

GRADUATE and/or UNDERGRADUATE

Course and Curriculum Changes

approved by the

College of Agriculture Faculty

on

October 8, 2007 at 3:30 p.m. in Weber 123

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

Agricultural Economics
Agronomy
Architectural Engineering and Construction Sciences
Biochemistry
Chemistry
College of Architecture, Planning and Design
Communications
Entomology
Management
Marketing
Mathematics
Mechanical and Nuclear Engineering
Plant Pathology
School of Journalism and Mass Communications
Statistics

Course and Curriculum Proposals
College of Agriculture
Fall 2007
Course Proposals

Agricultural Communications and Journalism

~~ADD: AGCOM 450. Digital Video Storytelling. (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 instructor permission.~~

~~RATIONALE: Digital media convergence is expecting communication graduates to have a wide variety of story telling skills, ranging from writing, to producing and editing videos. Traditional print publications are reaching new audiences by developing written stories that are then converged into multiple mediums for web and DVD distribution. Students with a largely print background, will learn how to be effective video storytellers and learn video camera and editing skills to make them more marketable. The course has been successfully offered under AGCOM 420, Topics in Agricultural Communications.~~

~~IMPACT: No impact on other departments. However, the JMC Department has been informed of the proposal.~~

~~EFFECTIVE DATE: Spring 2008--This course proposal will be resubmitted at a later time.~~

~~ADD: AGCOM 500. Web 2.0 & The Diffusion of Innovation. (3) I. This hands-on class focuses on the exploration of emerging “new media” technologies such as Web 2.0, blogging, podcasting/videocasting, RSS Feeds, mobile (hand-held) devices, as well as simple HTML/XML web page design, and the concepts of social networking. Students will begin with an exploration of underlying human communication theory as well as Rogers’ 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 instructor permission.~~

~~RATIONALE: Communications firms expect graduates to supply a variety of skills related to conventional and innovative communications tools. Communication, agribusiness, and other employers that hire our graduates are using various “new media” techniques to effectively market their products and programs to customers. This course will increase the marketability of our graduates. The course has been successfully offered under AGCOM 420, Topics in Agricultural Communications.~~

~~IMPACT: No impact on other departments. However, the JMC Department has been informed of the proposal.~~

~~EFFECTIVE DATE: Fall 2008 This course will be resubmitted at a later time.~~

~~ADD: AGCOM 600. Crisis Communication. (3)H. This hands-on class focuses on the application of effective crisis communication practices and techniques. Students will begin with an exploration of relevant interpersonal and organizational communication theory, learn to assess/evaluate organizational risks, and learn to develop a crisis communication plan. The students will then partner with a local community business to conduct the risk assessment and create and deliver a crisis communication plan to that business as the final project. Three hours lec. a week. Pr.: MC 200, or junior or senior standing, or instructor permission.~~

~~RATIONALE: During events of heightened stress on organizational goal attainment, poor communication can escalate a manageable incident into an out of control crisis. There is an increasing need for graduates to experience the application of effective communication practices and techniques. Industry employers, such as communication firms or corporate agribusinesses, 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 our graduates with a competitive advantage in the marketplace. This course has been successfully offered under AGCOM 420, Topics in Agricultural Communications.~~

~~IMPACT: No impact on other departments. However, the JMC Department has been informed of the proposal.~~

~~EFFECTIVE DATE: Spring 2008 This course will be resubmitted at a later time.~~

FROM: AGCOM 810. Agriscience Communication. (3)I. Written, visual, and oral communications for scientists. Attention is focused on literature reviews, scientific papers, graphics, poster presentations, and oral paper presentations. Grant applications, ethics, and communications with non-science audiences are discussed. Three hours lec. a week. Pr.: Graduate standing and instructor permission.

TO: AGCOM 810. Scientific Communication. (3) I. Written, visual, and oral communications for scientists. Attention is focused on literature reviews, scientific papers, graphics, poster presentations, and oral paper presentations. Grant applications, ethics, and communications with non-science audiences are discussed. Three hours lec. a week. Pr.: Graduate standing and instructor permission.

RATIONALE: The name change more accurately reflects the content of the course. Agriscience or science communication implies the communication of agriscience or science to the public. Scientific communications denotes the reporting of original research through journals, papers, and poster presentations.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2008

Animal Sciences and Industry

ADD: ASI 333. Equine Enterprise Management. (1) I. In odd years. Emphasis will be placed on management issues affecting the successful development and operation of an equine facility. Topics covered include health care, diet formulation, equipment needs, facility design and management, and equine business considerations. Two hours lab. a week. Pr.: Sophomore standing. Recommended pr.: ASI 107.

RATIONALE Equine Enterprise Management was taught as a one credit hour special problems course during the fall of 2003 and 2005. Creation of a new course focused specifically on topics related to developing, owning, and managing a horse operation will supplement material currently covered in existing equine courses and provide instruction on specific topics not being taught at this time.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2009

FROM: ASI 395. Meat Grading, Specifications, and Evaluation. (2) I. Advanced study in the evaluation of carcasses, wholesale cuts, and retail cuts of beef, lamb and pork. Application of grade standards and specifications to beef, lamb, and pork carcasses and subprimal cuts. Three hours lab a week. Pr.: ASI 370.

TO: ASI 495. Advanced Meat Evaluation. (2) I. Advanced study in the evaluation of carcasses, wholesale cuts, and retail cuts of beef, lamb and pork. Application of grade standards and specifications to beef, lamb, and pork carcasses and subprimal cuts. Three hours lab a week. Pr.: ASI 370.

RATIONALE: The title change is being requested to more accurately describe the content of the course as being a continuation of Principles of Meat Evaluation (ASI 370). Since the title is “Advanced Meat Evaluation” and the course enrollment is primarily juniors and seniors, the increase in course number is appropriate.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2008

ADD: ASI 602. Equine Breeding and Genetics. (2) I, in even years. Application of genetic and animal breeding principles to the horse. Emphasis on inheritance of color and diseases, as well as selection and mating programs. Two hours lec. a week. Rec Pr.: ASI 500 and ASI 510.

RATIONALE: This course expands on concepts from genetics and animal breeding by applying them directly to the horse industry. There is high student interest in equine science in general,

and this course is unique in its application of scientific principles to horse breeding. Few, if any, other schools offer an equine genetics or breeding course.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2008

FROM: ASI 777. Meat Technology (4) II. Meat composition, meat product safety and spoilage, quality assurance, meat processing techniques, sausage and formed products, color, packaging, plant planning and organization, field trip. Three hours lec. and three hours lab a week. Recommended pr.: ASI 350 and 361. Pr.: Senior or graduate standing.

TO: ASI 777. Meat Technology (3) II. Physical, chemical, and microbiological affects of processing technologies on meat products. Non-meat ingredient functionality, processing techniques, and quality parameters associated with processed meat manufacturing. Two hours lec. and three hours lab a week. Pr.: ASI 350; senior or graduate standing.

RATIONALE: Course content and instructor have changed. The three hour credit is more appropriate based on student contact hours.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Spring 2009

FROM: FDSCI 791. Advanced Application of HACCP Principles. (3) II. Evaluation of control parameters and methodology at critical control points, validating and auditing the effectiveness of critical control points, critical limits, monitoring tools, corrective action procedures, record keeping and verification procedures in addressing biological, chemical, and physical hazards that may be present in food products. Three hours lec. a week. Pr.: FDSCI 690. Recommended pr.: BIOL 455.

TO: FDSCI 791. Advanced Application of HACCP Principles. (3) II, in odd years. Evaluation of control parameters and methodology at critical control points, validating and auditing the effectiveness of critical control points, critical limits, monitoring tools, corrective action procedures, record keeping and verification procedures in addressing biological, chemical, and physical hazards that may be present in food products. Three hours lec. a week. Pr.: FDSCI 690. Recommended pr.: BIOL 455.

RATIONALE: Changing FDSCI 791 to being taught in odd years only, allows the course to meet sufficient enrollment. Currently the course is having to be cancelled every other year due to insufficient enrollment.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Spring 2009

Entomology

ADD: ENTOM 589. Turfgrass Insects and Their Management. (1) I. Biology, diagnosis and integrated management of turfgrass insect pests. Two hours lec. and two hours lab a week, for the last five weeks of the semester. Pr.: HORT 582 or concurrent enrollment and HORT 515 or concurrent enrollment. Same as HORT 589.

RATIONALE: Part of the reorganization of HORT 519, Turfgrass Pest Management, into one credit modules. This module will be taught by an Entomology faculty member.

IMPACT: This course will be cross-listed with Horticulture. Otherwise, there is no impact outside our department.

EFFECTIVE DATE: Fall 2008

Grain Science and Industry

ADD: GRSC 745. Fundamentals of Bioprocessing (3) II. This course is designed for students who desire a clear understanding of bioprocessing principles as applied to the emerging bio-based industry. This course covers the fundamentals of mass and energy balances, fluid dynamics, heat and mass transfer, as applied to bioprocessing. The microbial growth, kinetics and fermenter operation will be covered in detail. Fundamentals of downstream operations as applicable to bioprocessing will be covered in this course. Industrial bioprocessing case studies that involve the integration of the course contents will be discussed. Three hours lecture a week. Recommended Prerequisites: MATH 205 or 210, PHYS 113 or 115, BIOCH 265 or CHM 210

RATIONALE: As the world is gradually moving toward a bio-based economy, it is very pertinent to understand the principles of bioprocessing and its applications in various bioprocess industries, including biofuels and bioproducts. This course will introduce students to these principles, especially in the use for grains and related agricultural products. This course will also be needed by students wanting to work in the biofuels industries.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Spring 2008

Horticulture, Forestry and Recreation Resources

FROM: HORT 275. ~~Concepts of~~ Horticultural Design. (4) I. Introduction to the landscape design process including historical perspectives and contemporary issues; development of planning, graphical presentation and communication skills; and application of design principles to horticultural garden design. Two hours rec. and four hours studio per week.

TO: HORT 275. Horticultural Design I. (3) I. Introduction to the landscape design process

including historical perspectives and contemporary issues; development of planning, graphical presentation and communication skills; and application of design principles to horticultural garden design. Two hours rec. and two hours studio per week.

RATIONALE: As a preview and overview course to be taken by students during their first semester here, the current four studio hours is excessive and is becoming increasingly difficult for students to schedule without conflicts. It is the first of four design courses available to them and it is critical for them to take it as early as possible.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2008.

ADD: HORT 325. Introduction to Organic Farming. (2) I, in even years. This class will cover the history of organic farming principles, practices, and policies. USDA standards will be compared to similar standards in other countries, and to "green labels" that compete with organic products in the marketplace. Industry trends as well as the basics of how to certify farms and food processors will be included. One hour lec. and two hours lab a week.

RATIONALE: Organic is the fastest growing sector of the food economy. This class will provide K-State students an opportunity to learn practical information about certification, alternative labels, as well as production techniques and standards.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2008

ADD: HORT 360. Public Horticulture. (3) II. In-depth presentation and discussion of techniques and requirements for the management and administration of a public horticultural facility. Topics include oral and written presentation skills, proposal development, public relations, budgeting, fund-raising, dealing with governing boards, interpersonal relationships and managing horticultural operations. Three hours lec. a week.

RATIONALE: This course, which has been offered as a HORT 390 Horticulture Topics several times due to student interest, is part of the currently proposed Public Horticulture specialization. This course will provided students with a foundation of understanding of the public garden world and the application of horticultural principles in public horticulture.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Spring 2009

FROM: HORT 508. Landscape Maintenance. (3) I. Fundamentals of maintaining ornamental plants such as trees, shrubs, annual color, perennials, vines, and roses in residential,

commercial, and golf course landscapes. Two hours lec. and two hours lab a week. Recommended pr.: HORT 201 or BIOL 210; HORT 374 or 375 or FOR 330 or FOR 340; and AGRON 305.

