

GRADUATE and/or UNDERGRADUATE

Course and Curriculum Changes

approved by the

College of Agriculture Faculty

on

March 13, 2008 at 3:30 p.m. in Waters Hall Room 231

Units that may be directly impacted by these changes have been notified. These are:

Departments of:

College of Education  
Department of Agronomy  
Department of Animal Sciences and Industry  
Department of Biochemistry  
Department of Computing and Information Sciences  
Department of Economics  
Department of Entomology  
Department of Geography  
Department of Horticulture, Forestry and Recreation Resources  
Department of Human Nutrition  
Division of Biology  
School of Journalism and Mass Communications

**Course and Curriculum Proposals**  
**College of Agriculture**  
**Spring 2007**  
Course Proposals

Agricultural Communications and Journalism

- FROM:** AGCOM 110. Introduction to Agricultural Communications. (1) I. Introduction to agricultural communications programs, activities, careers, and trends. Required of all students beginning a major in agricultural communications. One hour lec. per week.
- TO:** AGCOM 110. Introduction to Agricultural Communications. (2) I. Introduction to agricultural communications programs, activities, careers, and trends. Orientation to department, college, and university policies and services to enhance student success. Required of all students beginning a major in agricultural communications. Two hours lec. per week.
- RATIONALE:** This will be a full semester course that will permit ACJ majors to have earlier contact with departmental faculty, programs, and facilities. It has been difficult to implement a meaningful communications project in the class the last eight weeks of the semester. The additional hour will allow the instructors time to cover important orientation and transition information for new students previously covered in GENAG 101, Agriculture Orientation, and design a communications project that illustrates the types of skills and knowledge needed in agricultural communications careers. This course will replace GENAG 101 in the ACJ curriculum.
- IMPACT:** No impact on other departments.
- EFFECTIVE DATE:** Fall 2008
- ADD:** AGCOM 435. Documentary Production. (3) II. Theory of visual storytelling is combined with basic and intermediate video camera and non-linear editing instruction to produce TV documentaries, magazine-type stories, and personal videos for web and broadcast distribution. Three hours rec. a week. Pr.: MC 200 or 221 or instructor permission. Same as MC 435.
- RATIONALE:** Graduates who will be working in a variety of communications and marketing positions are expected to have a wide variety of competencies. Students in this course will learn how to be effective video storytellers, operate video cameras, and perform video editing. The course will be cross-listed with MC 435 to serve interested students in the A. Q. Miller School of Journalism and Mass Communications. The proposed course has been successfully offered under AGCOM 420, Topics in Agricultural Communications.
- IMPACT:** Cross-listing has been agreed to with the School of Journalism and Mass Communications. No impact on other departments.
- EFFECTIVE DATE:** Fall 2008

- ADD:** AGCOM 590. New Media Technology. (3) I. This course focuses on the study and application of emerging “new media” technologies to effectively communicate information and market products and programs to general and targeted audiences. Students will study underlying communication theories such as Roger’s Theory of Innovation Diffusion to provide a context of how society adopts and incorporates new technology. Three hours lec. a week. Pr.: MC 200 or 221 or instructor permission. Same as MC 590.
- RATIONALE:** Communications firms expect graduates to supply a variety of skills related to conventional and innovative communications tools. Some current examples of “new media” include Web 2.0, blogging, podcasting/videocasting, and RSS Feeds. Communications, agribusiness, and other employers that hire our graduates use “new media” techniques to communicate and to market to their customers. The course will be cross-listed to serve interested students in the A. Q. Miller School of Journalism and Mass Communications. The proposed course has been successfully offered as AGCOM 420, Topics in Agricultural Communications.
- IMPACT:** Cross-listing has been agreed to with the School of Journalism and Mass Communications. No impact on other departments.
- EFFECTIVE DATE:** Fall 2008
- ADD:** AGCOM 610. Crisis Communication. (3) II. Focus is placed on the application of effective crisis communication practices and techniques. Students will learn relevant interpersonal and organizational communication theory, assess/evaluate organizational risks, and develop a crisis communication plan. Students will partner with a community business to create and deliver a comprehensive crisis communication plan. Three hours lec. a week. Pr.: MC 200, or 60 hours of college credit, or instructor permission. Same as MC 610.
- RATIONALE:** Industry employers, such as communication firms or corporate businesses, desire graduates with marketable experience in communication risk assessment/evaluation, crisis messaging, communication to diverse audiences and stakeholders, and communication plan development/evaluation. This course will provide students with a competitive advantage in the marketplace. AGCOM 620 will be cross-listed to serve interested students in the A. Q. Miller School of Journalism and Mass Communications. The proposed course has been successfully offered as AGCOM 420, Topics in Agricultural Communications.
- IMPACT:** Cross-listing has been agreed to with the School of Journalism and Mass Communications. No impact on other departments.
- EFFECTIVE DATE:** Fall 2008

Agricultural Education

ADD: AGED 500. Methods of Teaching Agriculture in the Secondary and Middle Schools. (3) I. II. Principles of teaching applied to content area instruction in the secondary and middle schools; motivation; organization of subject matter; lesson planning; evaluation and reporting; challenging the levels of ability; organization and management of the classroom; methodology and materials of the secondary schools. Pr.: EDCEP 315, EDSP 323, and EDSEC 376. Conc. enrollment required for EDSEC 455, 477, AGED 520, and EDCEP 525.

ADD: AGED 520. Block II Lab: Content Area Methods and Field Experience. (2) I. II. Field-based experience to help the pre-professional teacher practice the incorporation of specific content area with reading methods and demonstrate application of technology into teaching and assessment in the secondary and middle schools. Pr.: EDCEP 315, EDSP 323, and EDSEC 376. Conc. Enrollment required for EDSEC 455, 477, AGED 500 and EDCEP 525.

ADD: AGED 621. Program Planning in Agricultural Education. (3) I, II. The program development and planning process; development of guides for teaching and evaluating reimbursable secondary programs. Pr.: EDSEC 620.

RATIONALE: Agricultural Education is administratively moving from the Department of Secondary Education in the College of Education to the Department of Communications in the College of Agriculture. The above courses are currently taught under EDSEC numbers. The administrative move will require that the agricultural education sections of those courses be moved to the College of Agriculture.

IMPACT: The College of Education and the College of Agriculture support this change.

EFFECTIVE DATE: Fall 2008

Agricultural Education

## Changes in Course Prefixes

<b><u>FROM</u></b>	<b><u>TO</u></b>
EDSEC/GENAG 260 Ag Construction	AGED 260 Ag Construction
EDSEC/GENAG 262 Ag Structures	AGED 262 Ag Structures
EDSEC/GENAG 264 Ag Power	AGED 264 Ag Power
EDSEC 300 Introduction to Agricultural Education	AGED Introduction to Agricultural Education
EDSEC 400 Leadership & Professional Development in Agricultural Education	AGED 400 Leadership & Professional Development in Agricultural Education
EDSEC 503 Teaching Adult Classes in Agriculture	AGED 503 Teaching Adult Classes in Agriculture
EDSEC 505 Field Experience in Agricultural Education	AGED 505 Field Experience in Agricultural Education
EDSEC 615 Laboratory and Safety Techniques in Teaching Agriculture	AGED 615 Laboratory and Safety Techniques in Teaching Agriculture
EDCI 704 Extension Organization and Programs	AGED 704 Extension Organization and Programs
EDCI 705 Organization Problems in Teaching Agricultural Mechanics	AGED 705 Organization Problems in Teaching Agricultural Mechanics
EDCI 706 Principles of Teaching Adults in Extension	AGED 706 Principles of Teaching Adults in Extension
EDCI 734 Practicum in Agriculture-Related Occupations	AGED 734 Practicum in Agriculture-Related Occupations
EDCI 736 Practicum in Extension Education	AGED 736 Practicum in Extension Education
EDCI 823 Agricultural Education for Beginning Teachers	AGED 823 Agricultural Education for Beginning Teachers
EDCI 824 Young Farmer and Adult Farmer Education in Agriculture	AGED 824 Young Farmer and Adult Farmer Education in Agriculture
EDCI 850 Curriculum Development in Agriculture I	AGED 850 Curriculum Development in Agriculture I
EDCI 852 Curriculum Development in Agriculture II	AGED 852 Curriculum Development in Agriculture II
EDCI 855 Field Studies in Agricultural Education	AGED 855 Field Studies in Agricultural Education

