

**Undergraduate and/or Graduate
Course and Curriculum Changes – Non-Expedited Approval**

**Approved by the
College of Agriculture Faculty**

on

March 11, 2009 at 3 p.m. in Waters Hall, Room 231

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

**College of Business
Department of Chemistry
Department of Communication Studies, Theater and Dance
Department of Economics
Department of Sociology
Division of Biology**

Course and Curriculum Proposals – Non-Expedited Process
College of Agriculture
Spring 2009

Non-expedited Course Changes (599 and below)

Horticulture, Forestry and Recreation Resources

ADD: HORT 405. Water Issues in the Lawn and Landscape. (3) II. This course will examine critical water issues related to irrigation in urbanizing watersheds, with an emphasis on water quality and quantity. Factors impacting water scarcity and quality will be discussed. Successful completion of this course will help students understand the interrelatedness of incorrect irrigation practices and water quality/quantity, and will equip them to help protect water resources through application of science based irrigation practices. This is a distance education course. Rec. Pr.: Junior standing or one year of experience in the lawn/landscape maintenance industry.

RATIONALE: This course will educate students on critical water issues related to irrigation in urbanizing watersheds, with an emphasis on water quality and quantity.

IMPACT: Development of the course is supported by the Department of Plant Pathology. This course was previously taught and dropped by the Department of Plant Pathology.

EFFECTIVE DATE: Spring 2010

Non-expedited Course Changes (600 and above)

Agricultural Communications

ADD: AGED 786. Topics in Agricultural Education. (1-3) I, II, S. Examination of current topics in agricultural education. Varied specialized topics will be offered so course may be repeated.

RATIONALE: Agricultural Education faculty have administratively moved from the College of Education to the College of Agriculture. Secondary teachers of agricultural education need a graduate level course in which current, specialized topics can be taught in order that they can renew teaching certificates and apply the credits toward a masters degree.

IMPACT: No impact on other units.

EFFECTIVE DATE: Summer 2009

Food Science and Industry

FROM: FDSCI 600. Microbiology of Food. (2) I, II, S. This course deals with the isolation, identification, enumeration, and characterization of bacteria, yeasts, molds and other microbes associated with foods and food processing. Effects of physical and chemical agents on micro-organisms will be studied. Microbiological problems in food spoilage, food preservation, food fermentation, and food-borne diseases will be discussed. This is a Web-based lecture course intended for off-campus distance education students. ~~Pr.: BIOL 455.~~

TO: FDSCI 600. Microbiology of Food. (2) I, II, S. This course deals with the isolation, identification, enumeration, and characterization of bacteria, yeasts, molds and other microbes associated with foods and food processing. Effects of physical and chemical agents on micro-organisms will be studied. Microbiological problems in food spoilage, food preservation, food fermentation, and food-borne diseases will be discussed. This is a Web-based lecture course intended for off-campus distance education students. Rec. Pr.: BIOL 455.

RATIONALE: The course is only offered by Distance Education and thus most students may not have BIOL 455 because these students will usually take a Microbiology course at another university and will have a different course number. Currently almost all enrollments are usually blocked even though the students have the prerequisite equivalent. Making BIOL 455 a recommended prerequisite will alleviate the confusion caused by block enrollments and simplify the student's registration experience.

IMPACT: The Division of Biology has been notified; a response has not been received.

EFFECTIVE DATE: Fall 2009

Grain Science and Industry

FROM: GRSC 905. Enzyme Applications. ~~(2) I. Theories of enzyme action and function; commercial methods of manufacture and industrial uses, with special emphasis on the role of enzymes in the food industries. Two hours lec. a week. Rec. Pr.: BIOCH 521 and 522.~~

TO: GRSC 905 Enzyme and Bioprocessing Applications (3) I. The course explores the applications of enzymes and microbial cultures in the bioprocessing industry, including food, feed, industrial chemicals and biofuels; and major microbial pathways for product synthesis including a clear understanding of enzyme and microbial kinetics at an advanced level. Three one-hour lectures per week. Rec. Pre.: GRSC 820 or GRSC 740/BAE 740 or BIOCH 755.

RATIONALE: This class has not been taught for several years, but now has a new instructor who has expanded and rewritten the content and description to be more appropriate for today's needs and requirements. This has been approved by the Grain Science faculty.

IMPACT: This course will be offered in Grain Science, but will be available to any graduate level student.

EFFECTIVE DATE: Fall 2009

Horticulture, Forestry and Recreation Resources

ADD: HORT 710. Plant Cell, Tissue and Organ Culture. (3) II. Course will cover the principles and laboratory exercises that demonstrate major concepts and practical techniques in plant cell, tissue and organ culture. The history and use of plant cell-, tissue-, and organ- culture for crop improvement will be explained. The variety of tissue-culture techniques will be highlighted. Selected readings and practical tissue culture projects will be required. Two hours lecture and three hours lab per week. Rec. Pr.: HORT 350.