TO: HORT 508. Landscape Maintenance. (2) I. Understanding and implementing the maintenance requirements of existing landscapes focusing on a holistic approach to cultural, environmental and human inputs. Students will learn how to analyze and assess landscape maintenance practices more effectively for the care of young trees, shrubs, annuals, and perennials. Two hours lec.. and two hours lab a week for the first 11 weeks of the semester. Recommended pr.: HORT 201, HORT 374 or 375 or FOR 330 or FOR 340; and AGRON 305.

RATIONALE: The course material previously taught will be reduced to eliminate overlap with the newly revised course; HORT 515 - Basic Turfgrass Culture.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2008

FROM: HORT 510. Horticultural Design. (3) II. Reinforcement of the horticultural design process as applied to the use of native and introduced plant materials. Emphasis on functional and aesthetic arrangement of plants in small-scale design to meet site design objectives and adaptation to microclimates. Students expected to develop site adapted plant palettes and graphic ability to present their design. Two three-hour studio periods per week. Pr.: HORT 275 and two plant materials courses.

TO: HORT 510. Horticultural Design II. (3) II. Reinforcement of the horticultural design process as applied to the use of native and introduced plant materials. Emphasis on functional and aesthetic arrangement of plants in small-scale design to meet site design objectives and adaptation to microclimates. Students expected to develop site adapted plant palettes and graphic ability to present their design. Two three-hour studio periods a week. Pr.: HORT 275 and two plant materials courses.

RATIONALE: Minor name change to better reflect course content and sequencing in the curriculum.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Spring 2009

FROM: HORT 515. Turf Management. (3) I. Turfgrass identification and adaptation; establishment and maintenance of lawn and recreational turf areas; turfgrass pests and their control. Two hours rec. and two hours lab each week. Recommended pr.: HORT 201 and AGRON 305.

TO: HORT 515. Basic Turfgrass Culture. (2) I, II. Turfgrass identification and adaptation; establishment and maintenance of turf for home lawns, parks, and

commercial/institutional grounds. Two hours rec. and two hours lab a week, for first 11 weeks of the semester. Recommended pr.: HORT 201 and AGRON 305.

RATIONALE: HORT 515 will be divided into a two-credit course (Basic Turfgrass Culture) and a new one-credit course (HORT 516 - Intensive Culture of Golf and Sports Turf) which will be offered sequentially during the semester. This change is primarily intended to give students outside the golf course management and landscape and turf management options more flexibility in including turfgrass instruction in their program of study.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2008

ADD: HORT 516. Intensive Culture of Golf and Sports Turf. (1) I,II. Advanced topics in golf and sports turf maintenance, focusing on practices unique to intensively used and managed turf. Two hours lec. and two hours lab a week, for the last five weeks of the semester. Pr.: HORT 515.

RATIONALE: HORT 515 will be divided into a two-credit course (HORT 515, Basic Turfgrass Culture) and this new one-credit course. Students in golf course management and landscape and turf management will take both HORT 515 and 516, but students in other options or majors may only need HORT 515.

IMPACT: No impact outside our department, other than making it easier for students in other departments to study turfgrass management as an elective. No other departments require these courses.

EFFECTIVE DATE: Fall 2008

FROM: HORT 517. Golf Course Operations. (3) II. ~~In odd years~~. Strategies involved in golf course operation, including development of cultural practices, adherence to environmental regulations, personnel management, and budgeting. Two hours lec. and two hours lab a week. Pr.: HORT 515.

TO: HORT 517. Golf Course and Sports Turf Operations. (3) II. Strategies involved in golf course and sports turf operation, including development of cultural practices, effective communication, personnel management, and budgeting. Two hours lec. and two hours lab a week. Recommended pr.: HORT 515.

RATIONALE: HORT 517 has been taught each spring for several years; hence, the removal of the odd years statement. There is a growing interest in sports turf management, and a new Sports Turf Operations Management option is being proposed by the Department of Horticulture, Forestry and Recreation Resources. HORT 517 is being modified to include students with interest in this area. Effective communication has been included in the course syllabus, and is now included in the description.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Spring 2009

DROP: HORT 519. Turfgrass Pest Management (3). I. Biology, diagnosis and integrated control of turfgrass diseases, insect pests, and weeds. Two hours lecture and two hours laboratory per week. Pr: HORT 515 and one of the following: AGRON 330, ENTOM 320, or PLPTH 500.

RATIONALE: Reorganizing HORT 519, Turfgrass Pest Management, into one credit modules will give students more flexibility in including turfgrass pest management instruction in their program of study.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2008

FROM: HORT 551. Landscape Contracting and Construction. (3) II. The use, interpretation, and development of planting plans (including contracting, construction, and specifications) as applied to landscape horticulture. Two hours rec. and two hours lab a week. Recommended pr.: HORT 275.

TO: HORT 551. The Business of Landscape Contracting. (1) II. The study of contracts and specifications, and the bidding and estimating processes as applied to landscape contracting. Two hours rec. a week, for the first seven weeks of the semester. Recommended pr.: HORT 275.

RATIONALE: Much of this information is taught in the lecture portion of the existing course. The intent of this change is to separate these management activities from the lab. The construction lab portion would become a new, extended-period lab course that would facilitate more outdoor hands-on value by occurring later in the spring semester.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Spring 2009

ADD: HORT 552. Horticultural Landscape Construction. (1) II. The interpretation and implementation of small-scale landscape construction (hardscape) projects. Three hours lab a week, for the last 11 weeks of the semester. Recommended pr.: HORT 275.

RATIONALE: This course will provide students experiential learning in landscape construction. Delaying the start until later in the spring will likely facilitate more outdoor hands-on projects such as paver installation, retaining wall and other hardscape features construction.

IMPACT: No impact on other departments.

DATE EFFECTIVE: Spring 2009

FROM: HORT 555. Landscape Irrigation: Design and Contracting. (3) II. This course is intended for students with limited starting knowledge of irrigation design and contracting with the goal of stimulating further interest in these areas. Major topics: design techniques and drawing presentation; plans and specifications; basic hydraulics; estimating and bidding; and the principles of good business practices. Two hours lec. and two hours lab per week. Pr.: HORT 550 or two years of irrigation experience related field work approved by the instructor.

TO: HORT 555. The Fundamentals of Landscape Irrigation Design. (2). II. The goal of this course is to learn landscape irrigation design for efficient use of our water resources. This course will discuss basic hydraulics, sprinkler performance, plot plans, sprinkler layout, pipe sizing and zoning, and electrical considerations of the design process. Two hours lec. and two hours lab a week, for the last 11 weeks of the semester. Pr.: HORT 550 or two years of irrigation experience related field work approved by the instructor.

RATIONALE: The revised course will focus solely on the fundamentals of irrigation design while business practices, contracting, bidding and estimating will be discussed in HORT 551 - The Business of Landscape Contracting.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Spring 2009

FROM HORT 582. Horticultural Pest Management. (3) II. Strategies involved in horticultural pest management including types, calibration and operation of application equipment, pesticides, legal and safety issues, and non-pesticide control methods. Two hours lec. and three hours lab a week. Recommended pr.: HORT 201 ~~or BIOL 210, MATH 100~~, and an entomology, plant pathology, or weed science course.

TO: HORT 582. Foundations of Horticultural Pest Management. (1) I. Pesticide use and handling, horticultural pesticides and their characteristics, integrated pest management approaches, and pesticide applicator certification. Two hours lec. and two hours lab a week, for the first five weeks of the semester. Recommended pr.: HORT 201 and an entomology, plant pathology, or weed science course.

RATIONALE: The name change is reflective of the intent of the course. The HFRR pest management courses (HORT 582 and HORT 519, Turfgrass Pest Management, which is also currently a 3 cr. course) will be organized into five 1-credit modules. The revised HORT 582 will serve as the entry point and will be a required prerequisite for the other four courses.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2008

ADD: 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 lec. and two hours lab a week, for the middle five weeks of the semester. Pr: HORT 582. Same as PLPTH 583.

RATIONALE: This course 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.

IMPACT: This course will be cross-listed with plant pathology. Otherwise, there is no impact outside our department.

EFFECTIVE DATE: Fall 2008

ADD: HORT 587. Turfgrass Diseases and Their Management. (1) I. Biology, diagnosis and integrated management of turfgrass diseases. Emphasis is on diseases of intensively maintained turfgrass. Two hours lec. and two hours lab a week, for the first five weeks of the semester. Pr.: HORT 582 or concurrent enrollment and HORT 515 or concurrent enrollment. Same as PLPTH 587.

RATIONALE: Reorganizing HORT 519, Turfgrass Pest Management, into one credit modules will give students more flexibility in including turfgrass pest management instruction in their program of study.

IMPACT: This course will be cross-listed with plant pathology. Otherwise, there is no impact outside our department.

EFFECTIVE DATE: Fall 2008

ADD: HORT 588. Turfgrass Weeds and Their Management. (1) I. Biology, diagnosis and integrated management of turfgrass weeds. Two hours lec. and two hours lab a week, for the middle five weeks of the semester. Pr.: HORT 582 or concurrent enrollment and HORT 515 or concurrent enrollment.

RATIONALE: Reorganizing HORT 519, Turfgrass Pest Management, into one credit modules will give students more flexibility in including turfgrass pest management instruction in their program of study.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2008

ADD: HORT 589. Turfgrass Insects and Their Management. (1) I. Biology, diagnosis and integrated management of turfgrass insect pests. Two hours lec. and two hours lab a week, for the last five weeks of the semester. Pr.: HORT 582 or concurrent enrollment and HORT 515 or concurrent enrollment. Same as ENTOM 589.

RATIONALE: Reorganizing HORT 519, Turfgrass Pest Management, into one credit modules will give students more flexibility in including turfgrass pest management instruction in their program of study.

IMPACT: This course will be cross-listed with Entomology. Otherwise, there is no impact outside our department.

EFFECTIVE DATE: Fall 2008

ADD: HORT 600. Herbaceous Landscape Plant Production. (2) II. The principles and commercial practices for producing annual and herbaceous perennial landscape plants from seed and cuttings. Analysis of crop production costs will be emphasized. One hour lec. and three hours lab a week. Recommended pr.: HORT 350 and 570.

RATIONALE: HORT 625 was a 4-credit course that is being divided into two 2-credit courses (HORT 600 and HORT 625) to package course content in units that are of interest to students in different specializations and are easier for a greater number of students to fit into their curriculum.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Spring 2009

FROM: HORT 625. Floral Crops Production and Handling. (4) II. The principles and commercial practices for producing floral crops emphasizing the physical responses of plants to their environment. Aspects of postharvest physiology are also covered. Three hours lec. and three hours lab a week. ~~One Saturday field trip will be taken.~~ Recommended pr.: BIOL 500, HORT 350 and 570.

TO: HORT 625. Floral Crops Production and Handling. (2) II. The principles and commercial practices for producing floral potted crops and cut flowers crops emphasizing the physical responses of plants to their environment. Aspects of postharvest physiology will be covered. One hour lec. and three hours lab a week. Pr.: HORT 201. Recommended pr.: BIOL 500, HORT 350 and 570.

RATIONALE: HORT 625 was a 4-credit course that is being divided into two 2-credit courses (HORT 600 and HORT 625) to package course content in units that are of interest to students in different specializations and are easier for a greater number of students to fit into their curriculum.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Spring 2009

FROM: HORT 775. Plant Nutrition and Nutrient Management (3) II, in even years. Focuses on the macro and micro nutrient elements and their function in the growth and development of plants. Emphasis will be placed on the roles of single elements, interactions/balances

between elements, and nutrient deficiency/toxicity symptoms as they affect the physiology of the whole plant and management of nutrient applications. The relationships between crop nutrition and production and environmental considerations (yield, drought, temperature, pests) will be explored. ~~This course will utilize instructional technologies which may include electronic chat rooms, satellite video, compressed video, and other technologies.~~ Two hours lec. and two hours discussion a week. Pr.: AGRON 305 and BIOL 500.