**RATIONALE:** Agricultural Education is administratively moving from the Department of Secondary Education in the College of Education to the Department of Communications in the College of Agriculture. The above courses are all part of the current agricultural education programs at the undergraduate or graduate level. No new courses are being created and this change is simply a prefix change to reflect the new administrative structure. The College of Education and College of Agriculture support this change.

**IMPACT:** No impact on any departments.

**EFFECTIVE DATE:** Fall 2008

Agronomy

**ADD:** AGRON 625. Applications of Nutrient Management. (3) I. Principles for developing plant nutrient management programs in the Great Plains. Topics include assessing crop nutrient needs, making fertilizer recommendations, applying application technology and products to enhance nutrient use efficiency, using sensing technology to assess in-season nutrient needs, quality control functions, and the use of waste products as nutrient sources. Three hours lec. a week. Recommended pr.: AGRON 375.

**RATIONALE:** This course provides an advanced applications course in soil fertility. The 600 level allows enrollment for both undergraduates and graduate students in Agronomy for graduate credit.

**IMPACT:** No impact on other departments

**EFFECTIVE DATE:** Fall 2008

Animal Sciences and Industry**Proposed Pre-Requisite Requirements:**

<b>Course</b>	<b>FROM: Current Requirements</b>	<b>TO: Proposed Requirements</b>
ASI 315	Pr.:ASI 102 and ASI 105 or Instructor consent	Pr.: <u>ASI 105</u> Rec. Pr.: <u>ASI 102</u> or Instructor consent
ASI 350	Pr.:BIOL 198	<u>Rec.</u> Pr.:BIOL 198 <u>or a course in Chemistry</u>
ASI 385	Pr.:ASI 102	<u>Rec.</u> Pr.:ASI 102
ASI 396	Pr.:ASI 102 and ASI 106	<u>Rec.</u> Pr.:ASI 102 and ASI 106
ASI 445	Pr.:ASI 345	<u>Rec.</u> Pr.:ASI 345
ASI 490	Pr.:Junior Standing	<u>Rec.</u> Pr.:Junior Standing
ASI 535	Pr.:Senior Standing	<u>Rec.</u> Pr.:Senior Standing
FDSCI 725	Pr.:FDSCI 501	<u>Rec.</u> Pr.:FDSCI 501

**RATIONALE:** For these courses the listed prerequisites are only recommended by the assigned faculty teaching the courses. Although faculty prefer incoming students have these courses they will allow students to enroll without them.

**IMPACT:** No impact on other departments.

**EFFECTIVE DATE:** Spring 2009

**FROM:** ASI 510. Animal Breeding Principles. (3) I, II. The genetic principles in evaluation, selection, and mating systems used in beef, dairy, sheep, swine, poultry, and horse breeding. Intended for ASI majors. Three hours lec. a week. Pr.: ASI 500.

**TO:** ASI 510. Animal Breeding Principles. (3) I, II. The genetic principles of evaluation, selection, and mating systems used in beef, dairy, sheep, swine, poultry, horse and companion animal breeding. Intended for ASI majors and minors. Three hours lec. a week. Pr.: ASI 102 and ASI 500.

**RATIONALE:** Information on companion animal breeding has been added to course content. ASI 102 is an appropriate prerequisite course because students need to understand livestock and companion animal management, production practices and industry terminology prior to taking ASI 510. Students pursuing an ASI minor would benefit from this course, but minors did not exist at KSU when this course description was last revised.

**IMPACT:** No impact on other departments at Kansas State.

**EFFECTIVE DATE:** Spring 2009

Entomology

**ADD:** ENTOM 583. Survey of Horticultural Ornamental and Food Crop Pests. (1) I. Biology, diagnosis and integrated management of common horticultural ornamental and food crop pests. Two hours lec. and two hours lab per week. Course meets during the middle 5 weeks of the semester. Required prerequisite: HORT 582. Same as HORT 583 and PLPTH 583.

**RATIONALE:** This course will be cross-listed as HORT/PLPTH/ENTOM 583. It will provide horticulture students an opportunity to learn about ornamental and food crop pests. This will be an especially helpful class to students interested in landscape management, greenhouse production, and fruit/vegetable production. Including Entomology in the listing is important because the course will cover a number of insect pests.

**IMPACT:** No impact outside our department.

**EFFECTIVE DATE:** Fall 2008

Horticulture, Forestry and Recreation Resources

**FROM:** HORT 583. Survey of Horticultural Ornamental and Food Crop Pests (1). I. Biology, diagnosis and integrated management of common horticultural ornamental and food crop pests. Two hours lecture and two hours laboratory per week. Course meets during the middle 5 weeks of the semester. Required prerequisite: HORT 582. Same as PLPTH 583.

**TO:** HORT 583. Survey of Horticultural Ornamental and Food Crop Pests (1). I. Biology, diagnosis and integrated management of common horticultural ornamental and food crop pests. Two hours lecture and two hours laboratory per week. Course meets during the middle 5 weeks of the semester. Required prerequisite: HORT 582. Same as PLPTH 583 and ENTOM 583.

**RATIONALE:** This course was approved Fall, 2007 by the College of Agriculture as a cross listed course with the Department of Plant Pathology. It was meant to be cross listed with the Department of Entomology as well. We simply seek to correct this oversight.

**IMPACT:** No impact outside our college.

**EFFECTIVE DATE:** Fall 2008

**ADD:** HORT 690. Sustainable Agriculture. (2) I, in odd years. Historical perspectives of the sustainable agriculture movement in the U.S. and world-wide will be examined and critiqued. Components of sustainable agriculture such as agroecosystem theory, permaculture, energy use efficiency, and organic standards will be compared and evaluated. Students will demonstrate their understanding and application of the material by conducting research on a topic within sustainable agriculture and presenting the topic to the rest of the class. Two hours lec. per week. Pr.: Junior standing.

**RATIONALE:** Sustainable agriculture as a movement and as a field of study has grown throughout the U.S. By offering this course, HORT 690, along with HORT 325 (Organic Farming Systems), we can begin to cover this topic for both our undergraduate and graduate students wanting to further their education in this area.

**IMPACT:** Department of Geography has been contacted, however, this course could be used as an elective for the NRES secondary major, or other majors at KSU.

**EFFECTIVE DATE:** Fall 2009

#### Plant Pathology

**FROM:** PLPTH 583. Survey of Horticultural Ornamental and Food Crop Pests (1). I. Biology, diagnosis and integrated management of common horticultural ornamental and food crop pests. Two hours lecture and two hours laboratory per week. Course meets during the middle 5 weeks of the semester. Required prerequisite: HORT 582. Same as PLPTH 583.

