imperative that the student retains the originals of test scores in a safe place.

In accordance with statutory provisions, the Mississippi Department of Education, Jackson, Mississippi, has adopted the rules and regulations on issuing and renewing teaching licenses, which are set forth in Guidelines for Mississippi Educator Licensure, July 1999. The licensure program is applicable to all teacher licenses. Satisfactory completion of any teaching curriculum offered by the College of Education will enable the graduate to apply for teaching licensure in Mississippi, but this institution can neither waive any licensure requirements nor authorize substitutions for mandatory courses. Mississippi State University has submitted and received approval for its programs. Consequently, a student who plans to transfer from another university or college to the College of Education should consult with the Director of Clinical/Field-Based instruction or an advisor in the College of Education to ascertain the general education, professional educational, and specialized education courses which must be completed to obtain a teaching license in the field of his or her choice. Since teacher licenses are issued by the Mississippi Department of Education only, and not by the teacher education institutions, applications for licensure and original test scores must be filed with the Mississippi Department of Education by the applicant. Information concerning teacher licensure can be obtained from the Office of Clinical/Field-Based Instruction.

A student who chooses to complete a thesis must pass a final thesis defense and submit the thesis to complete degree requirements. A written or oral final comprehensive examination is required for a student who does not complete a thesis.
**GRADUATE DEGREE MODIFICATION OUTLINE FORM**

Use the chart below to make modifications to an existing Graduate Degree. All deleted courses and information should be shown in *italics* and all new courses and information in **bold**. Please include the course prefix, number, and title in both columns. Expand rows as needed.

<table>
<thead>
<tr>
<th>CURRENT Degree Description</th>
<th>PROPOSED Degree Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Degree:</strong> Master of Science</td>
<td><strong>Degree:</strong> Master of Science</td>
</tr>
<tr>
<td><strong>Major:</strong> Agricultural and Extension Education</td>
<td><strong>Major:</strong> Agricultural and Extension Education</td>
</tr>
<tr>
<td><strong>Concentrations:</strong></td>
<td><strong>Concentrations:</strong> Teaching and Leadership</td>
</tr>
<tr>
<td>A minimum of 30 hours of coursework in a planned program of study must be completed for the M.S. degree. A minimum of one-half the total credit hours on the program of study must be at the 8000 level. Students wishing to complete a thesis must take at least 6 credit hours of research/thesis (6 of these credit hours substitute for coursework hours) and an approved statistics course.</td>
<td>A minimum of 30 hours of coursework in a planned program of study must be completed for the M.S. degree. A minimum of one-half the total credit hours on the program of study must be at the 8000 level. Students wishing to complete a thesis must take at least 6 credit hours of research/thesis (6 of these credit hours substitute for coursework hours) and an approved statistics course.</td>
</tr>
<tr>
<td>The required courses for the leadership emphasis are: AIS 8803 or AIS 8703, AIS 8403, AIS 8503, AIS 8413, AIS 8801, and AIS 8263 or AIS 8203. The remaining courses in the leadership option may be a combination of approved electives or those to comprise a minor. A faculty member from the minor area should also be a member of the student’s graduate committee.</td>
<td>The required courses for the leadership concentration are: AIS 8803 or AIS 8703, AIS 8403, AIS 8503, AIS 8413, AIS 8801, and AIS 8263 or AIS 8203. The remaining courses in the leadership concentration may be a combination of approved electives or those to comprise a minor. A faculty member from the minor area should also be a member of the student’s graduate committee.</td>
</tr>
<tr>
<td>Depending on the courses taken at the undergraduate level, a student in the teaching emphasis may be required to take 3-6 additional hours of prerequisite coursework. Specific course requirements for the teaching option are EPY 6033 or AIS 8693, EDX 8173, AIS 8503, AIS 8403, AIS 6113, AIS 6403, and AIS 8606. Faculty in the Department of Agricultural Information Science and Education must approve substitutions for any of the above courses. A student must have earned at least a 3.00 GPA on coursework taken on the program to be eligible to student teach. An Application for Admission to Student Teaching form must be submitted to the Director of Clinical/Field Based Instruction one semester prior to student teaching. The student must submit a Praxis-Principles of Learning and Teaching (PLT) score of at least 132 to the Mississippi State University College of Education to meet graduation requirements and to the Mississippi Department of Education to obtain licensure. To be eligible for graduation, students must also have a 3.00 GPA after admission to the program.</td>
<td>Depending on the courses taken at the undergraduate level, a student in the teaching emphasis may be required to take 3-6 additional hours of prerequisite coursework. Specific course requirements for the teaching concentration are EPY 6033 or AIS 8693, EDX 8173, AIS 8503, AIS 8403, AIS 6113, AIS 6403, and AIS 8606. Faculty in Agricultural Information Science and Education must approve substitutions for any of the above courses. A student must have earned at least a 3.00 GPA on coursework taken on the program to be eligible to student teach. An Application for Admission to Student Teaching form must be submitted to the Director of Clinical/Field Based Instruction one semester prior to student teaching. The student must submit the minimum Praxis II: Principles of Learning and Teaching; Grades 7-12 (PLT) score as required by the Mississippi State University College of Education to meet graduation requirements and to the Mississippi Department of Education to obtain licensure. To be eligible for graduation, students must also have a 3.00 GPA after admission to the program.</td>
</tr>
<tr>
<td>To secure a Mississippi educator’s license, the student must request that ETS send a copy of his or her score on the Principles of Learning and Teaching (PLT) to Mississippi State University (Code R1480) or to MSU Meridian (Code R3336). It is imperative that the student retains the originals of test scores in a safe place.</td>
<td>To secure a Mississippi educator’s license, the student must request that ETS send a copy of his or her score on the Principles of Learning and Teaching (PLT) to Mississippi State University (Code R1480) or to MSU Meridian (Code R3336). It is imperative that the student retains the originals of test scores in a safe place.</td>
</tr>
</tbody>
</table>

In accordance with statutory provisions, the Mississippi
Department of Education, Jackson, Mississippi, has adopted the rules and regulations on issuing and renewing teaching licenses, which are set forth in *Guidelines for Mississippi Educator Licensure*, July 1999. The licensure program is applicable to all teacher licenses. Satisfactory completion of any teaching curriculum offered by the College of Education will enable the graduate to apply for teaching licensure in Mississippi, but this institution can neither waive any licensure requirements nor authorize substitutions for mandatory courses. Mississippi State University has submitted and received approval for its programs. Consequently, a student who plans to transfer from another university or college to the College of Education should consult with the Director of Clinical/Field-Based instruction or an advisor in the College of Education to ascertain the general education, professional educational, and specialized education courses which must be completed to obtain a teaching license in the field or fields of his or her choice. Since teacher licenses are issued by the Mississippi Department of Education only, and not by the teacher education institutions, applications for licensure and original test scores must be filed with the Mississippi Department of Education by the applicant. Information concerning teacher licensure can be obtained from the Office of Clinical/Field-Based Instruction.

A written or oral final comprehensive examination is required for the student in the non-thesis option. A student in the thesis option must pass a final thesis defense and submit the thesis.

<table>
<thead>
<tr>
<th>CURRENT CURRICULUM OUTLINE</th>
<th>Required Hours</th>
<th>PROPOSED CURRICULUM OUTLINE</th>
<th>Required Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Required Courses</td>
<td></td>
<td>College Required Courses</td>
<td></td>
</tr>
<tr>
<td>Major Required Courses</td>
<td></td>
<td>Major Required Courses</td>
<td></td>
</tr>
<tr>
<td><em>Teaching Option</em></td>
<td></td>
<td>AIS 8403 -- Directing Learning Experiences</td>
<td>3</td>
</tr>
<tr>
<td>AIS 8403 -- Directing Learning Experiences</td>
<td>3</td>
<td>AIS 8403 -- Directing Learning Experiences</td>
<td>3</td>
</tr>
<tr>
<td>AIS 8503 -- Program Planning</td>
<td>3</td>
<td>AIS 8503 -- Program Planning</td>
<td>3</td>
</tr>
<tr>
<td>AIS 6113 -- Methods of Teaching Agriscience</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EPY 6033 -- Learning Theories or AIS 8693 -- Philosophical Foundation of Agriculture and Human Sciences</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course</td>
<td>Credits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------------------------------</td>
<td>---------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIS 6403 – Development of Youth Programs</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDX 8173 – Special Education in the Regular Classroom</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIS 8606 – Student Teaching in AIS</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 hours of electives</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Leadership Option</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIS 8203 – Advanced Communication or AIS 8263 – Public Relations</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIS 8403 – Directing Learning Experiences</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIS 8503 – Program Planning</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIS 8413 – Methodology of Planned Change</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIS 8703 – Evaluation of Programs in AIS or AIS 8803 – Research Methods in AIS</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIS 8801 – Graduate Seminar</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 hours electives</td>
<td>14</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Concentration 1. Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIS 6113 – Methods of Teaching Agriscience</td>
<td>3</td>
</tr>
<tr>
<td>EPY 6033 – Learning Theories or AIS 8693 – Philosophical Foundation of Agriculture and Human Sciences</td>
<td>3</td>
</tr>
<tr>
<td>AIS 6403 – Development of Youth Programs</td>
<td>3</td>
</tr>
<tr>
<td>EDX 8173 – Special Education in the Regular Classroom</td>
<td>3</td>
</tr>
<tr>
<td>AIS 8606 – Student Teaching in AIS</td>
<td>6</td>
</tr>
<tr>
<td>6 hours of electives</td>
<td>6</td>
</tr>
</tbody>
</table>