TO: HORT 815. Plant Nutrition and Nutrient Management (3) II, in even years. Focuses on the macro and micro nutrient elements and their function in the growth and development of plants. Emphasis will be placed on the roles of single elements, interactions/balances between elements, and nutrient deficiency/toxicity symptoms as they affect the physiology of the whole plant and management of nutrient applications. The relationships between crop nutrition and production and environmental considerations (yield, drought, temperature, pests) will be explored. Three hours lec. a week. Pr.: AGRON 305 and BIOL 500.

RATIONALE: HORT 775 has evolved into an upper-level graduate-level course that is co-instructed via synchronous distance technologies with faculty from the University of Nebraska–Lincoln. In 4 offerings, only two undergraduates from K-State have enrolled. Therefore, a change of course number is sought to reflect its rigor and appropriateness for upper-level graduate students. The rubric number 815 was chosen so that it 1) coincides with the offering at the University of Nebraska, 2) can be considered for cross-listing with K-State’s Department of Agronomy, and 3) will meet Ph.D. student course requirements.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Spring 2009

Plant Pathology

FROM: PLPTH 575. ~~Special~~ Topics in Plant Pathology. (Var.) I, II, S. Discussions and lectures on important areas and contributions in the field of plant pathology. Pr.: Consent of instructor.

TO: PLPTH 575. Topics in Plant Pathology. (Var.) I, II, S. Discussions and lectures on important areas and contributions in the field of plant pathology. Pr.: Consent of instructor.

RATIONALE A title change for PLPTH 575 is needed to provide consistent sequencing among plant pathology topics courses. PLPTH 575 and PLPTH 920 will serve as graded topics courses in plant pathology while PLPTH 576 and PLPTH 921 will serve as credit/no credit topics courses in plant pathology. These companion topics course will increase the flexibility of faculty course offerings within the same semester.

PLPTH 575 Topics in Plant Pathology (Graded)

PLPTH 576 Special Topics in Plant Pathology (Credit/No Credit)
PLPTH 920 Topics in Plant Pathology (Graded)
PLPTH 921 Special Topics in Plant Pathology (Credit/No Credit)

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2008

ADD: PLPTH 576. Special Topics in Plant Pathology. (Var.) I, II, S. Discussions and lectures on important areas and contributions in the field of plant pathology. Credit/No Credit. Pr.: Consent of instructor.

RATIONALE: PLPTH 576 Topics in Plant Pathology will be a companion class to PLPTH 575 Special Topics in Plant Pathology. PLPTH 575 will be offered as a graded course in any given semester and PLPTH 576 will be used as a credit/no credit course. These companion topics courses will increase the flexibility of faculty course offerings within the same semester.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2008

ADD: 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 lec. and two hours lab a week, for the middle five weeks of the semester. Pr: HORT 582. Same as HORT 583.

RATIONALE: Cross listing with HORT 583, Survey of Horticultural Ornamental and Food Crop Pests. This course 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.

IMPACT: With the cross-listing, Plant Pathology and Horticulture are in agreement on this course offering.

EFFECTIVE DATE: Fall 2008

ADD: PLPTH 587. Turfgrass Diseases and Their Management. (1) I. Biology, diagnosis and integrated management of turfgrass diseases. Emphasis is on diseases of intensively maintained turfgrass. Two hours lec. and two hours lab a week, for the first five weeks of the semester. Pr.: HORT 582 or concurrent enrollment and HORT 515 or concurrent enrollment. Same as HORT 587.

RATIONALE: Cross listing with HORT 587, Turfgrass Diseases and Their Management. Reorganizing HORT 519, Turfgrass Pest Management, into one credit modules will give students more flexibility in including turfgrass pest management instruction in their program of study.

IMPACT: With the cross-listing, Plant Pathology and Horticulture are in agreement on this course offering.

EFFECTIVE DATE: Fall 2008

ADD: PLPTH 837 Plant-Virus-Vector Interactions. (2) I, in even years. A study of modes of virus transmission, important arthropod vectors, plant responses to viruses and insects, and current literature and techniques. Two hours lec. a week. Pr.: one of the following: BIOCH 521, BIOCH 522, ENTOM 830, ENTOM 875, or PLPTH 500.

RATIONALE: Arthropod vectors play an essential role in dissemination of viruses; more than 70% of plant-infecting viruses are transmitted from one host to another by arthropod vectors. This course will give students from plant pathology, entomology, and other disciplines the opportunity to learn about the molecular and ecological interactions between viruses and their arthropod vectors. At this time, there are no virus-vector courses offered at KSU.

Currently, there is a Plant Virology course offered through the Dept. of Plant Pathology. This course covers the basics of this discipline and only two lectures are devoted to vector interactions. An independent course focusing on virus-vector interactions is necessary due the importance of vectors and the complexities of virus-vector interactions.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2008

ADD: PLPTH 921. Special Topics in Plant Pathology. (Var.) I, II, S. Discussions and lectures on important areas and contributions in the field of plant pathology. Credit/No Credit. Pr.: Consent of instructor.

RATIONALE: PLPTH 921 Special Topics in Plant Pathology will be a companion class to PLPTH 920 Topics in Plant Pathology. PLPTH 920 will be offered as a graded course in any given semester and PLPTH 921 will be used as a credit/no credit course. These companion topics courses will increase the flexibility of faculty course offerings within the same semester.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2008

ADD: PLPTH 922. Teaching Practicum in Plant Pathology. 1-2. I, II, S. Practical training in teaching courses offered in the Department of Plant Pathology. Most students will serve as Teaching Assistants. Pr: Consent of instructor.

RATIONALE: There are no Teaching Assistants in the Department of Plant Pathology; most students are on appointments as Research Assistants. However, graduate students can greatly benefit from formal teaching experience and training. In the past, students who desired

to serve as TA's signed up for credit in PLPTH 750 Problems in Plant Pathology or PLPTH 920 Topics in Plant Pathology. The Department would like to have a formal course for students to get credit for serving as a Teaching Assistant. This would also free up the above courses for more traditional problems- and topics-type courses.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2008

Curriculum Proposals
Fall 2007

Animal Sciences and Industry

Business Option

FROM: **BUSINESS & ECONOMICS**
 (Required)

ACCTG 231 Accounting Business Operations
ACCTG 241 Accounting Investments & Finance

Select 6 Courses

Agricultural Economics - Any course numbered 202 or higher except 490
Accounting – Any course
Family Studies – FSHS 105
Finance – Any course
Management – Any course
Marketing – Any course

TO: **BUSINESS & ECONOMICS**
 (Required)

ACCTG 231 Accounting Business Operations
ACCTG 241 Accounting Investments & Finance

Select 6 Courses

Agricultural Economics - Any course numbered 202 or higher except 490
Accounting – Any course
Economics – Any course 500-level and above
Family Studies – FSHS 105
Finance – Any course
Management – Any course
Marketing – Any course

RATIONALE: 500-level economics courses are worthwhile choices for the “Business and Economics” section.

IMPACT: We do not anticipate a significant impact on the Economics Department.

EFFECTIVE DATE: Fall 2008

Science/Pre-Vet Option

FROM: **Physics/Math/Statistics Requirement**

(Minimum 6 hours)

Select From:

PHYS 113, 114

MATH 205, 210, 211, 220, 221, 222

STAT 325, 340, 350, 351

TO: **Physics/Math/Statistics Requirement**

(Minimum 6 hours)

Select From:

PHYS 113, 114

MATH 100, 205, 210, 211, 220, 221, 222

STAT 325, 340, 350, 351

RATIONALE: Science/Pre-Vet Option students who choose to complete the Science/Pre-Vet option, but are not planning on going to Vet School would be allowed to use *MATH 100, College Algebra*, to meet the 6 hours of math requirements of the option. All of our other options require *MATH 100*, but also require only 3 additional hours of Math/Statistics/Computers.

IMPACT: No impact on other departments

EFFECTIVE DATE: Fall 2008

Bioscience/Biotechnology, Business, Communications, Production/Management, and Science/Pre-Vet Options

FROM: Currently we allow students majoring in Animal Sciences and Industry within the Bioscience/Biotechnology, Business, Communications, Production/Management, and Science/Pre-Vet Options to have the option of taking *FDSCI 302, Introduction to Food Science*, as one of their Ag elective courses outside of Animal Science.

TO: We are proposing that the same set of students have the option of also taking *FDSCI 305, Fundamentals of Food Processing*, or *FDSCI 690, Principles of HACCP* as one of their Ag elective courses.

RATIONALE: Courses in this area are intended to provide breadth to a student's curriculum. We currently allow only *FDSCI 302* to meet this requirement. *FDSCI 305* and *FDSCI 690* would be equally beneficial to our students.

IMPACT: We anticipate this will have little impact on the Food Science and Industry program.

EFFECTIVE DATE: Fall 2008

Production/Management Option

FROM: BUSINESS & ECONOMICS

(Required)

ACCTG 231 Accounting Business Operations
ACCTG 241 Accounting Investments & Finance
OR

AGEC 308 Farm and Ranch Management

Select 4 Courses

Agricultural Economics - Any course numbered 202 or higher except 490

Accounting – Any course

Family Studies – FSHS 105

Finance – Any course

Management – Any course

Marketing – Any course

ANIMAL SCIENCE

(Required)

ASI 105 Animal Science Lab 1

ASI 106 Dairy/Poultry Lab 1

ASI 318 Fundamentals of Nutrition 3

ASI 320 Principles of Feeding 3

ASI 400 Farm Animal Repro 4

ASI 510 Animal Breeding Principles 3

ASI 580 Senior Seminar 1

Select 1 Course

ASI 350 Meat Science 3

ASI 361 Meat Animal Processing 2

ASI 601 Phys of Lactation 3

Select 1 Course

ASI 315 Livestock & Meat Eval 3

ASI 405 Fund Milk Processing 3

ASI 640 Poultry Product Tech 3

FDSCI 607 Food Microbiology 4

Select 3 Courses

ASI 515 Beef Science 3

ASI 521 Horse Science 3

ASI 524 Sheep Science 3

ASI 535 Swine Science 3

ASI 621 Dairy Science 3

ASI 645 Poultry Management 3

ASI 655 Behavior of Domestic Anmls 3

TO: BUSINESS & ECONOMICS

(Required)

ACCTG 231 Accounting Business Operations

ACCTG 241 Accounting Investments & Finance

OR

AGEC 308 Farm and Ranch Management

Select 4 Courses

- Agricultural Economics - Any course numbered 202 or higher except 490
- Accounting – Any course
- Economics – Any course 500-level and above
- Family Studies – FSHS 105
- Finance – Any course
- Management – Any course
- Marketing – Any course

ANIMAL SCIENCE

(Required)

ASI 105	Animal Science Lab	1
ASI 106	Dairy/Poultry Lab	1
ASI 318	Fundamentals of Nutrition	3
ASI 320	Principles of Feeding	3
ASI 400	Farm Animal Repro	4
ASI 510	Animal Breeding Principles	3
ASI 580	Senior Seminar	1

Select 1 Course

ASI 350	Meat Science	3
ASI 361	Meat Animal Processing	2
ASI 601	Phys of Lactation	3

Select 1 Course

ASI 315	Livestock & Meat Eval	3
ASI 405	Fund Milk Processing	3
ASI 640	Poultry Product Tech	3
FDSCI 607	Food Microbiology	4

Select 3 Courses

ASI 515	Beef Science	3	
ASI 521	Horse Science		3
ASI 524	Sheep Science	3	
ASI 535	Swine Science	3	
ASI 621	Dairy Science	3	
ASI 645	Poultry Management	3	

Only one of the courses below can be used to fulfill the above requirement

<u>ASI 520</u>	<u>Comp/Lab Anml Mngt</u>	<u>3</u>	
<u>ASI 655</u>	<u>Behavior of Domestic Anmls</u>	<u>3</u>	

RATIONALE: Several of our students change options from the Science/Pre-Vet option to the Production/Management option after their first three years. Most of these students have taken ASI 520, Companion and Lab Animal Management. They would like to use it in this option. This change would require these students to take at least two of our production courses. 500-level economics courses are worthwhile choices for the “Business and Economics” section

IMPACT: We do not anticipate a significant impact on the Economics Department.