**TO:** PLPTH 583. Survey of Horticultural Ornamental and Food Crop Pests (1). I. Biology, diagnosis and integrated management of common horticultural ornamental and food crop pests. Two hours lecture and two hours laboratory per week. Course meets during the middle 5 weeks of the semester. Required prerequisite: HORT 582. Same as PLPTH 583 and HORT 583.

**RATIONALE:** This course was approved Fall, 2007 by the College of Agriculture as a cross listed course with the Department of Plant Pathology. It was meant to be cross listed with the Department of Entomology as well. We simply seek to correct this oversight.

**IMPACT:** No impact outside our college.

**EFFECTIVE DATE:** Fall 2008

**ADD:** PLPTH 611. Agricultural Biotechnology Laboratory. (2) I. Laboratory course designed to provide practical applications of recombinant and genomic techniques related to agricultural biotechnology. Typical techniques include bioinformatics basics, DNA isolation, PCR applications, southern-and northern-blot analysis, linkage mapping, genetic and disease ID through DNA-based approaches, ELISA assays, eukaryotic transformation techniques. Six hours lab per week. Pr.: PLPTH610/AGRON 610 or concurrent enrollment.

**RATIONALE:** The proposed course is designed to be part of the proposed Applied Genomics and Biotechnology minor in the department of Plant Pathology. This course will also provide undergraduate and graduate students with current technical knowledge and laboratory experience for specific techniques used in agriculture biotechnology.

**IMPACT:** Biology has been contacted and has provided a letter of support.

**EFFECTIVE DATE:** Fall 2008

**ADD:** PLPTH 612 Genomics Applications. (3) II. An introduction to applications of genomics technologies to the analysis of genomes. Three hours lec. per week. Pr: BIOL 450 or ASI 500. Recommended pr.: BIOCH 521.

**RATIONALE:** The proposed course is designed to be part of the proposed Applied Genomics and Biotechnology minor in the department of Plant Pathology. This course will also provide undergraduate and graduate students with current technical knowledge and laboratory experience for specific techniques used in agriculture biotechnology.

**IMPACT:** Biology has been contacted and has provided a letter of support.

**EFFECTIVE DATE:** Fall 2008

**ADD:** PLPTH 613 Bioinformatics Applications. (2) II. Analysis of genetic and genomic data, focusing on practical use of public computational resources. One hour lec. and two hours lab per week. Pr: PLPTH 612 or concurrent enrollment.

**RATIONALE:** The proposed course is designed to be part of the proposed Applied Genomics and Biotechnology minor in the department of Plant Pathology. This course will also provide undergraduate and graduate students with current technical knowledge and laboratory experience for specific techniques used in agriculture biotechnology.

**IMPACT:** CIS and Biology have been contacted and have provided a letters of support.

**EFFECTIVE DATE:** Fall 2008

**ADD:** PLPTH 614. Internship for Applied Genomics and Biotechnology. (1-3) I, II, S. Approved and supervised work-study programs in various areas of agribusiness. Project reports required. Pr.: Consent of instructor.

**RATIONALE:** The proposed course is designed to be part of the proposed Applied Genomics and Biotechnology minor in the department of Plant Pathology. This course will also provide undergraduate and graduate students with an opportunity to utilize knowledge learned in the minor and to gain experience in a commercial agricultural biotechnology setting.

**IMPACT:** No impact on other departments.

**EFFECTIVE DATE:** Fall 2008

Curriculum Proposals

Agricultural Communications and Journalism

Agriculture and Environmental Options

FROM

General Requirements	Sem.	Cr.
ENGL100 Expos Writ I		3
ENGL200 Expos Writ II		3
SPCH105 Pub Speak IA		2
<del>GENAG101 Ag Orient</del>		<del>1</del>
MATH100Coll Algebra		3
ECON110 Macroecon		3
CHEM210 Chemistry I		4
OR		
CHEM110 Gen Chem		3
AND		
CHEM111 Chem Lab		1

TO

General Requirements	Sem.	Cr.
ENGL100 Expos Writ I		3
ENGL200 Expos Writ II		3
SPCH105 Pub Speak IA		2
MATH100Coll Algebra		3
ECON110 Macroecon		3
CHEM210 Chemistry I		4
OR		
CHEM110 Gen Chem		3
AND		
CHEM111 Chem Lab		1

Agriculture/NR Requirements  
AGCOM required courses

AGCOM110 Intro AgCom	4	AGCOM110 Intro AgCom	<u>2</u>
AGCOM410 Ag Mag	3	AGCOM410 Ag Mag	3
AGCOM510 Capstone	3	AGCOM510 Capstone	3

**RATIONALE:** AGCOM110 for two hours of credit will replace GENAG101, Ag Orientation (1 hr) and AGCOM110 (1 hr). The change will allow earlier in-depth activities with new majors and others who are interested in exploring the agricultural communications and journalism major.

**IMPACT:** No impact on other departments.

**EFFECTIVE DATE:** Fall 2008

Agricultural Economics

## M.S. Agricultural Economics Thesis Option

<b>Topic Area</b>	<b>Credit Hours</b>
<b>Economic Theory</b>	<u>6 Total</u>
ECON 720 Microeconomic Theory	3
Select one course from list below:	3
ECON 805 Income and Employment Theory	
<del>ECON 823 Advanced International Economics</del>	
AGEC 810 Price and Income Policies for Agriculture	
AGEC 840 International Markets and Agricultural Trade	
ADD <u>AGEC 825 Natural Resource Policy</u>	
<b>Agricultural Economics Theory</b> select two courses from list below:	<u>6 Total</u>
AGEC 805 Agricultural Marketing	
AGEC 823 Production Economics II	
AGEC 880 Agribusiness Industry Structures	
<b>Quantitative Methods</b>	<u>6 Total</u>
STAT 706 Basic Elements of Statistical Theory	3
ECON 830 Econometrics I	3
<b>Electives</b>	<u>6 Total</u>
AGEC Elective (700 level or higher)	3
General Elective (700 level or higher)	3
<b>Thesis Research</b>	<u>6 Total</u>
AGEC 899 Agricultural Economics Master's Research	6
	<b>Total Credit Hours</b>
	<b>30</b>

RATIONALE:           AGEC 825 is more appropriate than ECON 823 for the M.S. degree.

IMPACT:               Department of Economics has approved.

EFFECTIVE DATE: Fall 2008

## M.S. Agricultural Economics No-Thesis Option

<b>Topic Area</b>	<b>Credit Hours</b>
<b>Economic Theory</b>	<u>6 Total</u>
ECON 720 Microeconomic Theory	3
select one course from list below:	3
ECON 805 Income and Employment Theory	
<del>ECON 823 Advanced International Economics</del>	
AGEC 810 Price and Income Policies for Agriculture	
AGEC 840 International Markets and Agricultural Trade	
ADD <u>AGEC 825 Natural Resource Policy</u>	
<b>Agricultural Economics Theory</b> select two courses from list below:	<u>6 Total</u>
AGEC 805 Agricultural Marketing	
AGEC 823 Production Economics II	
AGEC 880 Agribusiness Industry Structures	
<b>Quantitative Methods</b>	<u>9 Total</u>
STAT 706 Basic Elements of Statistical Theory	3
AGEC 712 Optimization Techniques for Ag Econ	3
ECON 830 Econometrics I	3
<b>Electives</b>	<u>15 Total</u>
AGEC (700 level or higher)	9
AGEC or Business Electives*(700 level or higher)	6
<b>Total Credit Hours</b>	
<b>36</b>	

\*The three hours of Agricultural Economics electives and six hours of the Ag Econ or Business Electives may be substituted for by a Specialty consisting of nine hours at the 700 level or above.