**Concentration 2. Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIS 8203 – Advanced Communication or AIS 8263 – Public Relations</td>
<td>3</td>
</tr>
<tr>
<td>AIS 8413 – Methodology of Planned Change</td>
<td>3</td>
</tr>
<tr>
<td>AIS 8703 – Evaluation of Programs in AIS or AIS 8803 – Research Methods in AIS</td>
<td>3</td>
</tr>
</tbody>
</table>

**Concentration 1. Teaching**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIS 6113 – Methods of Teaching Agriscience</td>
<td>3</td>
</tr>
<tr>
<td>EPY 6033 – Learning Theories or AIS 8693 – Philosophical Foundation of Agriculture and Human Sciences</td>
<td>3</td>
</tr>
<tr>
<td>AIS 6403 – Development of Youth Programs</td>
<td>3</td>
</tr>
<tr>
<td>EDX 8173 – Special Education in the Regular Classroom</td>
<td>3</td>
</tr>
<tr>
<td>AIS 8606 – Student Teaching in AIS</td>
<td>6</td>
</tr>
<tr>
<td>6 hours of electives</td>
<td>6</td>
</tr>
</tbody>
</table>

**Concentration 2. Leadership**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIS 8203 – Advanced Communication or AIS 8263 – Public Relations</td>
<td>3</td>
</tr>
<tr>
<td>AIS 8413 – Methodology of Planned Change</td>
<td>3</td>
</tr>
<tr>
<td>AIS 8703 – Evaluation of Programs in AIS or AIS 8803 – Research Methods in AIS</td>
<td>3</td>
</tr>
<tr>
<td>AIS 8801 – Graduate Seminar</td>
<td>1</td>
</tr>
</tbody>
</table>
3. Justification and Learning Outcomes

Changes initially in 2011 indicated that we were combining options and changing coursework within these options. However, due to the nature of the CAPP compliances, options are not recognized. Concentrations are recognized within the CAPP compliance and this proposal changes the word “option” to “concentration.”

4. Support
A letter of support from the School of Human Sciences Curriculum Committee is included with this proposal.

5. Proposed 4-Letter Abbreviation
AEE

6. Effective Date
Fall 2012
Date: February 20, 2012

To: University Courses and Curriculum Committee

From: Dr. Jan Cooper Taylor, Chair
School of Human Sciences Curriculum Committee

Subject: Degree Modification Proposal

The proposed degree modification of the M.S. in Agricultural and Extension Education (Concentration: Teaching and Leadership) has the full support of the Curriculum Committee in the School of Human Sciences. The degree modification is proposed to support more accurate degree audits in CAPP.

Jan Cooper Taylor, Committee Chair

Jacquelyn Deeds, Committee Member

Wanda Cheek, Committee Member

Joe Wilmoth, Committee Member

Tommy Phillips, Committee Member
NOTE: This form is a cover sheet that must accompany the degree program change proposal. The actual proposal should be prepared in accordance with format requirements provided in the Guide and Format for Curriculum Proposals published by the UCCC. Both cover sheet and proposal should be submitted, along with all required copies, to UCCC, Mail Stop 9699 (25 Morgan Ave), Phone: 325-0831.

College: CALS
Contact Person: Barry Barnett
Nature of Change: Modification
Current Degree Program Name: Master of Science in Agriculture
Major: N/A
Concentration: Agricultural Economics

Department: Agricultural Economics
E-mail: barnett@agecon.msstate.edu
Date Initiated: 2/2012 Effective Date: Spr 2013

New Degree Program Name: No change
Major: N/A
Concentration: No change

Summary of Proposed Changes:
The following course requirement is new:
AEC 8233 Applied Welfare and Environmental Economics

The following course will no longer be required:
AEC 6233 Environmental Economics

Approved:  
Department Head

Date:  
2/21/12

Chair, College or School Curriculum Committee

3/12/12

Dean of College or School

3/19/12

Chair, University Committee on Courses and Curricula

Chair, Graduate Council (if applicable)

Chair, Deans Council
To: The College of Agriculture and Life Sciences Curriculum Committee

The M.S. Program Change is being submitted by the Agricultural Economics Department. The Departmental Curriculum Committee has reviewed the proposed change of requirements and unanimously supports the proposal for consideration. If you have any further questions, please feel free to contact me.

Sincerely,

Keith H. Coble
Giles Distinguished Professor
Agricultural Economics Department Curriculum Committee Chair
Box 5187
Mississippi State, MS 39762
Office: (662) 325-6670 Fax: (662) 325-8777

Keith H. Coble

Dan Petrolia

Barry L. Barnett

Kalyn Coatney

Randy Little
DEGREE MODIFICATION OUTLINE FORM
Use the chart below to indicate your new degree outline. If any General Education (Core) course is acceptable in the category, please indicate by saying “any Gen Ed course”. There is no need to type in the whole list. All deleted courses and information should be shown in *italics* and all new courses and information in **bold**. Include the course prefix, number, and title.

<table>
<thead>
<tr>
<th>CURRENT Degree Description</th>
<th>PROPOSED Degree Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree: M.S. Major: Agriculture Concentration: Agricultural Economics</td>
<td>Degree: M.S. Major: Agriculture Concentration: Agricultural Economics</td>
</tr>
<tr>
<td>The Department of Agricultural Economics offers a degree program leading to the Master of Science in Agriculture with a concentration in Agricultural Economics. This program stresses thorough mastery of advanced economic theory, methods of quantitative analysis, and the applications of these methods to the problems of agriculture. The broad program of economic research conducted by the department affords a wide selection of areas from which the student may choose a specific problem for research.</td>
<td>The Department of Agricultural Economics offers a degree program leading to the Master of Science in Agriculture with a concentration in Agricultural Economics. This program stresses thorough mastery of advanced economic theory, methods of quantitative analysis, and the applications of these methods to the problems of agriculture. The broad program of economic research conducted by the department affords a wide selection of areas from which the student may choose a specific problem for research.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CURRENT CURRICULUM OUTLINE</th>
<th>Required Hours</th>
<th>PROPOSED CURRICULUM OUTLINE</th>
<th>Required Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEC 8413 Game Theory</td>
<td>3</td>
<td>AEC 8413 Game Theory</td>
<td>3</td>
</tr>
<tr>
<td>AEC 8163 Consumers, Producers, and Markets</td>
<td>3</td>
<td>AEC 8163 Consumers, Producers, and Markets</td>
<td>3</td>
</tr>
<tr>
<td>AEC 6733 Econometric Analysis in Agricultural Economics</td>
<td>3</td>
<td>AEC 6733 Econometric Analysis in Agricultural Economics</td>
<td>3</td>
</tr>
<tr>
<td>AEC 6713 Quantitative Economics</td>
<td>3</td>
<td>AEC 6713 Quantitative Economics</td>
<td>3</td>
</tr>
<tr>
<td>AEC 8611 Research Seminar I</td>
<td>1</td>
<td>AEC 8611 Research Seminar I</td>
<td>1</td>
</tr>
<tr>
<td>AEC 8123 Market Organization and Structure</td>
<td>3</td>
<td>AEC 8123 Market Organization and Structure</td>
<td>3</td>
</tr>
<tr>
<td>AEC 8143 Agricultural Production Economics</td>
<td>3</td>
<td>AEC 8143 Agricultural Production Economics</td>
<td>3</td>
</tr>
<tr>
<td>AEC 8621 Research Seminar II</td>
<td>1</td>
<td>AEC 8621 Research Seminar II</td>
<td>1</td>
</tr>
<tr>
<td>AEC 8843 Survey Design and Experimental Economics</td>
<td>3</td>
<td>AEC 8843 Survey Design and Experimental Economics</td>
<td>3</td>
</tr>
<tr>
<td><strong>AEC 6233 Environmental Economics</strong></td>
<td>3</td>
<td><strong>AEC 8233 Applied Welfare and Environmental Economics</strong></td>
<td>3</td>
</tr>
<tr>
<td>AEC 8000 Thesis Research</td>
<td>6</td>
<td>AEC 8000 Thesis Research</td>
<td>6</td>
</tr>
<tr>
<td>Total Hours</td>
<td>32</td>
<td>Total Hours</td>
<td>32</td>
</tr>
</tbody>
</table>
JUSTIFICATION AND STUDENT LEARNING OUTCOMES

The M.S. program in Agriculture with a concentration in Agricultural Economics has a "lockstep" curriculum. Each student takes the same required courses and there are no electives. The proposed modification will delete one required course, Environmental Economics (AEC 6233), and replace it with a new required course, Applied Welfare & Environmental Economics (AEC 8233).

Generally speaking, a quality graduate degree in economics or agricultural/applied economics must include at least a survey of welfare economics. Currently, aside from a handful of lectures on welfare economics included in microeconomics and environmental economics courses offered by both AEC and EC, there exist no such course on campus.

From a practical perspective, AEC has desired to offer a strictly graduate-level course in this area, but due to resource constraints, has been "getting by" with a split-level course (AEC 4233/6233) which is not an ideal situation for our graduate students, who are increasingly interested in this topic area. However, this route is quickly becoming infeasible because many of our undergraduate students are taking the split-level course as part of their bachelor's curriculum (as a result of the institution of our new undergraduate major Environmental Economics & Management, as well as being a required course for our Agribusiness – Policy & Law concentration), and thus cannot take it at the graduate level if they enter our M.S. program. Furthermore, the split-level nature of the course simply does not allow for sufficient coverage of material we desire for our graduate students.