EFFECTIVE DATE: Fall 2008

Grain Science and Industry

Baking Science and Management - Cereal Chemistry Option

FROM:

Required courses:

CHM 210 Chemistry I	4 hrs
and	
CHM 230 Chemistry II	4 hrs
or	
CHEM 220 Chem Prin I	5 hrs
and	
CHEM 250 Chem Prin II	5 hrs
GRSC 101 Intro to GRSC	3 hrs
STAT 320 Elem of Statistics	3 hrs
or	
STAT 340 Biometrics I	3 hrs
BIOCH 521 General Biochemistry	3 hrs
or	
BIOCH 265 Biochemistry	5 hrs
FDSCI 501 Food Chemistry	3 hrs
or	
FDSCI 305 Fund Food Processing	3 hrs
ATM 540 Food Engin Tech	3 hrs
ASI 318 Fund of Nutrition	3 hrs
or	
HN 132 Basic Nutrition	3 hrs
or	
HN 400 Human Nutrition	3 hrs
GRSC 630 Mgmt. Apps	3 hrs

Free Electives 8 hrs
Total hours required 128 hrs

TO:

Required courses:

CHM 210 Chemistry I	4 hrs
and	
CHM 230 Chemistry II	4 hrs
<u>GRSC 150 Prin. of Milling</u>	<u>3 hrs</u>
<u>STAT 325 Statistics</u>	<u>3 hrs</u>
BIOCH 521 General Biochemistry	3 hrs
and	
<u>BIOCH 522 General Biochem Lab</u>	<u>2 hrs</u>
FDSCI 501 Food Chemistry	3 hrs
<u>GRSC 540 Eng. Apps in Food</u>	<u>3 hrs</u>
<u>GRSC 541 Eng. Apps in Food Lab</u>	<u>1 hrs</u>

HN 132 Basic Nutrition 3 hrs

Add new category:

Specialization Electives (select 4 hours)

<u>GRSC 610 Elec./Grain Proc</u>	<u>3 hrs</u>
<u>GRSC 500 Milling Science I</u>	<u>4 hrs</u>
<u>GRSC 745 Fund. Bioprocessing</u>	<u>3 hrs</u>
<u>GRSC 720 Extrusion Proc. Fd. & Fd.</u>	<u>4 hrs</u>
<u>EDLST 212 Intro to Lead concepts</u>	<u>3 hrs</u>
<u>FDSCI 690 HACCP</u>	<u>2 hrs</u>
<u>GRSC 712 Vib. Spect. Anal</u>	<u>1 hrs</u>
<u>GRSC 713 Cont. Chromotographic Anal.</u>	<u>1 hrs</u>

Free Electives 6 hrs
Total hours required 128 hrs

RATIONALE: The above changes are being made to allow students in the Cereal Chemistry option as much flexibility as possible to prepare for careers in the baking of food industries while still gaining a foundation of the newer technologies prevalent in the industry.

CHM 220/250 are being dropped as an alternates and CHM 210/230 will be used for this option.

GRSC 150 will replace GRSC 101 for this option. GRSC150 is more appropriate for students in this option.

GRSC 630 Management Applications will be dropped to make room for addition hours of specialization electives.

ATM 540 is no longer offered and will be replaced with GRSC540. GRSC 541 will be added.

BIOCH 265 is being dropped as an alternate and BIOCH 521 and BIOCH 522 will be required for this option.

ASI 318 and HN 132 are being dropped as alternates and HN400 will be required for this option.

For Cereal Chemistry majors the suggested and Specialization electives are more clearly defined and their scope has been broadened to introduce students to additional, most current topics in the Grain industry.

IMPACT: No major impact outside of department.

EFFECTIVE DATE: Fall 2008

Baking Science and Management - Production Management Option

FROM:

Required courses:

MATH 220 An Geom Calculus I	4 hrs
BIOCH 265 Int. Organic and Biol Chem	5 hrs
or	
CHM 350 and BIOCH 521	5 hrs
ME 212 Engr Graphics	2 hrs
PHYS 113 Eng Phys I	4 hrs
and	
PHYS 114 Eng Phys II	4 hrs
or	
PHYS 213 Eng Phys I	4 hrs
and	
PHYS 214 Eng Phys II	4 hrs
ASI 318 Fund of Nutrition	3 hrs
or	
HN 132 Basic Nutrition	3 hrs
or	
HN 400 Human Nutrition	3 hrs
STAT 320 Elem of Statistics	3 hrs
or	
STAT 340 Biometrics I	3 hrs
FDSCI 501 Food Chemistry	3 hrs
or	
FDSCI 305 Fund Food Processing	3 hrs
ATM 540 Food Engin Tech	3 hrs

Select 9 hours from the following:

ACCTG 241 Acctg Investment Finance	3 hrs
ACCTG 331 Acctg Processes and Controls	3 hrs
ECON 530 Money and Banking	3 hrs
FINAN 450 Principles of Finance	3 hrs
FINAN 470 Fin Analysis and Valuation	3 hrs
IMSE 501 Industrial Management	3 hrs
MANGT 300 Intro to TQM	3 hrs
MANGT 530 Industrial & Labor Relations	3 hrs
MANGT 531 Pers. & Human Res. Mgmt.	3 hrs
or	
ECON 523 Human Resource Economics	3 hrs
MKTG 400 Marketing	3 hrs
MKTG 542 Prof Selling and Sales Mangt	3 hrs

TO:

Required courses:

<u>MATH 205 Gen. Calc and Lin. Alg.</u>	<u>3 hrs</u>
BIOCH 265 Int. Organic and Biol Chem	5 hrs
<u>GRSC 110 Flow Sheets</u>	<u>2 hrs</u>
<u>GRSC 150 Principle of Milling</u>	<u>3 hrs</u>
PHYS 113 Eng Phys I	4 hrs
and	
PHYS 114 Eng Phys II	4 hrs
HN 132 Basic Nutrition	3 hrs
<u>STAT 325 Statistics</u>	<u>3 hrs</u>
FDSCI 501 Food Chemistry	3 hrs
<u>GRSC 540 Eng. Apps in Food</u>	<u>3 hrs</u>
<u>GRSC 541 Eng. Apps in Food Lab</u>	<u>1 hrs</u>
<u>Business Electives (select 9 hours)</u>	
ACCTG 241 Acctg Investment Finance	3 hrs
ACCTG 331 Acctg Processes and Controls	3 hrs
<u>AGEC 500 Production Economics</u>	<u>3 hrs</u>
<u>AGEC 515 Food & Agri. Bus. Mktg.</u>	<u>3 hrs</u>
FINAN 450 Principles of Finance	3 hrs
IMSE 501 Industrial Management	3 hrs
MANGT 300 Intro to TQM	3 hrs
MANGT 530 Industrial & Labor Relations	3 hrs
MKTG 400 Marketing	3 hrs
MKTG 542 Prof Selling and Sales Mangt	3 hrs

Add new category:	
<u>Specialization Electives (select 3 hours)</u>	
<u>GRSC 610 Elec./Grain Proc</u>	<u>3 hrs</u>
<u>GRSC 500 Milling Science I</u>	<u>4 hrs</u>
<u>GRSC 745 Fund. Bioprocessing</u>	<u>3 hrs</u>
<u>GRSC 720 Extrusion Proc. Fd. & Fd.</u>	<u>4 hrs</u>
<u>EDLST 212 Intro to Lead concepts</u>	<u>3 hrs</u>
<u>FDSCI 690 HACCP</u>	<u>2 hrs</u>
<u>GRSC 712 Vib. Spect. Anal</u>	<u>1 hrs</u>
<u>GRSC 713 Cont. Chromotographic Anal.</u>	<u>1 hrs</u>

Free Electives	9 hrs	Free Electives	<u>8 hrs</u>
Total hours required	128 hrs	Total hours required	128 hrs

RATIONALE: The above changes are being made to allow students as much flexibility as possible while still integrating courses covering the newest technologies in the food industry. Total number of hours required for graduation has not changed; however 3 hours of specialization electives have been added and total hours of free electives has been reduced from **25 to 17.**

GRSC 150, Principles of Milling will provide production managers and baking professionals a more through understanding of the flour and the milling process.

CHM 350 and BIOCH 521 are being dropped as an alternates and BIOCH 265 will be required for this option.

ME 212 will be replaced with GRSC 110, Flow Sheets. GRSC 110 will be more applicable for later GRSC senior level courses and for use in the bakery production layout and design areas.

MATH 210 and alternate MATH 220 will be replaced with MATH 205 General Calculus and Linear Algebra. MATH 205 uses an algebra approach more appropriate for students in this option.

ATM 540 is no longer offered and will be replaced with GRSC540. GRSC 541 will be added.

EDLST 212 Introduction to Leadership Concepts will be added as a Specialization Elective choice in response to our industry's repeated requests that BSM students would benefit from additional leadership education.

For all BSM majors the suggested Specialization Electives are more clearly defined and their scope has been broadened to introduce students to additional, most current topics in the Grain industry.

IMPACT: Letters have been written to the departments of Mechanical Engineering and Mathematics advising them of the courses being dropped and added.

EFFECTIVE DATE: Fall 2008

Feed Science and Management

FROM:

Required courses:

~~AGEC 220 Grain Livestock Mktg Systems~~ 3 hrs
~~CIS 101-104 (or equivalent PC Course)~~ 3 hrs
~~MATH 100 College Algebra~~ 3 hrs
~~MATH 150 Trigonometry~~ 3 hrs
MATH 205 Gen. Calc and Lin. Alg. 3 hrs

Specialization Electives 8 hrs

Total hours required 126 hrs

TO:

Required courses:

MATH 205 Gen. Calc and Lin. Alg. 3 hrs

Specialization Electives 18 hrs

Add to list: GRSC 745 Fund Bioprocessing 3 hrs

Total hours required 124 hrs

RATIONALE:

The above changes are being made to allow students as much flexibility as possible in the program to prepare for careers in the feed and allied industries, but also having the background for careers in plant management and operations in the biofuels and related industries. Students will still be able to complete the Pre-Vet Professional Requirements to apply for veterinary medicine if they desire.

Many of the students entering the program have already completed enough math to begin with MATH 205 which is a higher level course that remains in the degree program. Additionally, most students come into the program with the necessary computer skills and do not need a PC course.

Currently all students in the program are required to take both AGEC 220 and AGEC 420 which have some similar areas of content. Only one of these classes is needed for the Feed Science students.

The new GRSC 745 course will allow our students the opportunity to add knowledge and skills beneficial to understanding the production of biofuels and their related co-products.

IMPACT:

Letters have been written to the affected departments outside of Grain Science advising them of the courses being dropped and added.