The student is required to demonstrate evidence of scholarly effort by completing a creative component consisting of a written paper and an oral defense. The written paper will be on a topic provided by the student's advisory committee relating to the student's field of study.

RATIONALE:            AGEC 825 is more appropriate than ECON 823 for the M.S. degree.

IMPACT:                Department of Economics has approved.

EFFECTIVE DATE: Fall 2008

Agricultural EducationFROM**VII. Ag Mechanics (7 hrs.)**

<del>EDSEC</del> / <del>GENAG</del> 260 Ag Construction	3	___	___
<del>EDSEC</del> / <del>GENAG</del> 262 Ag Structures	2	___	___
<del>EDSEC</del> / <del>GENAG</del> 264 Ag Power	2	___	___

TO**VII. Ag Mechanics (7 hrs.)**

<u>AGED</u> 260 Ag Construction	3	___	___
<u>AGED</u> 262 Ag Structures	2	___	___
<u>AGED</u> 264 Ag Power	2	___	___

**XI. PROFESSIONAL EDUCATION**  
**PROFESSIONAL EDUCATION****Pre-Professional (13 hrs.)**

<del>EDSEC</del> 300 Intro to Ag Education	1	___	___
FSHS 110 Intro to Human Development	3	___	___
<del>DED 318 Instructional Media</del>	2	___	___
EDSEC 310 Foundations of Education	3	___	___
<del>EDSEC</del> 505 Field Experience Ag Ed.	1	___	___
EDSEC 620 Prin & Phil Career & Tech Ed	3	___	___

**Pre-Professional (11 hrs.)**

<u>AGED</u> 300 Intro to Ag Education	1	___	___
FSHS 110 Intro to Human Development	3	___	___
EDSEC 310 Foundations of Education	3	___	___
<u>AGED</u> 505 Field Experience Ag Ed.	1	___	___
EDSEC 620 Prin & Phil Career & Tech Ed	3	___	___

**Block I (8 hrs.)**

EDCEP 315 Educational Psychology	3	___	___
EDSP 323 Exceptional Stud Sec School	2	___	___
EDSEC 376 Core Teach Skills & Lab	3	___	___

**Block I (9 hrs.)**

EDCEP 315 Educational Psychology	3	___	___
EDSP 323 Exceptional Stud Sec School	2	___	___
EDSEC 376 Core Teach Skills & Lab	3	___	___
<u>DED 318 Educational Tech / Tch &amp; Lrng</u>	1	___	___

**Block II (16 hrs.)**

EDCEP 525 Interpersonal Relations Schools	1	___	___
EDSEC 455 Teaching Multicultural Society	1	___	___
<del>EDSEC</del> 400 Lead & Prof Development	2	___	___
EDSEC 477 Mid/Sec Reading	2	___	___
<del>EDSEC</del> 500 Methods Teaching Ag	3	___	___
<del>EDSEC</del> 520 Content & Read. Methods Lab	1	___	___
<del>EDSEC</del> 615 Lab & Safety Tech Teach Ag	3	___	___
<del>EDSEC</del> 621 Program Plan Ag Ed	3	___	___

**Block II (17 hrs.)**

EDCEP 525 Interpersonal Relations Schools	1	___	___
EDSEC 455 Teaching Multicultural Society	1	___	___
<u>AGED</u> 400 Lead & Prof Development	2	___	___
EDSEC 477 Mid/Sec Reading	2	___	___
<u>AGED</u> 500 Methods Teaching Ag	3	___	___
<u>AGED</u> 520 Content Area Meth & Field Exp	2	___	___
<u>AGED</u> 615 Lab & Safety Tech Teach Ag	3	___	___
<u>AGED</u> 621 Program Plan Ag Ed	3	___	___

**RATIONALE:**

Agricultural Education is administratively moving from the Department of Secondary Education in the College of Education to the Department of Communications in the College of Agriculture. The above courses are all part of the current agricultural education programs at the undergraduate or graduate level. No new courses are being created and this change is simply a prefix change to reflect the new administrative structure. The College of Education and College of Agriculture support this change. Changes in Pre-professional, Block I & II are consistent with changes made in secondary education in the College of Education.

**IMPACT:**

College of Education has approved.

**EFFECTIVE DATE:** Fall 2008

Animal Sciences and Industry

**Undergraduate Meat Science Certificate**  
**Department of Animal Sciences and Industry**  
**Kansas State University**

**RATIONALE:** The second largest industry in Kansas is the Meat Processing Industry, and Kansas ranks second in the nation in meat processing. Our Meat Science group receives job announcements and contacts nearly every week for graduates with a specialization in Meat Science. Because we do not have a ‘major’ or ‘option’ in Meat Science, and because some students in Agricultural Economics also have an interest in the Meat Processing Industry, we currently do not have a good method for identifying and advising students who have an interest in the Meat Processing Industry. A ‘**Meat Science Certificate**’ program should allow us to better identify, advise, and prepare students for the numerous and various kinds of jobs in the Meat Processing Industry. Our Meat Science Advisory Group strongly supports a ‘certificate program.’

**Effective Date:** Fall 2008

**Requirements:** 20 hours from the following:

<b><u>Required courses:</u></b>	<b><u>Hours</u></b>
ASI 350 Meat Science (ASI 340 if off campus student)	2 or 3
FDSCI 690 Principles of HACCP	2

**Select 8 to 15 hours from the following:**

ASI 361 Meat Animal Processing	2
ASI 370 Principles of Meat Evaluation	2
ASI 315 Livestock and Meat Evaluation	3
ASI 495 Advanced Meat Judging	2
ASI 610 Processed Meat Operations	2
ASI 661 Meat Study Tour	1
ASI 671 Meat Selection and Utilization (on or off campus student)	2
ASI 777 Meat Technology (ASI 776 if off campus student)	3
FDSCI 307 Applied Microbiology for Meat and Poultry Processors	3

**Select 0 to 7 hours from the following:**

ASI 310 Poultry and Poultry Products Evaluation	2
ASI 303 History and Attitudes of Animal Use	3
ASI 318 Fundamentals of Nutrition	3
or	
HN 132 Basic Nutrition	3
ASI 661 Problems in Meat Science	2-3
ASI 599 Internship	1-3
ASI 640 Poultry Products Technology	3
FDSCI 302 Introduction to Food Science	3
FDSCI 305 Fundamentals of Food Processing	3
FDSCI 607 Food Microbiology	4
FDSCI 695 Quality Assurance of Food Products	3
FDSCI 740 Research & Development of Food Products	4

**Student Learning Outcomes  
Animal Sciences and Industry  
Meat Science Certificate Program  
College of Agriculture**

**KSU Undergraduate  
Student Learning  
Outcomes**

**Certificate Program Graduates will have demonstrated:**

- A. The ability to apply critical thinking and problem-solving skills to the meat industry.
- B. The application of scientific principles to the fresh and further processed meat industries.
- C. The ability to learn and develop skills (technical, practical, qualitative and quantitative) to deal with potential changes in meat science and related industries.