Furthermore, we have recently added an additional teaching faculty member in this area in order to support the expanded set of course offerings in this area.

Finally, we have reduced the teaching load of several undergraduate courses in recent years and replaced them either with fewer, larger sections, or with courses taught elsewhere on campus.

1. Will this program change meet local, state, regional and national educational and cultural needs?
   
   Local, state, regional and national educational and cultural needs will continue to be met by this program change.

2. Will this program change result in duplication in the System? If so, please describe.

   No change. There will be no duplication in the System.

3. Will this program change advance student diversity within the discipline? If so, please describe.

   No change.
4. Will this program change result in an increase in the potential placement of graduates in MS, the Southeast, and the U.S.? If so, please describe.

The program change should better prepare our M.S. graduates for Ph.D. programs.

5. Will this program change result in an increase in the potential salaries of graduates in MS, the Southeast, and the U.S.? If so, please describe.

No change.

SUPPORT
See Agricultural Economics Change of Graduate Program Proposal Course Addition and Deletion Proposals.

PROPOSED 4-LETTER ABBREVIATION
No change

EFFECTIVE DATE
August 2012
Dr. Michael Cox  
CALS CCC  
Box 9555  
440 Dorman Hall  
Mississippi State, MS 39762  

Dr. Cox:  

The Agricultural Economics Department is submitting the following program changes to your committee.  
1. The addition of AEC 8233  
2. A M.S. program change which deletes AEC 6723 and adds AEC 8233  

The Agricultural Economics Departmental Curriculum Committee has reviewed the proposed course and unanimously supports the proposal for consideration. If you have any further questions, please feel free to contact me.  
Sincerely,  

Keith H. Coble  
Giles Distinguished Professor  
Agricultural Economics Department Curriculum Committee Chair  
Box 5187  
Mississippi State, MS 39762  
Office: (662) 325-6670 Fax: (662) 325-8777
COURSES
MISSISSIPPI STATE UNIVERSITY

NOTE: This form is a cover sheet that must accompany the course change proposal. The actual proposal should be prepared in accordance with format requirements provided in the Guide and Format for Curriculum Proposals published by the UCCC. Both cover sheet and proposal should be submitted, along with all required copies, to UCCC, Butler-Williams Building, Suite B, 100 Walker Road, Mail Stop 9699 (325-0831).

College or School: Ag & Life Sciences
Contact Person: Daniel R. Petrolia
Nature of Change: Add

Current Listing in Catalog:
Symbol  Number  Title

Current Catalog Description:

New or Modified Listing for Catalog:
Symbol  Number  Title  Credit Hours
AEC   8233  Applied Welfare & Environmental Economics  (3.0)

New or Modified Catalog Description:
This course is an applied approach to welfare economics, wherein the normative significance of economic events is evaluated, and its application to environmental economics.

Approved:
Department Head
Chair, College or School Curriculum Committee
Dean of College or School
Chair, University Committee on Courses and Curricula
Chair, Graduate Council (if applicable)
Chair, Deans Council

Date: 2/21/12  3/2/12  3/18/12
To: The College of Agriculture and Life Sciences Curriculum Committee

A new course AEC 8233 Applied Welfare & Environmental Economics is being submitted by the Agricultural Economics Department. The Departmental Curriculum Committee has reviewed the proposed course and unanimously supports the proposal for consideration. If you have any further questions, please feel free to contact me.

Sincerely,

Keith H. Coble
Giles Distinguished Professor
Agricultural Economics Department Curriculum Committee Chair
Box 5187
Mississippi State, MS 39762
Office: (662) 325-6670 Fax: (662) 325-8777

Keith H. Coble

Barry J. Barnett

Randy Little

Dan Petrolia
Kalyn Coatney
February 29, 2012

Dr. Steve Turner
Head, Department of Agricultural Economics

Dear Steve,

After review of the proposed syllabus for AEC 8233 Applied Welfare & Environmental Economics, the Department of Finance and Economics supports the creation of this course. We currently do not offer a graduate course in economics with the same content focused on environmental economics. We would like to see this course added and would likely have some of our economics graduate students use this course as an elective in their degree program.

Sincerely,

Kevin Rogers
Acting Department Head
Department of Finance and Economics
Proposal for Course Addition
AEC 8233 Applied Welfare and Environmental Economics

1. Catalog Description

AEC 8233. Applied Welfare and Environmental Economics. (3). Three hours lecture. This course is an applied approach to welfare economics, wherein the normative significance of economic events is evaluated, and its application to environmental economics.

2. Detailed Course Outline

<table>
<thead>
<tr>
<th>I. Introduction</th>
<th>Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Efficiency and Competitive Equilibrium</td>
<td>3.0</td>
</tr>
<tr>
<td>b. Measurement Criteria, Market Failure, and Distribution</td>
<td>3.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. Basic Concepts in Welfare Economics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Social Welfare Function</td>
<td>3.0</td>
</tr>
<tr>
<td>b. Pareto Optimality, the Pareto Criterion, the Compensation Principle</td>
<td>3.0</td>
</tr>
<tr>
<td>c. Benefit-Cost Analysis</td>
<td>3.0</td>
</tr>
<tr>
<td>d. Measurement Criteria</td>
<td></td>
</tr>
<tr>
<td>i. Producer and Consumer Surplus</td>
<td>4.0</td>
</tr>
<tr>
<td>ii. Compensating and Equivalent Variation and Surplus</td>
<td>4.0</td>
</tr>
<tr>
<td>e. Market Failure and the General Theory of Second Best</td>
<td>3.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>III. Applications to Environmental Economics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Market Failure</td>
<td></td>
</tr>
<tr>
<td>i. Externalities and the Coase Theorem</td>
<td>3.0</td>
</tr>
<tr>
<td>ii. Public Goods and the Free-Rider Problem</td>
<td>3.0</td>
</tr>
<tr>
<td>iii. Common-Property Resources</td>
<td>3.0</td>
</tr>
<tr>
<td>b. Non-Market Valuation</td>
<td></td>
</tr>
<tr>
<td>i. Revealed Preference Methods</td>
<td>3.0</td>
</tr>
<tr>
<td>ii. Stated Preference Methods (Contingent Valuation)</td>
<td>4.0</td>
</tr>
<tr>
<td>c. Regulation</td>
<td>3.0</td>
</tr>
</tbody>
</table>

3. Method of Evaluation

<table>
<thead>
<tr>
<th>Evaluation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>25%</td>
</tr>
<tr>
<td>Term paper</td>
<td>25%</td>
</tr>
<tr>
<td>Midterm exam</td>
<td>25%</td>
</tr>
<tr>
<td>Final exam</td>
<td>25%</td>
</tr>
</tbody>
</table>
100%
Grading scale:  A: 100-90
B: 89-80
C: 79-70
D: 69-60
F: 59-0

4. Justification and Learning Objectives

Justification

Generally speaking, a quality graduate degree in economics or agricultural/applied economics must include at least a survey of welfare economics. Currently, aside from a handful of lectures on welfare economics included in microeconomics and environmental economics courses offered by both AEC and EC, there exists no such course on campus.

From a practical perspective, AEC has desired to offer a strictly graduate-level course in this area, but due to resource constraints, has been “getting by” with a split-level course (AEC 4233/6233) which is not an ideal situation for our graduate students, who are increasingly interested in this topic area. However, this route is quickly becoming infeasible because many of our undergraduate students are taking the split-level course as part of their bachelor’s curriculum, and thus cannot take it at the graduate level if they enter our M.S. program. Furthermore, the split-level nature of the course simply does not allow for sufficient coverage of material we desire for our graduate students to see.

Furthermore, we have recently added an additional teaching faculty member in this area in order to support the expanded set of course offerings in this area.

Finally, we have reduced the teaching load of several undergraduate courses in recent years and replaced them either with fewer, larger sections, or with courses taught elsewhere on campus.

Learning Outcomes

The bulk of micro-economics coursework focuses on efficiency from the perspective of an individual firm or household, which means that, for the most part, welfare economics is either not covered at all or when it is covered, at a very superficial level. This course is intended to bridge this gap.

This course develops the students’ understanding of, ability to think about, efficiency from a societal standpoint, where issues of distribution and fairness play a key role. Environmental issues are, by their very nature, social questions, and thus welfare economics lends itself well
to this area. Thus, this course will develop the students’ ability to analyze environmental issues from the perspective of efficiency, distribution, and market failure.

The central theme of the course is that despite the difficulties of making inferences from market and non-market data concerning social welfare, these judgments will continue to be demanded and supplied. The basic problems associated with the use of price information, and measures that rely primarily on inferences from market data, suggest that a richer information set is required to formulate public policies. This information includes judgments about social welfare, fairness, and distribution. Thus, the ultimate learning outcome of this course is to have students “see the forest for the trees”, i.e., to recognize the role they will play in society once they complete our program.

5. Academic Misconduct

N/A

6. Target Audience

N/A

7. Support

See attached letters of support from the AEC curriculum committee and the Department of Finance and Economics. No funding is required to maintain the course and does not increase the current course load on currently available teaching faculty.

8. Instructor of Record

Daniel R. Petrolia, Department of Agricultural Economics

9. Graduate Student Requirements (Split-level Courses)

N/A

10. Planned Frequency

Spring semester

11. Explanation of any duplication

None. See attached letter of support from the Department of Finance and Economics.