EFFECTIVE DATE: Fall 2008

Milling Science and Management - Management Option

FROM:

Required courses:

~~MATH 220 Anal. Geom. & Calc. I~~ ~~4 hrs~~
~~3 hrs~~

~~BIOCH 265 Intro to Organic Biochemistry~~ ~~5 hrs~~

~~SPCH 311 Bus & Prof. Speaking~~ ~~3 hrs~~

Select 9 hours from the following:

ACCTG 331 Acttg Proc. & Cont. 4 hrs

AGEC 513 Ag Finance 3 hrs

AGEC 515 Food & Agri. Bus. Mktg. 3 hrs

AGEC 632 Agri. Bus. Logistics 3 hrs

~~GENAG 390 Ag Employment~~ ~~1 hrs~~

ENGL 516 Writ. Comm. For the Sciences 3 hrs

MANGT 390 Bus. Law I 3 hrs

MANGT 420 Mgmt. Conc. 3 hrs

MANGT 530 Ind. Labor Relations 3 hrs

MANGT 531 Pers. & Human Res. Mgmt. 3 hrs

~~MANGT 630 Labor Relations Law~~ ~~3 hrs~~

Free Electives 6 hrs

Total hours required ~~129~~ hrs

TO:

Required courses:

MATH 205 Gen. Calc. and Lin. Alg.

CHM 350 Gen. Organic Chemistry 3 hrs

CHM 351 Gen. Organic Chemistry Lab 2 hrs

GRSC 731 Milling Science II Lab 2 hrs

GRSC 610 Elec/Grain Proc. Ind. 3 hrs

Specialization Electives (select 11 hours)

ACCTG 331 Acttg Proc. & Cont. 4 hrs

AGEC 513 Ag Finance 3 hrs

AGEC 515 Food & Agri. Bus. Mktg. 3 hrs

AGEC 632 Agri. Bus. Logistics 3 hrs

ENGL 516 Writ. Comm. For the Sciences 3 hrs

MANGT 390 Bus. Law I 3 hrs

MANGT 420 Mgmt. Conc. 3 hrs

MANGT 530 Ind. Labor Relations 3 hrs

MANGT 531 Pers. & Human Res. Mgmt. 3 hrs

SPCH 311 Bus & Prof. Speaking 3 hrs

GRSC 720 Extrusion Proc. in the Fd & Fd. 4 hrs

GRSC 745 Fund. of Bioprocessing 3 hrs

GRSC 712 Vibrational Spect. Analysis 1 hrs

GRSC 713 Cont. Chromotographic Anal. 1 hrs

Free Electives 3 hrs

Total hours required 128 hrs

RATIONALE:

MATH 220, will be replaced with MATH 205, General Calculus and Linear Algebra. MATH 205 has an algebra approach more appropriate for students in this option.

milling

Replace BIOCH 265 with CHM 350 and CHM 351. This will upgrade the level of organic chemistry to better prepare students for chemistry related functions in the process.

GRSC 731 Milling Science II Lab (2) will be required for all milling science graduates. It will allow students to apply principles taught in GRSC 730 to increase technical understanding and meet expectations of industry.

Require all milling science graduates take GRSC 610 Elec/Grain Proc. Ind. Understanding of electrical principles and management is important in both options to safely manage and direct an electrically powered operation system.

Create new common specialization electives category for all options, including the previous elective choices for the management option plus selected grain science courses. With addition of GRSC 720 Extrusion and GRSC 745 Fundamentals of Bioprocessing, these changes strengthen the MSM degree program.

IMPACT: Letters have been written to the affected departments outside of Grain Science advising them of the courses being dropped and added.

EFFECTIVE DATE: Fall 2008

Milling Science and Management - Operations Option

FROM:
Required courses:

~~CE 231 Statics A 3 hrs~~
~~ENVD 205 Graphics I 2 hrs~~
~~ATM 540 Food Engin Tech 3 hrs~~
~~BIOCH 265 Intro to Organic Biochemistry 5 hrs~~

TO:
Required courses:

GRSC 540 Eng. Apps in Food 3 hrs
GRSC 541 Eng. Apps in Food Lab 1 hrs
CHM 350 Gen. Organic Chemistry 3 hrs
CHM 351 Gen. Organic Chemistry Lab 2 hrs
GRSC 625 Flour and Dough Testing 3 hrs

Add new category:

Specialization Electives (select 7 hours)

ACCTG 331 Acttg Proc. & Cont. 4 hrs
 AGECE 513 Ag Finance 3 hrs
 AGECE 515 Food & Agri. Bus. Mktg. 3 hrs
 AGECE 632 Agri. Bus. Logistics 3 hrs
 ENGL 516 Writ. Comm. For the Sciences 3 hrs
 MANGT 390 Bus. Law I 3 hrs
 MANGT 420 Mgmt. Conc. 3 hrs
 MANGT 530 Ind. Labor Relations 3 hrs
 MANGT 531 Pers. & Human Res. Mgmt. 3 hrs
 SPCH 311 Bus & Prof. Speaking 3 hrs
 GRSC 720 Extrusion Proc. in the Fd & Fd. 4 hrs
 GRSC 745 Fund. of Bioprocessing 3 hrs
 GRSC 712 Vibrational Spect. Analysis 1 hrs
 GRSC 713 Cont. Chromotographic Anal 1 hrs

Free Electives 9 hrs
 Total hours required 129 hrs

Free Electives 3 hrs
 Total hours required 128 hrs

RATIONALE: CNS 231 Statics A and ENVD 205 Graphics I are no longer considered as essential in the skill set for the operations students in the milling science program.

ATM 540 is no longer offered and will be replaced with GRSC540. GRSC 541 will be

added.

Replace BIOCH 265 with CHM 350 and CHM 351. This will upgrade the level of organic chemistry to better prepare students for chemistry related functions in the milling process.

Create new common specialization electives category for all options, including the previous elective choices for the management option plus selected grain science courses. With addition of GRSC 720 Extrusion and GRSC 745 Fundamentals of Bioprocessing, these changes strengthen the MSM degree program.

IMPACT: Letters have been written to the affected departments outside of Grain Science advising them of the courses being dropped and added.

EFFECTIVE DATE: Fall 2008

Milling Science and Management - Chemistry Option

FROM:

Required courses:

CHM 371 Chemical Analysis	4 hrs
CHM 551 Organic Chem II Lab	2 hrs

TO:

Required courses:

<u>CHM 350 Gen. Organic Chemistry</u>	<u>3 hrs</u>
<u>CHM 351 Gen. Organic Chemistry Lab</u>	<u>2 hrs</u>
<u>GRSC 610 Elec/Grain Proc. Ind.</u>	<u>3 hrs</u>
<u>GRSC 630 Mgmt. App. Gr. Proc. Ind.</u>	<u>3 hrs</u>
<u>GRSC 730 Milling Science II</u>	<u>2 hrs</u>
<u>GRSC 731 Milling Science II Lab</u>	<u>2 hrs</u>

Add new category:

Specialization Electives (select 3 hours)

ACCTG 331 Acttg Proc. & Cont.	4 hrs
AGEC 513 Ag Finance	3 hrs
AGEC 515 Food & Agri. Bus. Mktg.	3 hrs
AGEC 632 Agri. Bus. Logistics	3 hrs
ENGL 516 Writ. Comm. For the Sciences	3 hrs
MANGT 390 Bus. Law I	3 hrs
MANGT 420 Mgmt. Conc.	3 hrs
MANGT 530 Ind. Labor Relations	3 hrs
MANGT 531 Pers. & Human Res. Mgmt.	3 hrs
SPCH 311 Bus & Prof. Speaking	3 hrs
GRSC 720 Extrusion Proc. in the Fd & Fd.	4 hrs
GRSC 745 Fund. of Bioprocessing	3 hrs
GRSC 712 Vibrational Spect. Analysis	1 hrs
GRSC 713 Cont. Chromotographic Anal	1 hrs

Free Electives	13-14 hrs
Total hours required	129 hrs

Free Electives	<u>3 hrs</u>
Total hours required	<u>128</u> hrs

RATIONALE:

Chemistry requirements are changed to be consistent with the other two options in the major. All students will now take CHM 350 and 351 as part of the core requirements.

Create new common specialization electives category for all options, including the previous elective choices for the management option plus selected grain science courses. With addition of GRSC 720 Extrusion and GRSC 745 Fundamentals of Bioprocessing, these changes strengthen the MSM degree program.

IMPACT:

Letters have been written to the affected departments outside of Grain Science advising them of the courses being dropped and added.

EFFECTIVE DATE: Fall 2008

Horticulture, Forestry and Recreation Resources

FROM: Horticulture Major with Options in:
Fruit/Vegetable Production
~~Greenhouse Management~~
~~Nursery Management~~
Landscape Design
Landscape and Turf Management
Horticultural Therapy
Golf Course Management
Horticulture Science

TO: Horticulture Major with Options in:
Fruit/Vegetable Production
Greenhouse and Nursery Management
Landscape Design
Landscape Management
Horticultural Therapy
Golf Course Management
Horticulture Science
Sports Turf Management
Public Horticulture

RATIONALE: Option name changes more accurately reflect the curriculum. Combining the nursery management and greenhouse management options recognizes the considerable overlap that currently exists and recognizes the fact we can serve our students better within the context of one specialization. Renaming the landscape and turf management option reflects associated changes in the curriculum which will increase focus on landscaping, and the development of the new option in sports turf management with greater focus on turf management. Two new options in sports turf management and public horticulture reflect both changing demands of the horticultural industry for graduates and changing interests of students. Additional more specific rationale statements follow the detailed curriculum changes outlined on the following pages.

IMPACT: All impacted units have been contacted.

EFFECTIVE DATE: Fall 2008.

CURRENT**Horticulture Major**

Specializations in fruit/vegetable production, greenhouse management, nursery management, landscape design, and landscape and turf management

Quantitative sciences 16-18

~~CHM 210 Chemistry 1-4~~
~~Organic chemistry elective 3-5~~

MATH 100 College Algebra 3
 Math/physics/~~comp science~~ elective 3
 Statistics elective 3

Horticulture requirement 14-18

HORT 350 Plant Propagation 3
 HORT 520 Fruit Production 3

Or

HORT 560 Vegetable Crop Production 3
 HORT 190 Pre-Internship in Horticulture 1
 HORT 590 Horticulture Internship 2 or 5
~~Pest Management elective 2-3~~

Environmental science elective 3

Fruit/vegetable specialization 27

AGRON 330 Weed Science 3
~~ENTOM 612 Insect Pest Diagnosis 2~~

Or

~~ENTOM 620 Insecticides: Properties & Laws 2~~
 HORT 376 Herbaceous Ornamental Plants 3
 HORT 560 Vegetable Crop Production 3
 HORT 570 Greenhouse Operations Mgmt 3
~~HORT 575 Nursery/Garden Cntr. Operations 3~~

Specialization electives from list below (10 cr)

AGRON 375 Soil Fertility 3
 HORT 210 Concepts of Floral Design 3
 HORT 275 Concepts of Horticulture Design 3
 HORT 374 Woody Plant Materials I 3
~~HORT 375 Woody Plant Materials II 3~~

HORT 508 Landscape Maintenance 3
 HORT 515 Turf Management 3

HORT 585 Arboriculture 3
~~HORT 706 Turfgrass Science 3~~
~~HORT 775 Plant Nutrition Mgmt. 3~~

Free Electives 4-12

PROPOSED**Horticulture Major**

Specializations in fruit/vegetable production, greenhouse and nursery management (combined with new name), landscape design, and landscape management (new name)

Quantitative sciences 15

CHM 110 General Chemistry 3
CHM 111 General Chemistry Lab 1
BIOCH 265 Intro to Organic Chem & Biochem 5

MATH 100 College Algebra 3
Math/physics elective 3
 Statistics elective 3

Horticulture requirement 12-15

HORT 350 Plant Propagation 3
 HORT 520 Fruit Production 3

Or

HORT 560 Vegetable Crop Prod 3
 HORT 190 Pre-Internship in Horticulture 1
 HORT 590 Horticulture Internship 2 or 5