**Knowledge  
Critical Thinking**

**Knowledge  
Critical Thinking**

**Person Professional  
Development,  
Ownership of  
Learning**

**Undergraduate Meat Science Certificate – Department of Animal Sciences and Industry  
Assessment of Student Learning Plan  
Kansas State University**

**A. College, Department, and Date**

College: *Agriculture*  
Department: *Animal Sciences and Industry*  
Date: *January 24, 2008*

**B. Contact Person(s) for the Assessment Plans**

*Michael E. Dikeman, Meat Science Section Coordinator*  
*David Nichols, Teaching Coordinator for Animal Science and Industry*  
*Mishelle Hay, Academic Administrative Assistant*

**C. Degree Program**

*Undergraduate Certificate in Meat Science*

**D. Assessment of Student Learning Three-Year Plan****1. Student Learning Outcome(s): Students will demonstrate:**

- a. Ability to apply critical thinking and problem-solving skills to the meat industry.*
- b. Application of scientific principles to the fresh and further processed meat industries.*
- c. Ability to learn and develop skills (technical, practical, qualitative and quantitative) to deal with potential changes in meat science and related industries.*

Special rationale for selecting these learning outcomes (optional): *None*

**Relationships to K-State Student Learning Outcomes (insert the program SLOs and check all that apply):**

Program SLOs	University-wide SLOs -- Undergraduate Programs					Program SLO is conceptually different from university SLOs
	Knowledge	Critical Thinking	Communication	Diversity	Academic / Professional Integrity	
A	X	X			X	no
B	X	X			X	no
C	X		X		X	no

**2. How will the learning outcomes be assessed? What groups will be included in the assessment?**

SLO	MEASURES		WHO IS ASSESSED?
	DIRECT	INDIRECT	
<i>Critical thinking and problem-solving skills to the meat industry</i>	Selected questions from a range of 1 to 4 exams in ASI 350 & FDSCI 690		Certificate students in ASI 350, FDSCI 690
<i>Critical thinking and problem-solving skills to the meat industry</i>	Selected questions from a range of 1 to 4 exams in ASI 350 & FDSCI 690		Certificate students in ASI 350, FDSCI 690

		Sr Exit Interviews  Alumni and/or company surveys	Students graduating in ASI & FDSCI  3 to 5 yr grads and recently hired students
<b><i>Application of scientific principles to the fresh and further processed meat industries</i></b>	Selected questions from a range of 1 to 4 exams in ASI 350 & FDSCI 690		Certificate students in ASI 350, FDSCI 690
		Sr Exit Interviews  Alumni and/or company surveys	Students graduating in ASI & FDSCI  3 to 5 yr grads and recently hired students
<b><i>Ability to learn and develop skills (technical, practical, qualitative and quantitative) to deal with potential changes in meat science and related industries</i></b>	Selected questions from a range of 1 to 4 exams in ASI 350 & FDSCI 690		Certificate students in ASI 350, FDSCI 690

3. When will these outcomes be assessed? When and in what format will the results of the assessment be discussed?

SLO	TIMETABLE FOR ASSESSMENT OF SLO			CREATION OF BASELINE
	2008	2009	2010	
<i>Critical thinking and problem-solving skills to the meat industry</i>	ASI 350 and FDSCI 690	ASI 350 and FDSCI 690	ASI 350 and FDSCI 690	Baseline created after spring 2008
			5 year alumni and/or company surveys	Baseline created after spring 2009
<i>Application of scientific principles to the fresh and further processed meat industries</i>	ASI 350 and FDSCI 690	ASI 350 and FDSCI 690	ASI 350 and FDSCI 690	Baseline created after spring 2008
			5 year alumni and/or company surveys	Baseline created after spring 2009
<i>Ability to learn and develop skills (technical, practical, qualitative and quantitative) to deal with potential changes in meat science and related industries</i>	ASI 350 and FDSCI 690	ASI 350 and FDSCI 690	ASI 350 and FDSCI 690	Baseline created after spring 2008
			5 year alumni and/or company surveys	Baseline created after spring 2009

4. What is the unit's process for using assessment results to improve student learning?

The Meat Science Faculty will review the results of the assessment. Adjustments to courses and curriculum will be developed and presented to the entire faculty and college once baseline data are developed. Changes in course offerings, content, and curriculum will be used for student performance improvement.

## Grain Science and Industry

### Change B.S. in Feed Science and Management

FROM: B.S. in Feed Science and Management (no options)

TO: B.S. in Feed Science and Management (two options)

- Feed Production option
- Biofuels Production option

(See attached curriculum requirements for details)

**RATIONALE:** There is a great need for educated management and leaders in the biofuels industry. No other university offers an option for this management training. The Feed Science and Management degree already prepares students for careers in the feed, pet food and related grain processing industries, but does not offer a separate option in the biofuels. With the addition of certain current classes as a requirement, the Feed Science and Management degree program can offer a separate option in Biofuels Production. Thus, the Feed Science and Management degree is being revised from no options to offering 2 options, Feed Production and Biofuels Production. In addition, the sequencing of certain courses has been modified. Deletions of courses in Algebra, Trig and Computer Science were dropped in the Fall of 2008.

**IMPACT:** No departments outside of Grain Science will be affected as there are no core or required class additions or drops with this change. The new Feed Production curriculum guide rearranges the course sequence and incorporates previous changes.

**EFFECTIVE DATE:** Fall 2008

### Feed Science and Management – Feed Production Option

Current: (2005)

1 <sup>st</sup> Semester	
GENAG 101 Ag Orientation .....	1
GRSC 101 Intro to Grain Soc. ....	3
CHEM-210 Chemistry I.....	4
ENGL-100 Expository Writing.....	3
<del>Math 100 Algebra .....</del>	<del>3</del>
Total	14

2 <sup>nd</sup> Semester	
CHM-230 Chemistry II.....	4
BIOL-198 Princ. of Biology.....	4
<del>Math 150 Plane Trigonometry .....</del>	<del>3</del>
SPCH-105 Public Speaking IA.....	2
Soc.Sci./Hum Electives.....	3
Total	16

1 <sup>st</sup> Semester	
ENGL-200 Expository Writing II.....	3
<del>AGEC 120 Ag. Econ. &amp; Ag. Bus.....</del>	<del>3</del>
Required Courses.....	9
Total	15

Proposed: (Feed Production option)

#### FRESHMAN

1 <sup>st</sup> Semester	
GENAG 101 Ag Orientation .....	1
GRSC 101 Intro to Grain Sci.....	3
CHEM-210 Chemistry I.....	4
ENGL-100 Expository Writing.....	3
<del>MATH-205 Gen. Calc. &amp; Lin. Algebra .....</del>	<del>3</del>
Total	14

2 <sup>nd</sup> Semester	
CHM-230 Chemistry II.....	4
BIOL-198 Princ. of Biology.....	4
<del>AGEC-120 Ag. Econ. &amp; Ag. Bus.....</del>	<del>3</del>
SPCH-105 Public Speaking IA.....	2
Soc.Sci./Hum Electives.....	3
Total	16

#### SOPHOMORE

1 <sup>st</sup> Semester	
ENGL-200 Expository Writing II.....	3
<del>ECON-110 Macroeconomics.....</del>	<del>3</del>
Soc. Sci./Hum Elective .....	3
Required Courses.....	6
Total	15

2 <sup>nd</sup> Semester	
GRSC-110 Flow Sheets .....	2
<del>ECON-110 Macroeconomics.....</del>	<del>3</del>
Required Courses.....	6
Soc.Sci./Hum Electives.....	6
Total	17

1 <sup>st</sup> Semester	
GRSC-661 Qual. of Food & Feed Ingrid.....	3
<del>GRSC-405 Analytical Techniques.....</del>	<del>2</del>
Required Courses.....	9
Total	14