12. Method of Instruction Code

C-Lecture; F-Face-to-Face
13. Proposed CIP Number
45.0602

14. Proposed 24-Character Abbreviation of the Course Title
AEC 8233 App Welf Env Ec

15. Proposed Semester Effective
Spring 2013

16. Other Appropriate Information

Primary Course Textbooks:


Supplementary Textbooks:


17. Proposal Contact Person

Daniel R. Petrolia
Assistant Professor
Department of Agricultural Economics
petrolia@agecon.msstate.edu
662-325-2888

18. Special Notes

Cross-Listing

Effective Date

Spring 2013
SYLLABUS
AEC 8233: Applied Welfare & Environmental Economics
Spring Semester 2013
Time TBA
Location TBA

Instructor: Daniel R. Petrolia
Assistant Professor
Department of Agricultural Economics
Office: 316 Lloyd-Ricks-Watson
Office Hours: open-door policy; and by appointment
Telephone: 325-2888
E-mail: petrolia@agecon.msstate.edu

Course Description:

This course is an applied approach to welfare economics, the framework within which the normative significance of economic events is evaluated, and its application to the field of environmental economics.

The introduction considers the development of the new welfare economics in relation to economic theory as a whole and its importance for work in applied and environmental economics. The major themes of the course are introduced.

A brief overview of the key problems of applied welfare economics follows, notably the problem of social welfare measurement, the choice of appropriate welfare criteria, and the tension between market and non-market allocation of resources.

Following this brief overview, the main sections of the course examine the basic concepts underlying the measurement of welfare change at a technical level, including Pareto optimality, the compensation principle, Marshallian and Hicksian welfare measures, the question of Second Best optima, public goods and externalities, social welfare functions, and Arrow's Impossibility Theorem.

The central theme of the course is that despite the difficulties of making inferences from market and non-market data concerning social welfare, these judgments will continue to be demanded and supplied. The basic problems associated with the use of price information, and measures that rely primarily on inferences from market data, suggest that a richer information set is required to formulate public policies. This information includes judgments about social welfare, fairness, and distribution. This finding, far from diminishing the role of the economist, enriches it.
Primary Course Textbooks:


Supplementary Textbooks:


Grading and Course Requirements:
Homework 25%
Term paper 25%
Midterm exam 25%
Final exam 25%

Grading scale: A: 100-90; B: 89-80; C: 79-70; D: 69-60; F: 59-0

Academic dishonesty is not tolerated.
# Course Outline

<table>
<thead>
<tr>
<th>I. Introduction</th>
<th>Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Efficiency and Competitive Equilibrium</td>
<td>3.0</td>
</tr>
<tr>
<td>b. Measurement Criteria, Market Failure, and Distribution</td>
<td>3.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. Basic Concepts in Welfare Economics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Social Welfare Function</td>
<td>3.0</td>
</tr>
<tr>
<td>b. Pareto Optimality, the Pareto Criterion, the Competitive Equilibrium</td>
<td>3.0</td>
</tr>
<tr>
<td>c. Benefit-Cost Analysis</td>
<td>3.0</td>
</tr>
<tr>
<td>d. Measurement Criteria</td>
<td></td>
</tr>
<tr>
<td>i. Producer and Consumer Surplus</td>
<td>4.0</td>
</tr>
<tr>
<td>ii. Compensating and Equivalent Variation and Measure</td>
<td>4.0</td>
</tr>
<tr>
<td>e. Market Failure and the General Theory of Second Best</td>
<td>3.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>III. Applications to Environmental Economics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Market Failure</td>
<td></td>
</tr>
<tr>
<td>i. Externalities and the Coase Theorem</td>
<td>3.0</td>
</tr>
<tr>
<td>ii. Public Goods and the Free-Rider Problem</td>
<td>3.0</td>
</tr>
<tr>
<td>iii. Common-Property Resources</td>
<td>3.0</td>
</tr>
<tr>
<td>b. Non-Market Valuation</td>
<td></td>
</tr>
<tr>
<td>i. Revealed Preference Methods</td>
<td>3.0</td>
</tr>
<tr>
<td>ii. Stated Preference Methods (Contingent Valuation)</td>
<td>4.0</td>
</tr>
<tr>
<td>c. Regulation</td>
<td>3.0</td>
</tr>
</tbody>
</table>

| Contact Hours | 45.0 |
NOTE: This form is a cover sheet that must accompany the degree program change proposal. The actual proposal should be prepared in accordance with format requirements provided in the Guide and Format for Curriculum Proposals published by the UCCC. Both cover sheet and proposal should be submitted, along with all required copies, to UCCC, Mail Stop 9699 (25 Morgan Ave), Phone: 325-0831.

College: Agriculture and Life Sciences
Contact Person: Mike Phillips
Nature of Change: Modify
Current Degree Program Name:
   Major: Agriculture

Department: Plant and Soil Sciences
Mail Stop: 9555 E-mail: mphillips@pss.msstate.edu
Date Initiated: 09/20/2011 Effective Date: 1/1/2012

New Degree Program Name: No Change
   Major:
   Concentration:

Summary of Proposed Changes:

Degree requirements are not changing. This proposal provides students the option of combining studies in the Bachelor of Science in Agronomy or Horticulture with studies towards the Master of Science in Agronomy, Horticulture, or Weed Science. This is done by allowing undergraduates in their final semester to count a maximum of nine credit hours of graduate coursework towards both their B.S. and M.S. degrees. Current Graduate School policy permits students to complete up to nine hours of graduate credit in their final semester, but not to count those hours towards both degrees. The proposed combination is in accordance with recently approved Graduate Council guidelines on a combined BS/MS option.

Approved: [Signature]
Department Head

Date: 2/24/12

Chair, College or School Curriculum Committee: [Signature]

Date: 3/9/12

Dean of College or School: [Signature]

Date: 3/13/12

Chair, University Committee on Courses and Curricula:

Date: 3/8/12

Chair, Graduate Council (if applicable):

Chair, Deans Council:

☐ IHL Action Required

☐ SACS Letter Sent
March 5, 2012

CALS Courses & Curriculum Committee
Mike Cox, Chair
Box 9555
Mississippi State, MS 39762

CALS CCC:

The PSS CCC met as a committee to discuss and vote on the proposed BS/MS combined degree. After considerable discussion, the committee had a majority vote to support the proposed BS/MS combined degree in Plant and Soil Sciences. The committee determined this will be a good addition to the PSS curricular program. This program does not represent a duplication of effort from other programs offered at Mississippi State University.

Sincerely,

Richard L. Harkess, Chair
Plant and Soil Sciences Courses & Curriculum Committee

PSS CCC:
Brian Baldwin
Michael Cox
Jim DelPrince
William Kingery
David Lang
Paul Meints
Brenda Reed
Barry Stewart
Catalog Description.

<table>
<thead>
<tr>
<th>CURRENT Degree Description</th>
<th>PROPOSED Degree Description</th>
</tr>
</thead>
</table>
| Dr. Mike Phillips, Department Head  
Dr. William L. Kingery, Graduate Coordinator  
117 Dorman Hall  
PO Box 9555  
Mississippi State, MS 39762  
Telephone: 662-323-2311  
E-mail: wkingery@ppss.msstate.edu | Dr. Mike Phillips, Department Head  
Dr. William L. Kingery, Graduate Coordinator  
117 Dorman Hall  
PO Box 9555  
Mississippi State, MS 39762  
Telephone: 662-323-2311  
E-mail: wkingery@ppss.msstate.edu |
| Graduate study offered in the Department of Plant and Soil Sciences leads to the Master of Science in Agriculture degree with concentrations in Agronomy, Horticulture, or Weed Science and also to the Doctor of Philosophy degree in Agricultural Science with a concentration in Agronomy, Horticulture, or Weed Science. The department has an extensive research program which provides a diversity of problems for thesis and dissertation research under the supervision of experienced and highly trained scientists. The Department of Plant and Soil Science offers graduate programs in Plant Breeding and Genetics, Molecular Biology, Crop Modeling, Agronomy, Soil Science, Crop Physiology, Weed Science, Turfgrass Science, Remote Sensing, and Horticulture. Graduate programs are designed to develop skills in research techniques in reference to the individual needs of each student. This program is developed and administered by a departmental committee within the student's area of specialization and may include courses in mathematics and statistics, biology, chemistry, biochemistry, remote sensing, etc., as well as agronomic, horticultural, and weed science courses. Graduate assistantships are provided, subject to availability of funds. An undergraduate grade average of B or better is required to be eligible for an assistantship. Request for additional information should be addressed to Head of the Department of Plant and Soil Sciences, PO Box 9555, Mississippi State, MS 39762. | Graduate study offered in the Department of Plant and Soil Sciences leads to the Master of Science in Agriculture degree with concentrations in Agronomy, Horticulture, or Weed Science and also to the Doctor of Philosophy degree in Agricultural Science with a concentration in Agronomy, Horticulture, or Weed Science. The department has an extensive research program which provides a diversity of problems for thesis and dissertation research under the supervision of experienced and highly trained scientists. The Department of Plant and Soil Science offers graduate programs in Plant Breeding and Genetics, Molecular Biology, Crop Modeling, Agronomy, Soil Science, Crop Physiology, Weed Science, Turfgrass Science, Remote Sensing, and Horticulture. Graduate programs are designed to develop skills in research techniques in reference to the individual needs of each student. This program is developed and administered by a departmental committee within the student's area of specialization and may include courses in mathematics and statistics, biology, chemistry, biochemistry, remote sensing, etc., as well as agronomic, horticultural, and weed science courses. Graduate assistantships are provided, subject to availability of funds. An undergraduate grade average of B or better is required to be eligible for an assistantship. Request for additional information should be addressed to Head of the Department of Plant and Soil Sciences, PO Box 9555, Mississippi State, MS 39762. |