HORT 599 The Horticultural Professional 0
 Environmental science elective 3

Fruit/vegetable specialization 28

AGRON 330 Weed Science 3
HORT 325 Intro to Organic Farming 2

HORT 376 Herbaceous Ornamental Plants 3

HORT 560 Vegetable Crop Prod 3

HORT 570 Greenhouse Operations Mgmt 3

HORT 582 Foundations of Hort Pest Mgt 1

HORT 583 Survey of Horticultural Ornamental and Food Crop Pests 1

HORT 600 Herbaceous Landscape Plant Prod 2

Specialization electives from list below (10 cr)

AGRON 375 Soil Fertility 3
 HORT 210 Concepts of Floral Design 3
 HORT 275 Horticultural Design I 3
 HORT 374 Woody Plant Materials I 3

OR

HORT 375 Woody Plant Materials II 3

HORT 508 Landscape Maintenance 2

HORT 515 Basic Turfgrass Culture 2

HORT 550 Landscape Irrigation Systems 3

HORT 575 Nursery/Garden Cntr. Operations 3

HORT 585 Arboriculture 3

HORT 625 Floral Crops Prod & Handling 2

Free Electives 6-11

<i>Greenhouse management specialization</i>	28-29
HORT 376	Herbaceous Ornamental Plants 3
HORT 377	Plants in the Inter. Environment 3
HORT 570	Greenhouse Operations Mgmt 3
HORT 575	Nursery/Garden Cntr. Operations 3
HORT 625	Floral Crops Prod & Handling 4
Specialization electives: Choose 4 (12-13 crs)	
AGRON 330	Weed Science 3
HORT 210	Concepts of Floral Design 3
HORT 275	Concepts of Horticulture Design 3
HORT 374	Woody Plant Materials I 3
HORT 375	Woody Plant Materials II 3
HORT 508	Landscape Maintenance 3
HORT 515	Turf Management 3
HORT 585	Arboriculture 3
HORT 775	Plant Nutrition/Nutrient Mgmt 3

<i>Nursery management specialization</i>	27-28
AGRON 330	Weed Science 3
HORT 374	Woody Plant Materials I 3
HORT 375	Woody Plant Materials II 3
HORT 570	Greenhouse Operations Mgmt 3
HORT 575	Nursery/Garden Cntr. Operations 3
Specialization electives: Choose 4 (12-13 cr)	
HORT 275	Concepts of Horticulture Design 3
HORT 376	Herbaceous Ornamental Plants 3
HORT 508	Landscape Maintenance 3
HORT 515	Turf Management 3
HORT 550	Landscape Irrigation Systems 3
HORT 585	Arboriculture 3
HORT 625	Floral Crops Prod & Handling 4
HORT 775	Plant Nutrition/Nutrient Mgmt 3

<i>Greenhouse and Nursery Management specialization</i>	32
HORT 570	Greenhouse Operations Mgmt 3
HORT 575	Nursery/Garden Cntr Ops 3
HORT 582	Foundations of Hort Pest Mgt 1
HORT 583	Survey of Horticultural Ornamental and Food Crop Pests 1
HORT 600	Herbaceous Landscape Plant Prod 2
HORT 625	Floral Crops Prod and Handling 2
Specialization electives from list below (9 cr)	
HORT 374	Woody Plant Materials I 3
HORT 375	Woody Plant Materials II 3
HORT 376	Herbaceous Ornamental Plants 3
HORT 377	Plants Interior Environment 3
Specialization electives from list below (11 cr)	
AGRON 330	Weed Science 3
HORT 210	Concepts Floral Design 3
HORT 275	Horticultural Design I 3
HORT 508	Landscape Maintenance 2
HORT 515	Basic Turfgrass Culture 2
HORT 595	Landscape Irrigation Systems 3
HORT 585	Arboriculture 3
<u>Any other Horticulture course</u>	

<i>Landscape design specialization</i>	31
HORT 275 Concepts of Horticulture Design	4
HORT 374 Woody Plant Materials I	3
HORT 375 Woody Plant Materials II	3
HORT 376 Herbaceous Ornamental Plants	3
HORT 508 Landscape Maintenance	3
HORT 510 Horticulture Design	3
HORT 551 Landscape Contracts & Constr	3

Design elective ----- 3

Specialization electives from list below (6 cr)

HORT 515 Turf Management	3
HORT 545 Computer Applications in Design	3
HORT 580 Advanced Horticulture Design	3
HORT 585 Arboriculture	3

Free Electives 5-12

Landscape and turf management specialization .. **27**

AGRON 375 Soil Fertility	3
Or	
HORT 706 Turfgrass Science	3
HORT 374 Woody Plant Materials I	3
HORT 375 Woody Plant Materials II	3
HORT 376 Herbaceous Ornamental Plants	3
HORT 508 Landscape Maintenance	3
HORT 515 Turf Management	3

HORT 551 Landscape Contracts & Constr 3

HORT 585 Arboriculture 3

Specialization elective ----- 3

Free Electives 4-12

<i>Landscape design specialization</i>	29
HORT 275 <u>Horticultural Design I</u>	<u>3</u>
HORT 374 Woody Plant Materials I	3
HORT 375 Woody Plant Materials II	3
HORT 376 Herbaceous Ornamental Plants	3
HORT 508 Landscape Maintenance	<u>2</u>
HORT 510 <u>Horticultural Design II</u>	<u>2</u>
HORT 551 <u>The Business of Landscape Contracting</u>	<u>1</u>

HORT 552 Horticultural Landscape Constr 1

HORT 515 Basic Turfgrass Culture 2

HORT 582 Foundations of Hort Pest Mgt 1

Pest management elective from list below (2 cr)

HORT 583 Survey of Horticultural Ornamental and Food Crop Pests 1

HORT 587 Turfgrass Diseases & Mgt 1

HORT 588 Turfgrass Weeds & Mgt 1

HORT 589 Turfgrass Insects & Mgt 1

Specialization electives from list below (6 cr)

HORT 545 Computer Applications in Design	3
<u>HORT 550 Landscape Irrigation Systems</u>	<u>3</u>
<u>HORT 555 Fund of Landscape Irrig Design</u>	<u>2</u>
HORT 580 Advanced Horticulture Design	3
HORT 585 Arboriculture	3
<u>HORT 600 Herbaceous Landscape Plant Prod</u>	<u>2</u>

Free Electives 7-14

Landscape management specialization

AGRON 375 Soil Fertility	3
Or	
HORT 706 Turfgrass Science	3
HORT 374 Woody Plant Materials I	3
HORT 375 Woody Plant Materials II	3
HORT 376 Herbaceous Ornamental Plants	3
HORT 508 Landscape Maintenance	<u>2</u>
HORT 515 <u>Basic Turfgrass Culture</u>	<u>2</u>
<u>HORT 550 Landscape Irrigation Systems</u>	<u>3</u>
<u>HORT 551 The Business of Landscape Contr</u>	<u>1</u>
<u>HORT 552 Horticultural Landscape Constr</u>	<u>1</u>
<u>HORT 582 Foundations of Hort Pest Mgt</u>	<u>1</u>
HORT 585 Arboriculture	3

HORT 551 The Business of Landscape Contr 1

HORT 552 Horticultural Landscape Constr 1

HORT 582 Foundations of Hort Pest Mgt 1

HORT 585 Arboriculture 3

Pest management elective from list below (2 cr)

HORT 583 Survey of Horticultural Ornamental and Food Crop Pests 1

HORT 587 Turfgrass Diseases & Mgt 1

HORT 588 Turfgrass Weeds & Mgt 1

HORT 589 Turfgrass Insects & Mgt 1

Free Electives 7-12

Horticultural Therapy specialization		
Math/chemical science		10
CHM 210	Chemistry	4
MATH 100	College Algebra	3
STAT 320	Elements of Statistics	3
Or		
STAT 330	Elementary Statistics for Social Sciences	3

Horticulture requirement			23
HORT 190	Pre-Internship in Horticulture	1	
HORT 201	Principles of Horticulture Science	4	
HORT 350	Plant Propagation	3	
HORT 520	Fruit Production	3	
Or			
HORT 560	Vegetable Crop Production	3	

Horticulture electives 12

Horticultural Therapy specialization			28
HORT 235	Intro to the Horticultural Therapy Profession	3	
HORT 256	Human Dimensions of Hort.	3	
HORT 374	Woody Plant Materials I	3	
HORT 376	Herbaceous Ornamental Plants	3	
HORT 377	Plants of the Interior Environmnt.	3	
HORT 525	Horticulture for Special Pop.	3	
HORT 530	Horticultural Therapy Case Mgmt	1	
HORT 535	Horticultural Therapy Field Tech	3	
HORT 540	Horticultural Therapy Field Exp	3	
HORT 570	Greenhouse Operations Mgmt	3	

Human science and service requirements			13
PHIL 365	Medical Ethics	3	
PSYCH 505	Abnormal Psychology	3	
PSYCH 520	Life Span Personality Dev	3	
SOCIO 520	Methods of Social Research	4	

Professional electives			12
ANTH 204	Cultural Anthropology	3	
ANTH 510	Kinship & Marriage in Cross Cult. Perspective	3	
ANTH 511	Cultural Ecology & Economy	3	
ANTH 618	Religion in Culture	3	

AMETH 160	Intro Am Ethnic Studies	3	
ART 560	Art for Exceptional Individual	3	

Horticultural Therapy specialization		
Math/chemical science		10
<u>CHM 110</u>	<u>General Chemistry</u>	<u>3</u>
<u>CHM 111</u>	<u>General Chemistry Lab</u>	<u>1</u>
MATH 100	College Algebra	3
<u>STAT 325</u>	<u>Intro to Statistics</u>	<u>3</u>

Horticulture requirement			23
HORT 190	Pre-Internship in Horticulture	1	
HORT 201	Principles of Horticulture Science	4	
HORT 350	Plant Propagation	3	
HORT 520	Fruit Production	3	
Or			
HORT 560	Vegetable Crop Production	3	

<u>HORT 599</u>	<u>The Horticultural Professional</u>	<u>0</u>	
<u>HORT 582</u>	<u>Foundations of Hort Pest Mgt</u>	<u>1</u>	
<u>HORT 583</u>	<u>Survey of Horticultural Ornamental and Food Crop Pests</u>	<u>1</u>	
Horticulture electives			<u>10</u>

Horticultural Therapy specialization			29
HORT 256	Human Dimensions of Hort.	3	
HORT 374	Woody Plant Materials I	3	
HORT 376	Herbaceous Ornamental Plants	3	
HORT 377	Plants of the Interior Environmnt.	3	
HORT 525	Horticulture for Special Pop.	3	
HORT 530	Horticultural Therapy Case Mgmt	1	
HORT 535	Horticultural Therapy Field Tech	3	
HORT 540	Horticultural Therapy Field Exp	3	
HORT 570	Greenhouse Operations Mgmt	3	
<u>HORT 600</u>	<u>Herbaceous Landscape Plant Prod 2</u>	<u>2</u>	
<u>HORT 625</u>	<u>Floral Crops Prod & Handling</u>	<u>2</u>	

Human science and service requirements			12
<u>SOCIO 360</u>	<u>Social Problems</u>	<u>3</u>	
PSYCH 505	Abnormal Psychology	3	
PSYCH 520	Life Span Personality Dev	3	
<u>THTRE 665</u>	<u>Drama Therapy with Special Pop.</u>	<u>3</u>	