2 <sup>nd</sup> Semester	
<del>GRSC-651 Fd &amp; FD Prod Protection.....</del>	<del>4</del>
GRSC-510 Feed Technology I .....	4
Required Courses.....	9
Total	17

1 <sup>st</sup> Semester	
GRSC-591 Comm. Feed & Food Mfg. Intern.....	2
GRSC-750 Feed Technology II.....	4
GRSC-655 Cereal Food Plant Design/Const.....	3
Required Courses.....	6
Total	15

2 <sup>nd</sup> Semester	
GRSC-610 Elec. & Cont. Mill. Proc.....	3
GRSC-630 Mgmt Applications.....	3
Required Courses.....	12
Total	18

Total Hours for Graduation 126

#### REQUIRED COURSES

<del>AGEC-220 Grain &amp; Livestock Mktg Systems.....</del>	<del>3</del>
AGEC-420 Comm Futures Marketing.....	3
<del>Math-205 Gen Calc &amp; Lin Algebra .....</del>	<del>3</del>
<del>PHYS-113 Gen Physics I.....</del>	<del>4</del>
<del>PHYS-114 Gen Physics II.....</del>	<del>4</del>
STAT-325 Introduction to Statistics.....	3
<del>Intro to PC Course .....</del>	<del>3</del>
ENGL-516 Written Comm. for Scien.....	3
ACCTG-231 Acctg. Bus Options.....	3
ASI-318 Fundamentals of Nutrition .....	3
BIOCH-265 Intro Org Biochem.....	5
or	
CHM-350/351 General Organic Chemistry w/lab .....	5

2 <sup>nd</sup> Semester	
GRSC-110 Flow Sheets .....	2
<del>PHYS-113 General Physics I.....</del>	<del>4</del>
Required Courses.....	8
Soc.Sci./Hum Electives.....	3
Total	17

JUNIOR	
1 <sup>st</sup> Semester	
GRSC-661 Qual. of Food & Feed Ingrid.....	3
<del>PHYS-114 General Physics II.....</del>	<del>4</del>
Required Courses.....	3
Free Elective .....	3
Specialization Electives .....	3
Total	16

2 <sup>nd</sup> Semester	
<del>GRSC-405 Analytical Techniques.....</del>	<del>2</del>
GRSC-510 Feed Technology I .....	4
Required Courses.....	3
Free Elective.....	3
Specialization Electives .....	3
Total	15

SENIOR	
1 <sup>st</sup> Semester	
GRSC-591 Comm. Feed & Food Mfg. Intern.....	2
GRSC-750 Feed Technology II.....	4
GRSC-655 Cereal Food Plant Design/Const.....	3
Specialization Electives .....	6
Total	15

2 <sup>nd</sup> Semester	
GRSC-610 Elec. & Cont. Mill. Proc.....	3
GRSC-630 Mgmt Applications.....	3
<del>GRSC-651 Fd &amp; FD Prod Protection .....</del>	<del>4</del>
Specialization Electives.....	6
Total	16

Total Hours for Graduation 124

#### REQUIRED COURSES ( 20 hours )

AGEC-420 Comm Futures Marketing.....	3
STAT-325 Introduction to Statistics.....	3
ENGL-516 Written Comm. for Scien.....	3
ACCTG-231 Acctg. Bus Options.....	3
ASI-318 Fundamentals of Nutrition .....	3
BIOCH-265 Intro Org Biochem.....	5
or	
CHM-350/351 General Organic Chemistry w/lab .....	5

**SPECIALIZATION ELECTIVES****(Minimum 8 hours plus up to 6 hours free electives, or maximum 14 hours w/o free electives)**

<del>GENAG-390 Ag. Employment</del> .....	<del>1</del>
GRSC-720 Extrusion Proc. Fd & Fd Ind.....	4
GRSC-790 Grain Science Problems.....	2-3
AGEC-410 Ag Policy .....	3
AGEC-515 Ag-bus. Marketing.....	3
ECON-631 Princ. Trans.....	3
AGEC-632 Ag-bus. Logistics.....	3
ASI-320 Princ. Feeding.....	3
ACCTG-241 Acctg. Invest.&Finance.....	3
ACCTG-331 Acctg. Proc & Controls.....	3
FINAC-450 Intro to Finance.....	3
MANGT-390 Business Law I.....	3
MANGT-420 Manag. Concepts.....	3
MANGT-530 Ind & Labor Relations .....	3
MANGT-531 Pers & Hum Res Mgt.....	3
MANGT-630 Labor Rel Law.....	3
IMSE-501 Industrial Management.....	3
ASI-500 Genetics.....	3
BIOL-455 Gen Microbiology (w/ lab).....	4
BIOCH-521 General Biochemistry.....	3
<del>BIOCH-522 General Biochemistry. Lab</del> .....	<del>2</del>

**SPECIALIZATION ELECTIVES ( 18 Hours )**

GRSC-720 Extrusion Proc. Fd & Fd Ind.....	4
<u>GRSC-785 Advanced Flour &amp; Feed Tech .....</u>	<u>3</u>
GRSC-790 Grain Science Problems.....	2-3
AGEC-410 Ag Policy .....	3
AGEC-515 Ag-bus. Marketing.....	3
ECON-631 Princ. Trans.....	3
AGEC-632 Ag-bus. Logistics.....	3
ASI-320 Princ. Feeding.....	3
ACCTG-241 Acctg. Invest.&Finance.....	3
ACCTG-331 Acctg. Proc & Controls.....	3
FINAC-450 Intro to Finance.....	3
MANGT-390 Business Law I.....	3
MANGT-420 Manag. Concepts.....	3
MANGT-530 Ind & Labor Relations .....	3
MANGT-531 Pers & Hum Res Mgt.....	3
MANGT-630 Labor Rel Law.....	3
IMSE-501 Industrial Management.....	3
ASI-500 Genetics.....	3
BIOL-455 Gen Microbiology (w/ lab).....	4
BIOCH-521 General Biochemistry.....	3

**Feed Science and Management – Biofuels Production Option**

Current: (2005)

1<sup>st</sup> Semester

GENAG-101 Ag Orientation .....	1
GRSC-101 Intro to Grain Soc. ....	3
CHEM-210 Chemistry I.....	4
ENGL-100 Expository Writing.....	3
<del>MATH-100 College Algebra .....</del>	<del>3</del>
Total	14

2<sup>nd</sup> Semester

CHM-230 Chemistry II.....	4
BIOL-198 Princ. of Biology.....	4
<del>MATH-150 Plane Trigonometry.....</del>	<del>3</del>
SPCH-105 Public Speaking 1A.....	2
Soc.Sci./Hum Electives.....	3
Total	16

1<sup>st</sup> Semester

ENGL-200 Expository Writing II.....	3
<del>AGEC-120 Ag. Econ &amp; Ag. Bus.....</del>	<del>3</del>
Soc. Sci./Hum Elective .....	3
Required Courses.....	6
Total	15

2<sup>nd</sup> Semester

GRSC-110 Flow Sheets .....	2
<del>ECON-110 Macroeconomics.....</del>	<del>3</del>
Required Courses. ....	6
Soc.Sci./Hum Electives.....	6
Total	17

Proposed: (Biofuels Production option)

FRESHMAN

1<sup>st</sup> Semester

GENAG-101 Ag Orientation .....	1
GRSC-101 Intro to Grain Sci.....	3
CHEM-210 Chemistry I.....	4
ENGL-100 Expository Writing.....	3
<u>MATH-205 Gen. Calc. &amp; Lin. Algebra .....</u>	<u>3</u>
Total	14