Departmental Admission Criteria  
M.S. in Agriculture and Ph.D. in Agricultural Science with concentrations in Agronomy, Horticulture, or Weed Science:  
GPA—For Master of Science: Agronomy 2.5; Horticulture 2.75; Weed Science 3.00. For Doctor of Philosophy: Agronomy 3.00; Horticulture 3.00; Weed Science 3.25 on graduate work  
TOEFL (Test of English as a Foreign Language) or IELTS (International English Language Testing Systems) score—  
Agronomy: TOEFL score of 500 PBT (173 CBT; 61 iBT) or IELTS score of 5.5  
Horticulture: TOEFL score of 500 PBT (173 CBT; 61 iBT) or IELTS score of 5.5  
Weed Science: TOEFL score of 550 PBT (213 BT; 79 iBT) or IELTS score of 6.5  
GRE—Weed Science requires submission of GRE scores.  
Provisional Admission—A student who has not met the requirements stipulated by the University for admission to graduate study (GPA of 2.75) may be granted admission as a degree-seeking graduate.  
Highly qualified undergraduates at Mississippi State are encouraged to consider applying to the combined B.S./M.S. degree program. This program permits concurrent enrollment in the Agronomy or Horticulture B.S. and Agronomy, Horticulture, or Weed Science M.S. degrees during the student's final year of undergraduate studies with enrollment in up to nine hours of graduate courses for which undergraduate credit is also awarded. Students need to consult with a potential graduate advisor to ensure graduate credit could be applied to a Program of Study for the M.S. degree. Application to this program may be made as early as the end of the junior year (i.e., after completion of 90 or more hours of graded undergraduate courses). This option is only available for students pursuing a thesis-based Master of Science degree in Agronomy, Horticulture, or Weed Science.  
Departmental Admission Criteria  
M.S. in Agriculture and Ph.D. in Agricultural Science with concentrations in Agronomy, Horticulture, or Weed Science:  
GPA—For Master of Science: Agronomy 2.75; Horticulture 2.75; Weed Science 3.00. For Doctor of Philosophy: Agronomy
3.00; Horticulture 3.00; Weed Science 3.25 on graduate work
TOEFL (Test of English as a Foreign Language) or
IELTS (International English Language Testing
Systems) score—
Agronomy: TOEFL score of 500 PBT (173 CBT; 61 iBT) or
IELTS score of 5.5
Horticulture: TOEFL score of 500 PBT (173 CBT;
61 iBT) or IELTS score of 5.5
Weed Science: TOEFL score of 550 PBT (213
BT; 79 iBT) or IELTS score of 6.5
GRE—Weed Science requires submission of GRB
scores.

Requirements for entrance into the combined B.S./M.S.
program in Agronomy, Horticulture, or Weed Science are:
1. a GPA of 3.50 or higher on a 4.00 system for all
undergraduate work;
2. submission of a standard application for graduate studies
in the Department of Plant and Soil Sciences along
with application fee;
3. three letters of recommendation from individuals
familiar with the applicant's academic performance;
4. submission of scores from the Graduate Record
Examinations (GRE) General Test prior to enrolling in
graduate courses; and
5. a statement of professional interests and goals from the
applicant, including specification of one or more
potential Major Professors.

For students enrolled in a combined B.S./M.S. program,
the MSU Graduate Council has established these guidelines in
cooperation with the Registrar's office:

Once the student is accepted into the combined program,
the student and the advisor may select up to nine hours that
will satisfy both undergraduate and graduate requirements.
These courses may be split level (i.e. split 4000-6000 level)
or 8000 level classes. The student should take the courses
for graduate credit (i.e. 6000-level or higher). The student
should consult the most recent edition of the Graduate
Bulletin or Registrar's office for instructions regarding the
process for enrolling in graduate credit as an
undergraduate. The combination of undergraduate and
graduate credit hours may not exceed 13 hours within a
semester. After successfully completing the graduate-level
classes, the student and undergraduate advisor will
complete a request to receive undergraduate credit for the
course. After receiving the request, the Registrar will grant
credit for the undergraduate course and give the same
grade as received for the graduate course. For the case of a
split-level class, the transcript will show credit for both
4000-and 6000-level on the transcript. In the case of an 8000
level class, a special topics undergraduate course of the
same title will be entered on the transcript or a "dummy"
class created with the same name to allow dual credit.

Students are permitted to opt out of the combined program
at any time, at which point they could complete only the
undergraduate portion of the program. No additional dual
counting of courses would occur after the student opted out

Graduate Courses—Course prerequisites are noted in
with parentheses.

Crops:
PSS 6103 Forage and Pasture Crops. 3 hours
PSS 6123 Grain Crops. 3 hours
PSS 6133 Fiber and Oilseed Crops. 3 hours
PSS 6414 Turf Management. 4 hours
PSS 6423 Golf Course Operations (PSS 6414). 3 hours
PSS 6443 Athletic Field Management (PSS 3303, PSS 4414, or consent of instructor). 3 hours
PSS 6444 Plant Tissue Culture (BIO 4214/6214 or equivalent). 4 hours
PSS 6483 Introduction to Remote Sensing Technologies. 3 hours
PSS 6503 Plant Breeding (PO 3103 or equivalent). 3 hours
PSS 6823 Turfgrass Weed Management. 3 hours
PSS 6990 Special Topics in PSS. 1-9 hours
PSS 7000 Directed Individual Study. 1-6 hours
PSS 8000 Thesis Research/Thesis. Hours and credits to be arranged; minimum of 6 hours required for degree.
PSS 8103 Pasture Development. 3 hours
PSS 8123 Crop Ecology (BIO 4213/6213 or permission of instructor). 3 hours
PSS 8163 Environmental Plant Physiology. 3 hours
PSS 8513 Advanced Plant Breeding (PSS 4503/6503 or equivalent) [Same as GNS 8113]. 3 hours
PSS 8543 Biometrical Genetics in Plant Breeding (PSS 4503/6503 and ST 8114) [Same as GNS 8143]. 3 hours
PSS 8623 Genomes and Genomics (BCH 4113/6113 or BCH 4713/6713 or BCH 8643 or consent of instructor) [Same as BCH 8623]. 3 hours
PSS 8631 Topics in Genomics (PSS/BCH 8623 or BCH 4713/6713 or BCH 8643 or consent of instructor) [Same as BCH 8613]. 1 hour
PSS 8811-8831 Seminar. 1-3 hours
PSS 8990 Special Topics in PSS. 1-9 hours
PSS 9000 Dissertation Research/Dissertation. Hours and credits to be arranged; minimum of 20 hours required for degree.

Soils:
PSS 6313 Soil Fertility and Fertilizers (PSS 3303 and junior standing). 3 hours
111
PSS 6314 Soil Microbiology (BIO 3304) [Same as BIO 4324/6324]. 4 hours
PSS 6323 Soil Classification (PSS 3303), 3 hours
PSS 6333 Soil Conservation and Land Use (PSS 3303). 3 hours
PSS 6373 Geospatial Agronomic Management (PSS 3303 and PSS 3133). 3 hours
PSS 6603 Soil Chemistry (PSS 3303). 3 hours
PSS 7000 Directed Individual Study. 1-6 hours
PSS 8000 Thesis Research/Thesis. Hours and

Students will receive the Bachelor's degree once the requirements for the Bachelor's degree are met. Students will be required to complete all of the requirements for both the Bachelor's and Master's degrees in order to receive both degrees and those requirements will be identical to the requirements for students enrolled in traditional B.S. and M.S. programs. Students will be classified as undergraduates until they fulfill all the requirements for the undergraduate degree. At that time they will be classified as graduate students and will be subject to all the guidelines pertaining to the M.S. degree. Students admitted to this program should read and understand the guidelines in the Department of Plant and Soil Sciences Graduate Student Handbook before registering for any courses for graduate credit.

Provisional Admission—A student who has not met the requirements stipulated by the University for admission to graduate study (GPA of 2.75) may be granted admission as a degree-seeking graduate student with provisional status. The student will be eligible for advancement to regular status after attaining a 3.00 GPA on the first 9 hours of graduate level courses taken at Mississippi State University (courses with an S grade, transfer credits, or credits earned while in Unclassified status cannot be used to satisfy this requirement). If a GPA of 3.00 is not attained, the provisional student may be dismissed from the graduate program.

Program of Study: General Departmental Requirements

Master of Science Degree—The minimum number of credit hours required is 30, with 12 credit hours at 8000 level or above plus 6 hours of research/thesis. A thesis defense is required. An exit seminar describing thesis research is also required.

Doctor of Philosophy Degree—A qualifying examination is required at the beginning of the student's third semester. The student must successfully complete a program of study as approved by the major advisor and graduate committee. The student must pass a preliminary examination presented by the graduate committee. A dissertation is required of all candidates for the doctorate. Two departmental seminars are required. The first seminar, which is to be done in the early stages, will present the research proposal and include a review of relevant literature, and the second, or exit seminar, will describe the dissertation research.

Program of Study: Agronomy Concentration Requirements

Master of Science—See General Departmental Requirements.