Professional electives			12
ANTH 204	Cultural Anthropology	3	

BIOL 330	Public Health Biology	3	AMETH 160	Intro Am Ethnic Studies	3
BIOL 340	Structure and Function of the Human Body	8	BIOL 330	Public Health Biology	3
EDSP 500	Introduction to Human Exceptionality	3	EDSP 500	Introduction to Human Exceptionality	3
			<u>FSHS 110</u>	<u>Intro Human Development</u>	<u>3</u>
			<u>FSHS 310</u>	<u>Early Childhood</u>	<u>3</u>
			<u>FSHS 350</u>	<u>Family Relationships & Gender Roles</u>	<u>3</u>
FSHS 415	Manual Communication	3	FSHS 415	Manual Communication	3
FSHS 506	Middle Childhd. & Adolescence	3	FSHS 506	Middle Childhood & Adolescence	3
GERON 315	Introduction to Gerontology	3	GERON 315	Introduction to Gerontology	3
HIST 534	Social History of Medicine	3	HIST 534	Social History of Medicine	3
KIN 220	Biobehavioral Bases of Exercise	3	KIN 220	Biobehavioral Bases of Exercise	3
KIN 345	Psychological Dynamics of Physical Activity	3	KIN 345	Psychological Dynamics of Physical Activity	3
			<u>MC 180</u>	<u>Fundamentals of Public Relations</u>	<u>3</u>
PSYCH 202	Drugs & Behavior	2	<u>PHIL 365</u>	<u>Medical Ethics</u>	<u>3</u>
PSYCH 280	Psychology of Childhood and Adolescence	3	PSYCH 202	Drugs & Behavior	2
PSYCH 510	Introduction to Behavior Modification	3	PSYCH 280	Psychology of Childhood and Adolescence	3
PSYCH 520	Life Span Personal Development	3	PSYCH 470	Psychobiology	3
SOCIO 432	Comm Organ & Leadership	3	<u>PSYCH 535</u>	<u>Social Psychology</u>	<u>3</u>
SOCIO 460	Juvenile Delinquency	3	<u>SOCIO 361</u>	<u>Soc. of Criminal Justice Systems</u>	<u>3</u>
THFRE 665	Drama Therapy with Special Populations	3	SOCIO 432	Comm Organ & Leadership	3
	OR		SOCIO 460	Juvenile Delinquency	3
THFRE 674	Drama Therapy with Adolescents	3			
	OR				
THFRE 675	Drama Therapy with Older Adults	3			

Golf Course Management Specialization

Technical core 20

Golf Course Management Specialization

BIOL 198	Principles of Biology	4
CHEM 210	Chemistry I	4
Computer science elective		3
MATH 100	College Algebra	3
MATH 205	General Calc & Linear Algebra	3
Statistics elective		3
Internship		6
HORT 190	Pre-Internship in Horticulture	1
HORT 590	Horticulture Internship (at a golf facility)	2
HORT 590	Horticulture Internship (at a golf facility)	3
	Or	
HRIMD 495/ GENBA 495	Golf Course Internship in Business/Hospitality Management	3
Turf Management		39
GENAG 101	Ag Orientation	1
AGRON 305	Soils	4
AGRON 335	Environmental Quality	3
	Or	
FOR 375	Intro to Natural Resources Mgt	3
AGRON 375	Soil Fertility	3
ATM 653	Water Management and Irrigation Systems	3
	Or	
HORT 550	Landscape Irrigation Systems	3
HORT 201	Principles of Hort Science	4
HORT 374	Woody Plant Materials I	3
	Or	
HORT 375	Woody Plant Materials II	3
HORT 515	Turf Management	3
HORT 517	Golf Course Operations	3
HORT 706	Turfgrass Science	3
PLPTH 500	Principles of Plant Pathology	3
Horticulture elective		3
Pest management elective		3
Free electives		7-9

Technical core		20
BIOL 198	Principles of Biology	4
<u>CHEM 110</u>	<u>General Chemistry</u>	<u>3</u>
<u>CHEM 111</u>	<u>General Chemistry Lab</u>	<u>1</u>
Computer science elective		3
MATH 100	College Algebra	3
MATH 205	General Calc & Linear Algebra	3
Statistics elective		3
Internship		6
HORT 190	Pre-Internship in Horticulture	1
HORT 590	Horticulture Internship (at a golf facility)	2
HORT 590	Horticulture Internship (at a golf facility)	3
	Or	
HRIMD 495/ GENBA 495	Golf Course Internship in Business/Hospitality Management	3
<u>HORT 599 The Horticultural Professional</u>		<u>0</u>
Turf Management		40
GENAG 101	Ag Orientation	1
AGRON 305	Soils	4
AGRON 335	Environmental Quality	3
	Or	
FOR 375	Intro to Natural Resources Mgt	3
AGRON 375	Soil Fertility	3
ATM 653	Water Management and Irrigation Systems	3
	Or	
HORT 550	Landscape Irrigation Systems	3
HORT 201	Principles of Hort Science	4
HORT 374	Woody Plant Materials I	3
	Or	
HORT 375	Woody Plant Materials II	3
HORT 515	<u>Basic Turfgrass Culture</u>	<u>2</u>
<u>HORT 516</u>	<u>Intensive Culture of Golf and Sports Turf</u>	<u>1</u>
HORT 517	<u>Golf Course and Sports Turf Operations</u>	<u>3</u>
HORT 706	Turfgrass Science	3
PLPTH 500	Principles of Plant Pathology	3
<u>HORT 582</u>	<u>Foundations of Hort Pest Mgt</u>	<u>1</u>
<u>HORT 587</u>	<u>Turfgrass Diseases & Mgt</u>	<u>1</u>
<u>HORT 588</u>	<u>Turfgrass Weeds & Mgt</u>	<u>1</u>
<u>HORT 589</u>	<u>Turfgrass Insects & Mgt</u>	<u>1</u>
Horticulture elective		3
Free electives		6-8

RATIONALE:

Quantitative sciences: the change from CHM 210 to CHM 110/111 is due to our recognition that CHM 110/111 offers the knowledge of chemistry necessary for the horticulture major; BIOCHM 265 is required rather than one of two Organic chemistry electives, this change is required since the other elective requires CHM 210; removing computer science elective choices in recognition that the majority of our students come to us with acceptable computer skills

Horticulture requirement: the pest management elective has been incorporated into each of the specialization curricula, all hort students will be required to take HORT 582 Foundations of Hort Pest Management and depending on the specialization, also choose 1-3 additional credits from a list of approved courses; the addition of HORT 599 The Horticultural Professional is a new course required of all hort majors, this is a capstone course of a 3-course series (HORT 190, 590, 599) that focuses on the hort industry and serves as a mechanism to collect end-program assessments

Specializations: Changes within each specialization reflect changes in existing courses being put forth at this time and the addition of new courses being put forth at this time. Specialization name changes more accurately reflect the curriculum. Combining the nursery management and greenhouse specializations recognizes the considerable overlap and the fact we can serve our students better within the context of one specialization

IMPACT: All units who will be impacted by the above changes have been contacted.

EFFECTIVE DATE: Fall 2008

Sports Turf Operations Management (New Option)

Technical Core 20 hours

BIOL 198	Principles of Biology	4
CHM 110	General Chemistry	3
CHM 111	General Chemistry Lab	1
Computer Science Elective		3
Math 100	College Algebra	3
Math 205	General Calculus & Linear Algebra	3
Statistics elective		3

Communication and Interpersonal

Relations 17 hours

ENGL 100	Expository Writing I	3
ENGL 200	Expository Writing II	3
SPCH 105	Public Speaking 1A	2
Communications Electives		9

Internship 6 hours

HORT 190	Pre-Internship in Horticulture	1
HORT 590	Horticulture Internship	2
HORT 590	Horticulture Internship	3

Humanities and Social Sciences 14 hours

ECON 110	Prin. of Macroeconomics	3
ECON 120	Prin. of Microeconomics	
OR		
AGEC 120	Agric. Econ. And Agric. Bus	3
Humanities and Social Science Elective		3
Foreign Language Elective		3-5

Business Management 15 hours

ACCTG 231	Accounting for Business Ops.	3
MANGT 420	Management Concepts	3
MKTG 400	Marketing	3
MANGT 531	Human Resource Management	3
MKTG 630	Sports Marketing	3

Turf Management 47 hours

GENAG 101	Ag Orientation	1
AGRON 305	Soils	4
AGRON 335	Environmental Quality	3
	OR	
FOR 375	Intro. to Natural Resource Management	3
AGRON 375	Soil Fertility	3
ATM 653	Water Mgt. and Irrigation Systems	3
	OR	
HORT 550	Landscape Irrigation Systems	3
HORT 201	Principles of Horticultural Science	4
HORT 374	Woody Plant Materials I	3
	OR	
HORT 376	Herbaceous Ornamental Plants	3
HORT 515	Basic Turfgrass Culture	2
HORT 516	Intensive Culture of Golf and Sports Turf	1
HORT 517	Golf Course and Sports Turf Operations	3
HORT 706	Turfgrass Science	3
PLPTH 500	Principles of Plant Pathology	3
RRES 690	Parks and Recreation Adm.	4
RRES 489	Program and Event Planning	3
Horticulture Elective		3
HORT 582	Foundations of Horticultural Pest Management	1
HORT 587	Turfgrass Diseases and their Management	1
HORT 588	Turfgrass Weeds and their Management	1
HORT 589	Turfgrass Insects and their Management	1

Hospitality 4 hours

HRIMD 220	Environmental Issues in Hosp.	2
HRIMD 340	Contemporary Issues in Controlled Beverages	2

Free Electives 7 hours

Total Credit Hours Required for Graduation 130

RATIONALE:

Sports Turf Operations Management is proposed as a new specialization under the Horticulture major in the Department of Horticulture, Forestry and Recreation Resources. There is a growing demand for professionals in this area and we believe the proposed curriculum is unique and will prepare graduates well for careers in this area. The Sports Turf Operations Management option was prepared with input from the Board of Directors of the Sports Turf Managers Association (STMA). This included comments from sports turf managers overseeing sports turf and related operations for major league baseball, the NFL, and K-12 school districts (see following pages). The national sports turf sales manager for the Toro Corporation is an adjunct faculty in our department, and will be involved in student instruction for 1 to 2 weeks every year.

Modeled after our Golf Course Management program, the Sports Turf Operations Management option places an emphasis on horticulture and turfgrass science, and compliments this with course work in communications, business, and hospitality. The STMA members repeatedly emphasized the importance of business and communications and supported the inclusion of some hospitality courses. The importance of work experience prior to graduation is again emphasized with 6 credits of internship required.

In summary, we believe the proposed Sports Turf Operations Management option will be unique in the U.S., much as our current Golf Course Management program is, and will produce graduates well prepared for the challenges of this growing industry.

IMPACT:

All impacted units have been contacted.