2<sup>nd</sup> Semester

CHM-230 Chemistry II.....	4
BIOL-198 Princ. of Biology.....	4
<u>AGEC-120 Ag. Econ. &amp; Ag. Bus.....</u>	<u>3</u>
SPCH-105 Public Speaking 1A.....	2
Soc.Sci./Hum Electives.....	3
Total	16

SOPHOMORE

1<sup>st</sup> Semester

ENGL-200 Expository Writing II.....	3
<u>ECON-110 Macroeconomics.....</u>	<u>3</u>
Soc. Sci./Hum Elective .....	3
Required Courses.....	6
Total	15

2<sup>nd</sup> Semester

GRSC-110 Flow Sheets .....	2
<u>PHYS-113 General Physics I.....</u>	<u>4</u>
Required Courses. ....	8
Soc.Sci./Hum Electives.....	3
Total	17

1 <sup>st</sup> Semester	
GRSC-661 Qual. of Food & Feed Ingrid.....	3
<del>GRSC-405 Analytical Techniques .....</del>	<del>2</del>
Required Courses.....	9
Total	14

2 <sup>nd</sup> Semester	
<del>GRSC-651 Fd &amp; FD Prod Protectio.....</del>	<del>4</del>
GRSC-510 Feed Technology I .....	4
Required Courses.....	9
Total	17

1 <sup>st</sup> Semester	
GRSC-591 Comm. Feed & Food Mfg. Intern.....	2
GRSC-750 Feed Technology II.....	4
GRSC-655 Cereal Food Plant Design/Const.....	3
Required Courses.....	6
Total	15

2 <sup>nd</sup> Semester	
GRSC-610 Elec. & Cont. Mill. Proc.....	3
GRSC-630 Mgmt Applications.....	3
Required Courses.....	12
Total	18

Total Hours for Graduation 126

#### REQUIRED COURSES

AGEC-220 Grain & Livestock Mktg Systems.....	3
AGEC-420 Comm Futures Marketing.....	3
<del>Math-205 Gen Calc &amp; Lin Algebra .....</del>	<del>3</del>
<del>PHYS-113 Gen Physics I.....</del>	<del>4</del>
<del>PHYS-114 Gen Physics II.....</del>	<del>4</del>
STAT-325 Introduction to Statistics.....	3
<del>Intro to PC Course .....</del>	<del>3</del>
ENGL-516 Written Comm. for Scien.....	3
ACCTG-231 Acctg. Bus Options.....	3
ASI-318 Fundamentals of Nutrition .....	3
BIOCH-265 Intro Org Biochem.....	5
or	
<del>CHM-350/351 General Organic Chemistry w/lab .....</del>	<del>5</del>

#### SPECIALIZATION ELECTIVES

(Minimum 8 hours plus up to 6 hours free electives,  
or maximum 14 hours w/o free electives)

<del>GENAG-390 Ag. Employment.....</del>	<del>1</del>
GRSC-720 Extrusion Proc. Fd & Fd Ind.....	4
GRSC-790 Grain Science Problems.....	2-3
AGEC-410 Ag Policy .....	3
AGEC-515 Ag-bus. Marketing.....	3
ECON-631 Princ. Trans.....	3

#### JUNIOR

1 <sup>st</sup> Semester	
GRSC-661 Qual. of Food & Feed Ingrid.....	3
<u>PHYS-114 General Physics II .....</u>	<u>4</u>
Required Courses.....	6
<u>Free Elective .....</u>	<u>3</u>
Total	16

2 <sup>nd</sup> Semester	
<u>GRSC-405 Analytical Techniques .....</u>	<u>2</u>
GRSC-510 Feed Technology I .....	4
Required Courses.....	3
Free Elective.....	3
<u>Specialization Electives .....</u>	<u>3</u>
Total	15

#### SENIOR

1 <sup>st</sup> Semester	
GRSC-591 Comm. Feed & Food Mfg. Intern.....	2
GRSC-750 Feed Technology II.....	4
GRSC-655 Cereal Food Plant Design/Const.....	3
Required Courses .....	6
Total	15

2 <sup>nd</sup> Semester	
GRSC-610 Elec. & Cont. Mill. Proc.....	3
GRSC-630 Mgmt Applications.....	3
<u>GRSC-651 Fd &amp; FD Prod Protection .....</u>	<u>4</u>
Required Courses .....	6
Total	16

Total Hours for Graduation 124

#### REQUIRED COURSES (35 hours )

AGEC-420 Comm Futures Marketing.....	3
STAT-325 Introduction to Statistics.....	3
ENGL-516 Written Comm. for Scien.....	3
ACCTG-231 Acctg. Bus Options.....	3
ASI-318 Fundamentals of Nutrition .....	3
BIOCH-265 Intro Org Biochem.....	5
<u>ATM-545 Production &amp; Storage of Grains.....</u>	<u>3</u>
<u>BIOL-455 General Microbiology (w/lab) .....</u>	<u>4</u>
<u>GRSC-540 Eng Apps. Grain/Food Products .....</u>	<u>3</u>
<u>GRSC-541 Eng Apps. Grain/Food Products Lab.....</u>	<u>1</u>
<u>GRSC-745 Fundamentals of Bioprocessing .....</u>	<u>4</u>

#### SPECIALIZATION ELECTIVES ( 3 Hours )

GRSC-720 Extrusion Proc. Fd & Fd Ind.....	4
<u>GRSC-785 Advanced Flour &amp; Feed Tech .....</u>	<u>3</u>
GRSC-790 Grain Science Problems.....	2-3
AGEC-410 Ag Policy .....	3
AGEC-515 Ag-bus. Marketing.....	3
ECON-631 Princ. Trans.....	3

AGEC-632 Ag-bus. Logistics.....	3	AGEC-632 Ag-bus. Logistics.....	3
ASI-320 Princ. Feeding.....	3	ASI-320 Princ. Feeding.....	3
ACCTG-241 Acctg. Invest.&Finance.....	3	ACCTG-241 Acctg. Invest.&Finance.....	3
ACCTG-331 Acctg. Proc & Controls.....	3	ACCTG-331 Acctg. Proc & Controls.....	3
FINAC-450 Intro to Finance.....	3	FINAC-450 Intro to Finance.....	3
MANGT-390 Business Law I.....	3	MANGT-390 Business Law I.....	3
MANGT-420 Manag. Concepts.....	3	MANGT-420 Manag. Concepts.....	3
MANGT-530 Ind & Labor Relations .....	3	MANGT-530 Ind & Labor Relations .....	3
MANGT-531 Pers & Hum Res Mgt.....	3	MANGT-531 Pers & Hum Res Mgt.....	3
MANGT-630 Labor Rel Law.....	3	MANGT-630 Labor Rel Law.....	3
IMSE-501 Industrial Management.....	3	IMSE-501 Industrial Management.....	3
ASI-500 Genetics.....	3	ASI-500 Genetics.....	3
<del>BIOL 455 Gen Microbiology (w/ lab).....</del>	<del>4</del>		
BIOCH-521 General Biochemistry.....	3	BIOCH-521 General Biochemistry.....	3
<del>BIOCH 522 General Biochemistry Lab.....</del>	<del>2</del>		

Horticulture, Forestry and Recreation Resources**Current****Horticulture Major  
Landscape Design Specialization**

<b>Quantitative sciences</b>	<b>18</b>
CHM 110 General Chemistry	3
CHM 111 General Chemistry Lab	1
<del>BIOCH 265 Intro to Organic Chem &amp; Biochem</del>	<del>5</del>
MATH 100 College Algebra	3
Math/physics elective	3
Statistics elective	3

**Proposed****Horticulture Major  
Landscape Design Specialization**

<b>Quantitative sciences</b>	<b><u>16</u></b>
CHM 110 General Chemistry	3
CHM 111 General Chemistry Lab	1
MATH 100 College Algebra	3
Math/physics elective	3
Statistics elective	3
<u>Surveying electives</u>	<u>3</u>

**RATIONALE:** An error was made in preparing materials for College of Agriculture Course and Curriculum Committee's consideration Fall, 2007. Inadvertently BIOCH 265 was added as a requirement and Surveying elective was dropped. These changes applied to most of the other options in horticulture but never should have been included for the Landscape Design Specialization. We are simply correcting this error.