RATIONALE: Plant cell, tissue and organ culture is an important research tool in both basic and applied studies as well as in commercial application. This course will provide horticulture and plant related-science major students an opportunity to learn about fundamental principles and techniques in plant cell, tissue and organ culture which can be applied to all crop plants, including agronomic, horticulture, and forestry crops for germplasm improvement.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Spring 2010

ADD: HORT 910. Advances in Plant Cell Culture. (2) II. Course will cover current topics in plant cell culture, applications and commercial practices, with emphasis on plant genetic improvement. Research-level skills in this area will be taught. Two hours lecture a week Odd years. Rec. Pr.: HORT 710.

RATIONALE: One of the newest and most exciting applications of plant cell culture is molecular farming using modern plant cell and tissue culture biotechnology. This course will provide horticulture and plant related science majors an opportunity to learn advanced cell and tissue culture theories for crop genetic improvement.

IMPACT: Development of the course is supported by the Department of Plant Pathology.

EFFECTIVE DATE: Spring 2010

Undergraduate Curriculum Changes

Food Science and Industry

Food Science and Industry B.S. Professional and Processing Electives

From:

FOOD SCIENCE ELECTIVES

ASI	303	Hist & Attitudes Animal Ag	3
ASI	315	Livestock and Meat Evaluation	3
ASI	490	Micro Computer Applications	3
ASI	500	Genetics	3
ASI	533	Anatomy & Physiology	4
ASI	595	Contemp Issues in An Sci & Ag	3
ASI	645	Poultry Management	3
AGRON	335	Environmental Quality	3
FDSCI	430	Food Products Evaluation	3
FDSCI	603	Food Science Internship	1-6
FDSCI	630	Food Science Problems	1-3
FDSCI	713	Rapid Methods and Auto in Micro	2
FDSCI	791	Adv Application of HACCP Prin	3
GNHE	310	Human Needs	3
HN	352	Personal Wellness	3
HN	413	Science of Food	4
HN	701	Sensory Analysis	2-3
GRSC	602	Cereal Science	3
GRSC	651	Food and Feed Prod Protection	4
GRSC	661	Quality of Feed & Food Ingrdnts	3
STAT	341	Biometrics II	3

NUTRITION ELECTIVES

HN	400	Human Nutrition	3
HN	600	Public Health Nutrition	3
HN	610	Lifespan Nutrition	3
HN	620	Nutrient Metabolism	4
HN	630	Clinical Nutrition	5
HN	635	Nutrition and Exercise	3

COMMUNICATIONS

AGCOM	210	Communications in Ag Ind	3
AGCOM	400	Ag Business Comm	3
ENGL	300	Expository Writing III	3
ENGL	516	Written Communication for Sci.	3
MKTG	542	Prof Selling and Sales Mngnt	3
MC	110	Mass Comm in Society	3
MC	120	Principles of Advertising	3
MC	180	Fund of Public Relations	3
SOCWK	310	Fund Comm for Ag & Food Sci	3
SPCH	311	Bus and Professional Speaking	3
SPCH	321	Public Speaking II	3
SPCH	322	Interpersonal Communication	3
SPCH	326	Small Group Discussion Methods	3

ANY FOREIGN LANGUAGE

Completion of ASI 395- Meat Judging

TECHNOLOGY ELECTIVES

ATM	160	Engineered Systems & Tech	3
ATM	450	Sensors/Control Ag Biol Systems	3
ATM	455	Engines and Power Transfer	3
ATM	661	Watershed Management	3
BAE	345	Properties of Biological Materials	2
GRSC	540	Engr Appl Grain/Food Processing	3
GRSC	541	Engr Appl Grain/Food Proc Lab	1

PROCESSING ELECTIVES

ASI	310	Poultry Products Evaluation	2
ASI	350	Meat Science	3
ASI	361	Meat Animal Processing	2
ASI	370	Principles of Meat Evaluation	2
ASI	405	Fundamentals of Milk Processing	3
ASI	495	Advanced Meat Evaluation	2
ASI	608	Dairy Food Processing & Technol	3
ASI	610	Processed Meat Operations	2
ASI	640	Poultry Products Technology	3
ASI	671	Meat Selection and Utilization	2
ASI	777	Meat Technology	4
GRSC	101	Intro to Grain Science and Industry	3
GRSC	150	Principles of Milling	3
GRSC	505	Cereal & Feed Analysis	3
GRSC	625	Flour and Dough Testing	3
GRSC	635	Baking Science I	2
GRSC	636	Baking Science I Lab	2
GRSC	737	Baking Science II	3
GRSC	738	Baking Science II Lab	1