Master of Science-Non-Thesis—A student in the M.S. non-thesis option program must successfully complete 30 hours of graduate level courses of which at least 15 must be courses numbered 8000 or above. Three credit hours of Directed Individual Study (PSS 7000) are required, and the student must develop a
credits to be arranged; minimum of 6 hours required for degree.
PSS 8314 Clay Mineralogy. 4 hours
PSS 8333 Advanced Soil Fertility. 3 hours
PSS 8343 Model Watershed Hydrology (PSS 3301/3303 or consent of instructor). 3 hours
PSS 8950 Special Topics in PSS. 1-9 hours
PSS 9000 Dissertation Research/Dissertation. Hours and credits to be arranged; minimum of 20 hours required for degree.

Program of Study
Horticulture Concentration Requirements
M.S.—See General Departmental Requirements.
M.S.—Non-thesis—A student in the M.S. non-thesis option program must successfully complete 30 credit hours of graduate level courses of which at least 15 must be courses numbered 8000 or above. Three credit hours of Directed Individual Study (PSS 7000) are required, in which the student must develop a research paper approved by the student's graduate committee. An oral comprehensive exam is required.
Ph.D.—A minimum number of 30 hours of coursework is required. After two semesters, the student is required to take a qualifying examination. After completing coursework, an oral preliminary examination will be administered. Original research is required, and a dissertation is also required, including a dissertation defense and final examination.

Academic Performance
The general academic performance and continued enrollment policies as stipulated by the Office of the Graduate School will be followed.

Prerequisite and Core Courses—As stipulated by the major professor, the departmental graduate coordinator, and the dean.
- M.S. specific requirements—Statistics (ST 8114) and Seminar (PSS 8811)
- Ph.D. specific course requirements—Biochemistry (BCH 6603), Design and Analysis of Experiments (ST 8214), and Seminar (PSS 8811-8831)

Completion Requirements
- M.S.—A thesis and thesis defense required. M.S. candidates are required to take an oral examination, a written examination, or both.
- Ph.D.—The dissertation is required of all candidates for the doctorate, and a minimum of 20 semester hours of research for the dissertation must be scheduled. The graduate committee must approve the dissertation topic, the outline, and final product.

Graduate Courses—Courses prerequisites are noted in parentheses.
PSS 6043 International Horticulture (PSS 1313). 3 hours
PSS 6143 Advanced Fruit Sciences (PSS 3043 or equivalent). 3 hours
PSS 6341 Controlled Environment Agriculture Laboratory (Co-requisite: PSS 4343 for horticulture majors). 1 hour
PSS 6343 Controlled Environment Agriculture (BIO 2113 and PSS 3303; co-requisite for horticulture majors: PSS 4341). 3 hours
PSS 6353 Arboriculture and Landscape Maintenance. 3 hours
PSS 6363 Sustainable Nursery Production (PSS 2423 and PSS 3303). 3 hours

Graduate Courses—Course prerequisites are noted in parentheses.
PSS 6103 Forage and Pasture Crops. 3 hours
PSS 6123 Grain Crops. 3 hours
PSS 6133 Fiber and Oilseed Crops. 3 hours
PSS 6414 Turf Management. 4 hours
PSS 6423 Golf Course Operations (PSS 6414). 3 hours
PSS 6443 Athletic Field Management (PSS 3303, PSS 4414, or consent of instructor). 3 hours
PSS 6444 Plant Tissue Culture (BIO 4214/6214 or equivalent). 4 hours
PSS 6483 Introduction to Remote Sensing Technologies. 3 hours
PSS 6503 Plant Breeding (PO 3103 or equivalent). 3 hours
PSS 6823 Turfgrass Weed Management. 3 hours
PSS 6990 Special Topics in PSS. 1-9 hours
PSS 7000 Directed Individual Study. 1-6 hours
PSS 8000 Thesis Research/Theory. Hours and credits to be arranged; minimum of 6 hours required for degree.
PSS 8103 Pasture Development. 3 hours
PSS 8123 Crop Ecology (BIO 4213/6213 or permission of instructor). 3 hours
PSS 8163 Environmental Plant Physiology. 3 hours
PSS 8513 Advanced Plant Breeding (PSS 4503/6503 or equivalent) [Same as GNS 8113]. 3 hours
PSS 8543 Biometrical Genetics in Plant Breeding (PSS 4503/6503 and ST 8114) [Same as GNS 8143]. 3 hours
PSS 8623 Genomes and Genomics (BCH 4113/6113 or BCH 4713/6713 or BCH 6643 or consent of instructor) [Same as BCH 8623]. 3 hours
PSS 8631 Genomes and Genomics (PSS/BCH 8623 or BCH 4713/6713 or BCH 6643 or consent of instructor) [Same as BCH 8613]. 1 hour
PSS 8811-8831 Seminar. 1-3 hours
PSS 8990 Special Topics in PSS. 1-9 hours
PSS 9000 Dissertation Research/Dissertation. Hours and credits to be arranged; minimum of 20 hours required for
PSS 6444 Plant Tissue Culture (BIO 1203 or equivalent and BIO 4214/6214), 4 hours
PSS 6453 Vegetable Production (PSS 3303, PSS 3301 and BIO 4204), 3 hours
PSS 6503 Plant Breeding (PO 3103) [Same as FSS 4503], 3 hours
PSS 6553 Plant Growth and Development, 3 hours
PSS 6613 Horticulture Crop Programming (PSS 4343/6343), 3 hours
PSS 6833 Temperature Stress Physiology (BIO 4214/6214 or BCI 4013/6013), 3 hours
PSS 6990 Special Topics in PSS, 1-9 hours
PSS 7000 Directed Individual Study, 1-6 hours
PSS 8000 Thesis Research/Thesis. Hours and credits to be arranged; minimum of 6 hours required for degree
PSS 8513 Advanced Plant Breeding (PSS 4503/6503) [same as GNS 8113], 3 hours
PSS 8553 Phytohormones and Growth Regulation (BIO 4214/6214 and CH 2503), 3 hours
PSS 8554 Plant Genetic Engineering (PSS 6444 and BCI 6713), 4 hours
PSS 8563 Post Harvest Physiology of Horticultural Plants (Organic Chemistry and BIO 4214/6214 or equivalent), 3 hours
PSS 8573 Morphology of Horticultural Plants (BIO 4204/6204), 3 hours
PSS 8613 Methods of Horticultural Research, 3 hours
PSS 8623 Genomes and Genomics (BCH 4113/6113 or BCH 4713/6713 or BCH 8643 or consent of instructor) [Same as BCH 8623], 3 hours
PSS 8631 Topics in Genomics (PSS/BCH 8623 or BCH 4713/6713 or BCH 8643 or consent of instructor) [Same as BCH 8613], 1 hour
PSS 8811-0831 Seminar, 1-3 hours
PSS 8890 Special Topics in PSS, 1-9 hours
PSS 9000 Dissertation Research/Dissertation. Hours and credits to be arranged; minimum of 20 hours required for degree.

Program of Study
Horticulture Concentration Requirements
M.S.—See General Departmental Requirements.
M.S.-Non-thesis—A student in the M.S. non-thesis option program must successfully complete 30 credit hours of graduate level courses of which at least 15 must be courses numbered 8000 or above. Three credit hours of Directed Individual Study (PSS 7000) are required, in which the student must develop a research paper approved by the student’s graduate committee. An oral comprehensive exam is required. Ph.D.—A minimum number of 30 hours of coursework is required. After two semesters, the student is required to take a qualifying examination. After completing coursework, an oral preliminary examination will be administered. Original research and a dissertation are also required, including a dissertation defense and final examination.

Academic Performance
The general academic performance and continued enrollment policies as stipulated by the Office of the Graduate School will be followed.

Prerequisite and Core Courses—As stipulated by the Office of the Graduate School.
- M.S. specific requirements—Statistics (ST 8114) and Seminar (PSS 8811)
- Ph.D. specific course requirements—Biochemistry (BCH 6603), Design and Analysis of Experiments (ST 8214), and Seminar (PSS 8811-8831)

Completion Requirements
- M.S.—A thesis and thesis defense are required. M.S. candidates are required to take an oral examination, a written examination, or both.
- Ph.D.—The dissertation is required of all candidates for the doctorate, and a minimum of 20 semester hours of research for the dissertation must be scheduled. The graduate committee
Graduate Courses—Course prerequisites are noted in parentheses.
PSS 6483 Introduction to Remote Sensing Technologies (Senior or Graduate standing, or consent of instructor). 3 hours
PSS 6633 Weed Biology and Ecology (BIO 1203, PSS 3133). 3 hours
PSS 6813 Herbicide Technology (PSS 3133). 3 hours
PSS 6823 Turfgrass Weed Management. 3 hours
PSS 7000 Directed Individual Study. 3 hours
PSS 8000 Thesis Research/Thesis. Hours and credits to be arranged; minimum of 6 hours required for degree
PSS 8634 Environmental Fate of Herbicides (CH 4513/6513, PSS 4813/6813). 4 hours
PSS 8701-8724 Current Topics in Weed Science (PSS 4813/6813 or consent of instructor). 1-9 hours
PSS 8724 Herbicide Physiology and Biochemistry (PSS 4813/6813, BIO 4214/6214 CH 4513/6513 or consent of instructor). 4 hours
PSS 8811-8831 Seminar. 1-3 hours
PSS 9000 Dissertation Research/Dissertation. Hours and credits to be arranged;

must approve the dissertation topic, the outline, and final product.