**IMPACT:** None outside the department

**EFFECTIVE DATE:** Fall 2008

Plant Pathology

ADD: Applied Genomics and Biotechnology Minor

K-State's minor in Applied Genomics and Biotechnology was developed to enhance the career options for students in animal and plant sciences. Upon completion of the minor, students will be more competitive to enter the workforce in the genomics and biotechnology area as well as be more prepared to continue on in a graduate research program.

Graduates of the program will have a broad knowledge of the application of biotechnology (e.g. techniques, ethics, potential risk, and intellectual property rights), genomics, and bioinformatics to plant and animal improvement. Students will be exposed to techniques such as molecular cloning, PCR, genetic and disease diagnostics, as well as, bioinformatics analyses of genomic data, including sequence alignment, retrieval of data from public databases, DNA marker diversity and inheritance studies, genome mapping, and gene expression.

The minor requires a total of 17-21 semester hours. To pursue the Applied Genomics and Biotechnology minor the student must file a letter of intent with the program coordinator prior to taking the last 3 courses. The undergraduate research project or internship must be pre-approved by the minor coordinator and students must enroll in PLPTH 614, PLPTH 599 or equivalent to present a final report.

17-21 hrs required:

BIOCH 521 General Biochemistry	3
ASI 500 Genetics	3
or	
BIOL 450 Modern Genetics	4
PLPTH 610/AGRON610 Biotechnology	3
PLPTH 611 Agricultural Biotechnology Laboratory	2
or	
BIOL 676 Molecular Genetics Lab	3
PLPTH 612 Genomics Applications	3
PLPTH 613 Bioinformatics Applications	2
PLPTH 599 Undergraduate research in Plant Pathology or equivalent	1-3
or	
PLPTH 614 Internship or equivalent	1-3

RATIONALE: The Applied Genomics and Biotechnology minor will enhance student employment options by providing current technical knowledge and laboratory experience for specific techniques used in agriculture biotechnology.

IMPACT: Departments of Agronomy, Animal Science, Biology, Biochemistry, CIS, Entomology, Human Nutrition, Horticulture, and Grain Science have agreed.

EFFECTIVE DATE: Fall 2008

**UNIVERSITY GENERAL EDUCATION PROPOSAL**  
**Small Business Operations**  
**AGEC 202**

**Effective Date: Fall 2008**

**1. GENERAL INTRODUCTION**

Small Business Operations is a freshman/sophomore-level course for a broad group of students. The course structure includes lecture, class discussion, weekly quizzes, two tests, four writing assignments, a final and a term paper. The course is designed for non-majors who benefit from being exposed to the broader concepts and underlying principles of planning, organizing, marketing, managing, financing, controlling, and operating a business.

**2. FOUR UGE CRITERIA FOR APPROVAL**

**A. Designed with Non-majors in Mind**

Small Business Operations is designed for non-agricultural economics majors. Although the examples are mostly agriculturally based, the concepts are broad and the students are exposed to the underlying principles of planning, organization, marketing, financing and operating a business. These concepts are important in our ever widening global economy.

**B. Active Learning**

Two major activities of AGECE 202 include: (1) weekly in-class and online quizzes that require supplying current financial and managerial information from commercial sources, and (2) a written business plan in which each student provides a detailed analysis and proposal of a specific plan for a business that they would start and operate. The plan includes the business structure, accounting, finance, management, marketing and human resource aspect of operating their business. The plan also requires assumptions about the future general economic conditions under which the business will operate.

**C. An Experiential Context for the Matter to be Studied**

The topics covered in AGECE 202 include many ideas and experiences of concern to the students in the class. Students express their experiences with small and large business organizations and discuss the positive and negative aspects of such organizations. The function of business and its interaction with the community, social responsibility and the profit motive in an increasingly complex international economy are discussed.

## **D. Foster Connections**

The primary goal of AGECE 202 is for students to achieve an understanding of how basic economic and financial systems work and to avoid the commitment of fragments of knowledge to memory. Students are encouraged to understand the current economic environment and to know much more than facts and memorized data. The entrepreneurial spirit, profit motive and business itself are analyzed. Rather than have students simply commit fragments of knowledge to memory, they learn broader concepts and underlying principles of economics and finance to enable them to apply their knowledge to their daily lives. The ultimate objective is for students to be able to conceptualize economic and financial models and use economic analysis. To have students acquire the financial decision-making skills that will allow them to identify the alternatives and weigh the benefits and costs of these decisions and action is the purpose of this course.

### **3. EXPECTATIONS FOR STUDENT LEARNING**

The student's grasp of the ultimate objectives – to be able to conceptualize economic models and use economic analysis will be evaluated throughout the term of the course. There will be regular measurements in terms of quizzes and tests. The class discussion and the term paper will challenge the students to delve into concepts covered during the course and to develop their research and critical analysis skills.

### **4. ADDITIONAL INFORMATION**

This course provides an introduction to economic and financial principles. I have taught this course five times. The students are a very diverse group,

The defense against business demagogues is the understanding of and commitment to the principles of private enterprise. These are abstract principles that are difficult to understand, apply or to commit to. It is my role as professor to teach them the tools that they need to overcome the difficulty of seeing the invisible hand at work.

For example, in order to understand the current economic environment, students need to know much more than facts and memorized data. They need to see that the corporate organization, the profit motive and business itself are being blamed for social problems that have nothing to do with business per se. In this environment, there is a very real danger that demagogues, while reviling the rich, will loot the private wealth that is the seed money of society's workings. The defense against demagogues is the understanding of and commitment to the principles of private enterprise. These are abstract principles that are difficult to understand, commit to and apply. It is my role as professor to give students the tools they need to overcome the difficulty of seeing the "invisible hand" underlying our economic system.

It is also important, I believe, for students to leave my courses with an appreciation of the mission of business and the benefits of corporate structure and individual equity ownership. To gain that appreciation, I provide opportunities for verbal and written communication and for team projects that enable students to work in group collaboration with members from other colleges and disciplines. This gives them the opportunity to experience more real world situations. Because of

the years I spent working in corporate America and on Wall Street, I maximize the relevance of my classes by integrating practical applications into the classroom experience.

My mission in teaching is to have students understand and apply financial principles—to show students the invisible hand at work. To achieve this level of thinking, I recognize that my students have diverse learning styles. As such, I employ a variety of teaching strategies that involve active participation to engage students in understanding current economic problems. My ultimate goal is to assist students to increase their knowledge, identify resources, collect data and evaluate economic situations. To me, this is what teaching agricultural economics is all about. This is what will propel students to assume their position in our complex society.