EFFECTIVE DATE:

Fall 2008

Public Horticulture (new option)

Communications 11 hours

ENGL 100	Expository Writing I	3
ENGL 200	Expository Writing II	3
SPCH 105	Public Speaking 1 A	2
SPCH 311	Business and Professional Spkg.	3

Humanities and Social Sciences 9 hours

PSYCH 110	General Psychology	3
SOCIO 211	Intro to Sociology	3
AMETH 160	Intro to American Ethnic Studies	3

Math/Chemical Sciences 10 hours

CHM 110	General Chemistry	3
CHM 111	General Chemistry Lab	1
MATH 100	College Algebra	3
Statistics Elective		3
Choose from STAT 325or 350		

Agric/Biological Sciences 19 hours

AGRON 305	Soils	4
BIOL 198	Principles of Biology	4
BIOL 551	Taxonomy of Flowering Plants	4
Entomology Elective		3
GENAG 101	Ag Orientation	1
PLPTH 500	Principles of Plant Pathology	3

Business 12 hours

ACCTG 231	Accounting for Bus Operations	3
AGEC 120	Ag Econ & Ag Business	3

OR

ECON 120	Microeconomics	3
MANGT 420	Management Concepts	3
MANGT 531	Human Resources Management	3

Horticulture Requirement 13 hours

HORT 190	Pre-Internship in Horticulture	1
HORT 201	Principles of Horticultural Science	4
HORT 350	Plant Propagation	3
HORT 590	Internship	5

At public garden facilities. One in horticulture,
one in education

HORT 599	The Horticultural Profession	0
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Public Horticulture Specialization 31 hours

HORT 256	Human Dimensions in Hort	3
HORT 275	Horticultural Design I	3
HORT 301	Horticulture Practicum	3
HORT 508	Landscape Maintenance	2
HORT 360	Public Horticulture	3
HORT 570	Greenhouse Operations Mangt.	3
HORT 582	Foundations of Horticulture Pest Management	1
HORT 600	Herbaceous Landscape Plant Prod	2
Plant materials electives (6 cr.)		
HORT 515	Basic Turfgrass Culture	2
HORT 552	Hort Landscape Construction	1
HORT 555	The Fundamentals of Landscape Irrigation Design	2
HORT 585	Arboriculture	3
HORT 625	Floral Crops Production and Handling	2

Professional electives from list below . . . 12 hours

EDADL 212	Intro to Leadership Concepts	2
EDCI 704	Extension Organization & Prin	3
EDCI 706	Prin of Teaching Adults in Extension	3
GEOG 300	Geography of Tourism	3
HRIMD 120	Survey of the Hospitality Industry	1
HRIMD 230	Issues in Tourism	2
RRES 489	Program & Event Planning	3
MC 120	Principles of Advertising	3
MC 180	Fundamentals of Public Relations	3
PSYCH 564	Psychology of Organizations	3
RRES 635	Methods of Environmental Interp	3

Free Electives 13 hours

TOTAL CREDITS FOR GRADUATION . . . 130

RATIONALE:

The public horticulture option is intended for students interested in professional careers which promote horticulture and emphasize people and their education and enjoyment of plants. Such careers include director of a botanical garden or park; city or urban horticulturist; extension agent, teacher, educational director, or program coordinator; professional garden writer/editor or publication manager; public garden curator; and plant collections manger. Initial work on developing this specialization were based on recent and current student interest and the fact that very few universities offer this specialization. Additionally, with the continuing development of the K-State Gardens, K-State has the unique opportunity to become a model university garden demonstrating dynamic linkages between the Gardens and an academic unit of the University. While university gardens are not unique, embedding an academic discipline within a university garden is unique. The creation of the Public Horticulture specialization is one step in the Horticulture Divisions plan to establish K-State Gardens as a model university garden.

IMPACT:

No impact outside our department.

EFFECTIVE DATE:

Fall 2008

Plant Pathology

Plant Pathology MS Graduate Curriculum

FROM:

M.S. students are required to take at least 30 credit hours beyond the B.S. degree.

At least two of the following (or their equivalents):

PLPTH 730 Plant Nematology.....	2 cr
PLPTH 835 Plant Virology	2 cr
PLPTH 840 Plant Pathogenic Bacteria	2 cr
PLPTH 845 Plant Pathogenic Fungi	2 cr

At least one of the following:

PLPTH 880 Plant Molecular Biology	3 cr
PLPTH 910 Molecular Plant-Microbe Interactions.....	3 cr

At least one of the following:

PLPTH 905 Ecology and Epidemiology of Plant Pathogens.....	2 cr
PLPTH 768 Population Genetics.....	3 cr

Seminar, (PLPTH 870, 1 credit hour), must be taken at least once, in addition to the thesis defense seminar (credit in PLPTH 870 (1 credit hour) is also granted for the thesis (or report) defense seminar). The non-thesis defense seminar must be in an area not related to the thesis work unless approved by the Seminar Committee. (2 credit hours total for Seminar)

At least two additional credit hours of electives must be taken in Plant Pathology:

One of the following, depending upon the option (report or research) selected:

PLPTH 898 Master's Report (2 credit hours)

PLPTH 899 Research in Plant Pathology for the M.S. degree (6 credit hours minimum, 8 credit hours maximum; students can take more than 8 credit hours of PLPTH 899, but only 8 credit hours will count toward the degree and only 8 credit hours can be listed on the Program of Study).

Most students in our Department choose the thesis option and sign up for PLPTH 899. Students who do not desire the intensive research experience may choose to do a report instead, and will sign up for PLPTH 898 instead of 899. Because research experience is considered a prelude for a Ph.D., the report option is sometimes considered a "terminal degree;" i.e., students who complete the report option are much less likely to be accepted into a Ph.D. program. It is recommended only for those students who do not intend to later pursue a Ph.D.

Students who start in the research option and have taken PLPTH 899 for credit, and then switch to a report option, sign up for 2 credits of PLPTH 898 and leave the PLPTH 899 credit on their transcripts; however, the PLPTH 899 credit does not count toward the 30 credit-hour minimum requirement for the M.S. degree.

Free electives:

Report option: 14-15 credit hours

Thesis option: 10-11 credit hours

Plant Pathology MS Graduate Curriculum

TO:

M.S. students are required to take at least 30 credit hours beyond the B.S. degree.

At least two of the following (or their equivalents):

PLPTH 730 Plant Nematology.....3 cr

PLPTH 835 Plant Virology2 cr

PLPTH 840 Plant Pathogenic Bacteria2 cr

PLPTH 845 Plant Pathogenic Fungi3 cr

At least one of the following:

PLPTH 880 Plant Molecular Biology3 cr

PLPTH 910 Molecular Plant-Microbe Interactions.....3 cr

At least one of the following:

PLPTH 905 Ecology and Epidemiology of Plant Pathogens.....2 cr

PLPTH 768 Population Genetics.....3 cr

Seminar, (PLPTH 870, 1 credit hour), must be taken at least once, in addition to the thesis defense seminar (credit in PLPTH 870 (1 credit hour) is also granted for the thesis (or report) defense seminar). The non-thesis defense seminar must be in an area not related to the thesis work unless approved by the Seminar Committee. (2 credit hours total for Seminar)

At least two additional credit hours of electives must be taken in Plant Pathology:

One of the following, depending upon the option (report or research) selected:

PLPTH 898 Master's Report (2 credit hours)

PLPTH 899 Research in Plant Pathology for the M.S. degree (6 credit hours minimum, 8 credit hours maximum; students can take more than 8 credit hours of PLPTH 899, but only 8 credit hours will count toward the degree and only 8 credit hours can be listed on the Program of Study).

Most students in our Department choose the thesis option and sign up for PLPTH 899. Students who do not desire the intensive research experience may choose to do a report instead, and will sign up for PLPTH 898 instead of 899. Because research experience is considered a prelude for a Ph.D., the report option is sometimes considered a "terminal degree;" i.e., students who complete the report option are much less likely to be accepted into a Ph.D. program. It is recommended only for those students who do not intend to later pursue a Ph.D.

Students who start in the research option and have taken PLPTH 899 for credit, and then switch to a report option, sign up for 2 credits of PLPTH 898 and leave the PLPTH 899 credit on their transcripts; however, the PLPTH 899 credit does not count toward the 30 credit-hour minimum requirement for the M.S. degree.

Free electives:

Report option: 14-15 credit hours

Thesis option: 10-11 credit hours

RATIONALE: The Plant Pathology PhD graduate curriculum is being updated following discussions at a recent departmental teaching retreat. The proposed curriculum reflects the change from 2 cr hr to 3 cr hr for both PLPTH 730 Plant Nematology and PLPTH 845 Plant Pathogenic Fungi. Faculty teaching these courses felt the need for more time to go in depth on the course topics.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Spring 2008

Plant Pathology PhD Graduate Curriculum

FROM:

Ph.D. students are required to take at least 90 credit hours beyond the B.S. degree; graduate committees normally require at least 24 credit hours of formal class work at KSU past the M.S. The Graduate School will usually allow 30 credit hours to be transferred from a completed M.S. program.

Each of the following (or their equivalents):

PLPTH 730 Plant Nematology.....2 cr
PLPTH 835 Plant Virology2 cr
PLPTH 840 Plant Pathogenic Bacteria2 cr
PLPTH 845 Plant Pathogenic Fungi2 cr

At least one of the following:

PLPTH 880 Plant Molecular Biology3 cr
PLPTH 910 Molecular Plant-Microbe Interactions.....3 cr

At least one of the following:

PLPTH 905 Ecology and Epidemiology of Plant Pathogens.....2 cr
PLPTH 768 Population Genetics.....3 cr

Seminar, (PLPTH 870, 1 credit hour), must be taken at least twice, in addition to the thesis defense seminar (credit in PLPTH 870 (1 credit hour) is also granted for the thesis defense seminar). At least one of the non-thesis defense seminars must be in an area not related to the thesis work unless approved by the Seminar Committee. (3 credit hours total for Seminar)

At least four additional credit hours of electives must be taken in Plant Pathology.

Research (PLPTH 999). The Graduate School requires 30 credit hours minimum and notes that the number of research credits should accurately reflect the emphasis on research inherent in the Ph.D. degree.

Free Electives:
39-40 credit hours

Plant Pathology PhD Graduate Curriculum

TO:

Ph.D. students are required to take at least 90 credit hours beyond the B.S. degree; graduate committees normally require at least 24 credit hours of formal class work at KSU past the M.S. The Graduate School will usually allow 30 credit hours to be transferred from a completed M.S. program.

Each of the following (or their equivalents):

PLPTH 730 Plant Nematology.....	3 cr
PLPTH 835 Plant Virology	2 cr
PLPTH 840 Plant Pathogenic Bacteria	2 cr
PLPTH 845 Plant Pathogenic Fungi	3 cr

At least one of the following:

PLPTH 880 Plant Molecular Biology	3 cr
PLPTH 910 Molecular Plant-Microbe Interactions.....	3 cr

At least one of the following:

PLPTH 905 Ecology and Epidemiology of Plant Pathogens.....	2 cr
PLPTH 768 Population Genetics.....	3 cr

At least one of the following:

<u>PLPTH 922 Teaching Practicum in Plant Pathology.....</u>	<u>1-2 cr</u>
<u>EDCI 943 Principles of College Teaching.....</u>	<u>3 cr</u>

Alternate teaching experience approved by the student's graduate committee

PLPTH 870 Seminar must be taken for a total of 3 credit hours. One credit hour of PLPTH 870 must be used for a proposal seminar with the first 2 years of entering the graduate program. One credit hour of PLPTH 870 must be used for the thesis defense seminar. At least one hour of seminar must be in an area not related to the thesis work unless approved by the Seminar Committee.

At least four additional credit hours of electives must be taken in Plant Pathology.

Research (PLPTH 999). The Graduate School requires 30 credit hours minimum and notes that the number of research credits should accurately reflect the emphasis on research inherent in the Ph.D. degree.

Free Electives:

39-40 credit hours

RATIONALE:

The Plant Pathology PhD graduate curriculum is being updated following discussions at a recent departmental teaching retreat. The proposed curriculum reflects the change from 2 cr hr to 3 cr hr for both PLPTH 730 Plant Nematology and PLPTH 845 Plant Pathogenic Fungi. Faculty teaching these courses felt the need for more time to go in depth on the course topics. A graduate student teaching requirement was approved at the teaching retreat. Faculty felt graduate students would be more rounded and more competitive in the market place if they participated in a teaching experience. Teaching options include: PLPTH 922 Teaching Practicum in Plant Pathology (pending concurrent approval of PLPTH 922) or EDCI Principles of College Teaching or an Alternate teaching experience approved by the student's graduate committee. As for PLPTH 870 Seminar, the department consensus was that PhD graduate students in Plant Pathology should utilize one of the three 1 credit hour seminars to present their thesis proposal. This practice is in line with curricula at other Plant Pathology departments across the US.

IMPACT:

No impact on other departments.

EFFECTIVE DATE:

Spring 2008