Graduate Courses—Courses prerequisites are noted in parentheses.
PSS 6043 International Horticulture (PSS 1313). 3 hours
PSS 6143 Advanced Fruit Sciences (PSS 3043 or equivalent). 3 hours
PSS 6341 Controlled Environment Agriculture Laboratory (Co-
prerequisite: PSS 4343 for horticulture majors). 1 hour
PSS 6343 Controlled Environment Agriculture (BIO 2113 and
PSS 3302; co-requisite for horticulture majors: PSS 4343). 3 hours
PSS 6353 Arboriculture and Landscape Maintenance. 3 hours
PSS 6363 Sustainable Nursery Production (PSS 2423 and PSS
3303). 3 hours
PSS 6444 Plant Tissue Culture (BIO 1203 or equivalent and
BIO 4214/6214). 4 hours
PSS 6453 Vegetable Production (PSS 3303, PSS 3301 and BIO
4204). 3 hours
PSS 6503 Plant Breeding (PO 3103) [Same as PSS 4503]. 3 hours
PSS 6553 Plant Growth and Development. 3 hours
PSS 6613 Floriculture Crop Programming (PSS 4343/6343). 3 hours
PSS 6833 Temperature Stress Physiology (BIO 4214/6214 or
BCH 4013/6013). 3 hours
PSS 6990 Special Topics in PSS. 1-9 hours
PSS 7000 Directed Individual Study. 1-6 hours
PSS 8000 Thesis Research/Thesis. Hours and credits to be
arranged; minimum of 6 hours required for degree
PSS 8513 Advanced Plant Breeding (PSS 4503/6503) [Same as
GNS 8113]. 3 hours
PSS 8553 Phytohormones and Growth Regulation (BIO
4214/6214 and CH 2503). 3 hours
PSS 8554 Plant Genetic Engineering (PSS 6444 and BCH
6713). 4 hours
PSS 8563 Post Harvest Physiology of Horticultural Plants
(Organic Chemistry and BIO 4214/6214 or equivalent). 3 hours
PSS 8573 Morphology of Horticultural Plants
(BIO 4204/6204). 3 hours
PSS 8613 Methods of Horticultural Research. 3 hours
PSS 8623 Genomes and Genomics (BCH 4113/6113 or BCH
4713/6713 or BCH 8643 or consent of instructor) [Same as
BCH 8623]. 3 hours
PSS 8631 Topics in Genomics (PSS/BCH 8623 or BCH
4713/6713 or BCH 8643 or consent of instructor) [Same as
BCH 8613]. 1 hour
PSS 8811-8831 Seminar. 1-3 hours
PSS 8990 Special Topics in PSS. 1-9 hours
PSS 9000 Dissertation Research/Dissertation. Hours and credits
to be arranged; minimum of 20 hours required for degree

Program of Study
Weed Science Concentration Requirements
M.S.—See General Departmental Requirements.
Ph.D.—The student must successfully complete a program of
study as presented by the student’s major advisor and graduate
committee. Twenty hours of Research/ Dissertation (PSS 9000)
and two seminars (PSS 8811-8831) to include an exit seminar
describing the student’s dissertation research are required. A
qualifying examination after completion of two semesters, a
1. Curriculum Outline

There is no change in the curriculum. The only change is that up to, but no more than, nine hours of graduate coursework could be taken during the student's final semester of undergraduate studies and counted towards the M.S. degree in Agronomy, Horticulture, or Weed Science. As stated in guidance issued by the MSU Graduate Council (October 2008), students may use up to nine hours for both the bachelor's and master's degrees. The specific guidance on this from the Graduate Council was:

"The double counting will work as follows: once the student is accepted into the combined program, the student and the advisor may select up to nine hours that will satisfy both undergraduate and graduate requirements. These courses may be split level or 8000 level classes. The student should take the courses for graduate credit. After successfully completing the graduate-level class, the student and advisor will fill out a request to receive undergraduate credit for the course. After receiving the request, the Registrar will grant credit for the undergraduate course and give the same grade. For the case of a split-level class, the transcript will show both on the transcript. In the case of an 8000 level class, a special topics undergraduate course of the same title will be entered on the transcript or a "dummy" class created with the same name to allow dual credit."

2. Justification and Learning Outcomes

The creation of a new combined BS/MS option for obtaining the M.S. degree in Agronomy, Horticulture, or Weed Science will allow highly qualified MSU undergraduates to work on a Bachelor's degree and a Master's degree concurrently. This will permit those students to obtain the Master's degree in less time than where a student would complete the Bachelor's before beginning work on the Master's degree. Students in the combined BS/MS degree program will be allowed to double count selected courses to simultaneously fulfill the requirements for the two degrees.
This combined BS/MS program is meant to encourage participation of our most talented undergraduates in research at a higher level than is available under current undergraduate research programs. It is further hoped some of the graduates from the combined program would extend their studies to a Ph.D. program or other terminal degree. Because the students would have had in-depth exposure to research, the likelihood of success of such Ph.D. students should be substantially increased.

Publicity about this program may stimulate undergraduates in Plant and Soil Sciences to begin to consider graduate school options earlier in their academic career.

The availability of the program in Plant and Soil Sciences may attract more honors quality undergraduates into the Plant and Soil Sciences majors.

**Expected Learning Outcomes**

Expected learning outcomes for the combined BS/MS program would be the same as for the existing, independent B.S. and M.S. degree programs. These include, but are not limited to:

1. Students will be able to demonstrate a broad based knowledge in their selected discipline of Agronomy, Horticulture, or Weed Science.

2. Students will be able to demonstrate proficiency in experimental design, data management, data analysis, and data interpretation.

3. Students will be able to demonstrate knowledge and understanding of current trends and important issues in agriculture.

4. Students will be able to convey knowledge obtained from their research in written and oral formats by publishing journal articles and presenting at professional conferences.

**Assessment**

All degree programs in the Department of Plant and Soil Science are part of the ongoing assessment process at MSU. This combined program would be incorporated into that assessment process. In general, the assessment programs evaluate whether students demonstrate a breadth of knowledge across the agricultural sciences, a depth of knowledge in their specific discipline, and the ability to synthesize that knowledge in scholarly endeavors.

Specifically, the combined B.S./M.S. program will be assessed on:

1. Student’s ability to demonstrate competency in communication skills,

2. Student’s ability to demonstrate application and synthesis of knowledge in professional forums,

3. Student success after graduation measured by career placement.

**Additional Questions**

1. Will this program change meet local, state, regional, and national educational and cultural needs? If so, please describe.
Yes, this change allows outstanding students to receive a higher level of education in less time than before the combined programs were available. These students would then enter the agricultural workforce sooner where an increase in educational levels is sorely needed.

2. Will this program change result in duplication in the System? If so, please describe.
This program will not result in duplication in the System.

3. Will this program change/advance student diversity within the discipline? If so, please describe.
This program will not affect diversity within the discipline.

4. Will this program change result in an increase in the potential placement of graduates in MS, the Southeast, and the U.S.? If so, please describe.
Yes. Traditionally it is much easier to place M.S. students in the southeastern region than B.S. students.

5. Will this program change result in an increase in the potential salaries of graduates in MS, the Southeast, and the U.S.? If so, please describe.
Yes, M.S. students generally receive a higher starting salary than B.S. students.

4. Support
A letter of support from the Department of Plant and Soil Sciences Curriculum Committee is attached.

5. Proposed 4-Letter Abbreviation
No Change

6. Effective Date
Fall 2012
NOTE: This form is a cover sheet that must accompany the degree program change proposal. The actual proposal should be prepared in accordance with format requirements provided in the Guide and Format for Curriculum Proposals published by the UCCC. Both cover sheet and proposal should be submitted, along with all required copies, to UCCC, Mail Stop 9699 (25 Morgan Ave), Phone: 325-0831.

College: Engineering Department: Computer Science and Engineering
Contact Person: Edward Allen Mail Stop: 9637 E-mail: allen@cse.msstate.edu
Nature of Change: Modification Date Initiated: 03/01/12 Effective Date: Fall 2012

Current Degree Program Name: Minor in Computer Science, Ph.D. Degree
Major: Concentration: Master of Science

New Degree Program Name: Minor in Computer Science, Ph.D. Degree
Major: Concentration: Master of Science

Summary of Proposed Changes:

1. Clarify the prerequisite requirement for courses that can be taken to complete the minor.
2. Add a requirement for a comprehensive exam covering the courses taken towards the minor.
3. Add flexibility to the list of eligible courses.
4. Remove the requirement that students must be accepted by a minor professor before courses towards the minor can be taken.
5. Remove CSE 6613, Biocomputing as a course that can be applied towards the minor.

Approved:

Date:

Department Head

3/19/12

Chair, College or School Curriculum Committee

3/23/2012

Dean of College or School

3/23/12

Chair, University Committee on Courses and Curricula

5/8/12

Chair, Graduate Council (if applicable)

Chair, Deans Council

☐ IHL Action Required

☐ SACS Letter Sent
Proposal to Modify the Minor in Computer Science
Master's Degree

<table>
<thead>
<tr>
<th>CURRENT Degree Description</th>
<th>PROPOSED Degree Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Degree:</strong> Master's Degree Minor in Computer Science</td>
<td><strong>Degree:</strong> Master's Degree Minor in Computer Science</td>
</tr>
</tbody>
</table>
| Master's Degree—The Graduate Council requires that a student who wishes to earn a minor in computer science in a master's degree program complete at least 9 semester hours of computer science graduate credit. In addition, the Department of Computer Science and Engineering requires that the following requirements be satisfied:  
  • At least 3 semester hours must be at the full graduate (8000) level;  
  • At least 6 semester hours must be in one of the following areas: artificial intelligence, software engineering, high performance computing, graphics and visualization, theory, or computer security;  
  • All prerequisites courses for the minor courses included in the program of study must be satisfied. | The Graduate Council requires that a student who wishes to earn a minor in computer science in a master's degree program complete at least nine semester hours of computer science graduate credit. In addition, the Department of Computer Science and Engineering requires that the following requirements be satisfied:  
  • At least three semester hours must be at the full graduate (8000) level.  
  • At least six semester hours must be in one of the research focus areas of the department, or theory, not to include CSE 6613.  
  • CSE 2383 Data Structures or CSE 6753 Computation Fundamentals or equivalent must have been completed by the student. This required background may have been completed during undergraduate study. CSE 6753 may count toward the minor.  
  • The student must pass a comprehensive examination over minor coursework, as determined by the minor professor. This may be in conjunction with an examination for their primary degree program.  

The student must be accepted by a minor professor in the Department of Computer Science and Engineering and have the approval of both the minor professor and the Graduate Coordinator in Computer Science and Engineering of the minor program of study prior to enrollment in graduate courses for the minor. The minor professor will be included in the student's Graduate Committee. | The student must be accepted by a minor professor in the Department of Computer Science and Engineering and have the approval of both the minor professor and the Graduate Coordinator in Computer Science and Engineering of the minor program of study. The minor professor will be included in the student's supervisory committee. |

Justification

The current course requirements for a Minor in Computer Science impose a long chain of prerequisite coursework that adds significant time to the degree completion for non-Majors. This also discourages students from pursuing Minors in Computer Science. In order to relax the prerequisite requirements, non-majors will be required to pass CSE 6753, *Computation Fundamentals*, or CSE 2383, *Data Structures*, (or equivalent of either) in order to fulfill the
fundamental prerequisites required in many CSE graduate courses. CSE 6753, *Computation Fundamentals* is designed to provide fundamental Computer Science background to graduate students in other technical/engineering fields. CSE 2383, *Data Structures* is included in order to allow non-majors who have taken Computer Science courses as undergraduates to fulfill the fundamental prerequisite requirements. This modification is anticipated to increase the enrollment in the MS Minor in Computer Science from one student per semester to four per semester.

The research focus areas are no longer specified in order to make the minor degree program flexible (*i.e.*, this keeps CSE from having to resubmit a new degree modification proposal whenever the department’s research focus areas change). CSE 6613, *Biocomputing*, is a course designed for non-majors and cannot be applied toward any CSE degree program.

The addition of comprehensive examination over the minor coursework mirrors the requirement that the department imposes on its majors for the MS degree. All CSE MS degree majors currently are required to pass an oral comprehensive examination for the coursework only, project, or thesis degree completion options.

The requirement that students have a minor professor in place before being given credit for courses towards a minor is being removed because many students take graduate CSE courses they are interested in before considering completing the minor degree program’s requirements. As currently written, the requirements disallow such courses from being applied towards the minor. The modification will enable students to retroactively apply courses they have already taken towards fulfilling the minor degree program’s requirements.
March 18, 2012

To whom it may concern:

This letter is in support of the proposal to modify the program requirements for Minor in Computer Science PhD degree and Minor in Computer Science Master's degree. Eighteen faculty members present at the February 17, 2012 departmental meeting approved this proposal unanimously.

Sincerely,

Yoginder Dandass
CSE Course and Curricula Committee Chair

Eric Hansen
CSE Course and Curricula Committee Member

Edward Allen
CSE Graduate Coordinator
NOTE: This form is a cover sheet that must accompany the degree program change proposal. The actual proposal should be prepared in accordance with format requirements provided in the Guide and Format for Curriculum Proposals published by the UCCC. Both cover sheet and proposal should be submitted, along with all required copies, to UCCC, Mail Stop 9699 (25 Morgan Ave), Phone: 325-0831.

College: Engineering
Contact Person: Edward Allen
Nature of Change: Modification

Department: Computer Science and Engineering
Mail Stop: 9637  E-mail: allen@cse.msstate.edu
Date Initiated: 03/01/12 Effective Date: Fall 2012

Current Degree Program Name: Minor in Computer Science, Ph.D. Degree

Major: Concentration:

New Degree Program Name: Minor in Computer Science, Ph.D. Degree

Major: Concentration:

Summary of Proposed Changes:

1. Clarify the prerequisite requirement for courses that can be taken to complete the minor.
2. Add a requirement for a comprehensive exam covering the courses taken towards the minor.
3. Add flexibility to the list of eligible courses.
4. Remove the requirement that students must be accepted by a minor professor before courses towards the minor can be taken.
5. Remove CSE 6613, Biocomputing as a course that can be applied towards the minor.

Approved:

[Signatures]

Date:

3/19/12
3/23/2012
3/23/12
5/8/12

[Signatures]
Proposal to Modify the Minor in Computer Science
Ph.D. Degree

<table>
<thead>
<tr>
<th>CURRENT Degree Description</th>
<th>PROPOSED Degree Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Degree: Ph.D. Degree Minor in Computer Science</strong></td>
<td><strong>Degree: Ph.D. Degree Minor in Computer Science</strong></td>
</tr>
<tr>
<td>Ph.D. Degree — The Graduate Council requires that a student who wishes to earn a minor in computer science in a Ph.D. degree program complete at least 12 semester hours of computer science graduate credit. In addition, the Department of Computer Science and Engineering requires that the following requirements be satisfied:</td>
<td>Ph.D. Degree — The Graduate Council requires that a student who wishes to earn a minor in computer science in a Ph.D. degree program complete at least twelve semester hours of computer science graduate credit. In addition, the Department of Computer Science and Engineering requires that the following requirements be satisfied:</td>
</tr>
<tr>
<td>• At least 3 semester hours must be at the full graduate (8000) level;</td>
<td>• At least three semester hours must be at the full graduate (8000) level.</td>
</tr>
<tr>
<td>• At least 6 semester hours must be in one of the following areas: artificial intelligence, software engineering, high performance computing, graphics and visualization, theory, or computer security;</td>
<td>• At least six semester hours must be in one of the research focus areas of the department, or theory, not to include CSE 6613.</td>
</tr>
<tr>
<td>• All prerequisite courses for the minor courses included in the program of study must be satisfied. The student must be accepted by a minor professor in the Department of Computer Science and Engineering and have the approval of both the minor professor and the Graduate Coordinator in Computer Science and Engineering of the minor program of study prior to enrollment in graduate courses for the minor. The minor professor will be included in the student’s graduate committee.</td>
<td>• CSE 2383 Data Structures or CSE 6753 Computation Fundamentals or equivalent must have been completed by the student. This required background may have been completed during undergraduate study. CSE 6753 may count toward the minor.</td>
</tr>
<tr>
<td></td>
<td>• The student must pass a comprehensive examination over minor coursework, as determined by the minor professor. This may be in conjunction with an examination for their primary degree program.</td>
</tr>
<tr>
<td></td>
<td>The student must be accepted by a minor professor in the Department of Computer Science and Engineering and have the approval of both the minor professor and the Graduate Coordinator in Computer Science and Engineering of the minor program of study. The minor professor will be included in the student’s supervisory committee.</td>
</tr>
</tbody>
</table>

Justification

The current course requirements for a Minor in Computer Science impose a long chain of prerequisite coursework that adds significant time to the degree completion for non-Majors. This also discourages students from pursuing Minors in Computer Science. In order to relax the prerequisite requirements, non-majors will be required to pass CSE 6753, Computation Fundamentals, or CSE 2383, Data Structures, (or equivalent of either) in order to fulfill the
fundamental prerequisites required in many CSE graduate courses. CSE 6753, *Computation Fundamentals* is designed to provide fundamental Computer Science background to graduate students in other technical/engineering fields. CSE 2383, *Data Structures* is included in order to allow non-majors who have taken Computer Science courses as undergraduates to fulfill the fundamental prerequisite requirements. This modification is anticipated to increase the enrollment in the PhD Minor in Computer Science from one student per semester to four per semester.

The research focus areas are no longer specified in order to make the minor degree program flexible (i.e., this keeps CSE from having to resubmit a new degree modification proposal whenever the department’s research focus areas change). CSE 6613, *Biocomputing*, is a course designed for non-majors and cannot be applied toward any CSE degree program.

The addition of comprehensive examination over the minor coursework mirrors the requirement that the department imposes on its majors for the PhD degree.

The requirement that students have a minor professor in place before being given credit for courses towards a minor is being removed because many students take graduate CSE courses they are interested in before considering completing the minor degree program’s requirements. As currently written, the requirements disallow such courses from being applied towards the minor. The modification will enable students to retroactively apply courses they have already taken towards fulfilling the minor degree program’s requirements.
March 18, 2012

To whom it may concern:

This letter is in support of the proposal to modify the program requirements for Minor in Computer Science PhD degree and Minor in Computer Science Master’s degree. Eighteen faculty members present at the February 17, 2012 departmental meeting approved this proposal unanimously.

Sincerely,

\[ \begin{align*}
\text{Yoginder Dandass} \\
\text{CSE Course and Curricula Committee Chair}
\end{align*} \]

\[ \begin{align*}
\text{Eric Hansen} \\
\text{CSE Course and Curricula Committee Member}
\end{align*} \]

\[ \begin{align*}
\text{Edward Allen} \\
\text{CSE Graduate Coordinator}
\end{align*} \]