BUSINESS/MANAGEMENT ELECTIVES

ACCTG	231	Accounting Business Operations	3
ACCTG	241	Accounting Investing & Financing	3
MANGT	420	Management Concepts	3
MKTG	400	Marketing	3
FINAN	450	Principles of Finance	3
AGEC	120	Ag Econ & Agribusiness	3
AGEC	308	Farm and Ranch Management	3
AGEC	318	Food & Agribusiness Management	3
AGEC	410	Agricultural Policy	3
AGEC	415	Global Ag Econ, Hunger & Poverty	3
AGEC	420	Commodity Futures	3
AGEC	505	Agricultural Market Structures	3
AGEC	515	Food and Agribusiness Marketing	3
AGEC	520	Market Fund & Futures Opt Trad	3
AGEC	570	Food Mfg, Distribution & Retailing	3
AGEC	623	International Agriculture Trade	3
AGEC	632	Agribusiness Logistics	3
CIS	101	Intro to Information Technology	1
CIS	102	Intro to PC Spreadsheet Applications	1
CIS	103	Intro to PC Database Applications	1
CIS	104	Intro to PC Word Processing	1
CIS	105	Intro to Computer Programming	1
ECON	120	Prin Micro Economics	3
ECON	520	Intermediate Micro Economics	3
MANGT	300	Intro to Total Quality Management	1
MANGT	366	Management Info Systems	3
MANGT	390	Business Law I	3
MANGT	421	Intro to Operations Management	3
MANGT	530	Industrial & Labor Relations	3
MANGT	531	Personnel & Human Resource Mgmt.	3
MKTG	450	Consumer Behavior	3
MKTG	541	Retailing	3
MKTG	542	Prof Selling and Sales Management	3

To:

FOOD SCIENCE ELECTIVES

ASI	303	Hist & Attitudes Animal Ag	3
ASI	315	Livestock and Meat Evaluation	3
ASI	500	Genetics	3
ASI	533	Anatomy & Physiology	4
ASI	595	Contemporary Issues in An Sci & Ag	3
ASI	645	Poultry Management	3
ASI	660	International Study Experience in ASI 0-6	
AGRON	335	Environmental Quality	3
BIOL	340	Human Body	8
BIOL	450	Modern Genetics	4
BIOL	541	Cell Biology	3
CHM	550	Organic Chemistry II	3
CHM	551	Organic Chemistry II Lab	2
FDSCI	430	Food Products Evaluation	3
FDSCI	603	Food Science Internship	1-6
FDSCI	630	Food Science Problems	1-3
FDSCI	713	Rapid Methods and Auto in Microbiol	2
FDSCI	730	Food Safety and Security	2
FDSCI	791	Adv Application of HACCP Prin	3
GENAG	505	Comparative Agriculture	2-4
GNHE	310	Human Needs	3
HN	352	Personal Wellness	3
HN	400	Human Nutrition	3
HN	413	Science of Food	4
HN	600	Public Health Nutrition	3
HN	610	Lifespan Nutrition	3
HN	620	Nutrient Metabolism	4
HN	630	Clinical Nutrition	5
HN	635	Nutrition and Exercise	3
HN	701	Sensory Analysis	2-3
GRSC	602	Cereal Science	3
GRSC	651	Food and Feed Prod Protection	4
GRSC	661	Quality of Feed & Food Ingredients	3
PHYS	114	General Physics II	4
STAT	341	Biometrics II	3

COMMUNICATIONS

AGCOM	400	Ag Business Communications	3
AGCOM	590	New Media Technology	3
AGCOM	610	Crisis Communication	3
COMM	311	Bus and Professional Speaking	3
COMM	321	Public Speaking II	3
COMM	322	Interpersonal Communication	3
COMM	326	Small Group Discussion Methods	3
COMM	535	Communication Leadership	3
ENGL	300	Expository Writing III	3
ENGL	516	Written Communication for Sci.	3
GENAG	450	Citizenship and Ethics in Ag	3
MKTG	542	Prof Selling and Sales Management	3
MC	110	Mass Comm in Society	3
MC	120	Principles of Advertising	3
MC	180	Fund of Public Relations	3
SOCWK	310	Fund Comm for Ag & Food Sci	3

■ ANY FOREIGN LANGUAGE

Completion of ASI 495- Meat Judging

TECHNOLOGY ELECTIVES

ASI	490	Micro Computer Applications	3
ATM	160	Engineered Systems & Tech	3
ATM	450	Sensors/Control Ag Biol Systems	3
ATM	455	Engines and Power Transfer	3
ATM	661	Watershed Management	3
BAE	345	Properties of Biological Materials	2
CIS	101	Intro to Information Technology	1
CIS	102	Intro to PC Spreadsheet Applications	1
CIS	103	Intro to PC Database Applications	1
CIS	104	Intro to PC Word Processing	1
CIS	105	Intro to Computer Programming	1
GRSC	540	Engr Appl Grain/Food Processing	3
GRSC	541	Engr Appl Grain/Food Proc Lab	1

PROCESSING ELECTIVES

ASI	310	Poultry Products Evaluation	2
ASI	350	Meat Science	3
ASI	361	Meat Animal Processing	2
ASI	370	Principles of Meat Evaluation	2
ASI	405	Fundamentals of Milk Processing	3
ASI	495	Advanced Meat Evaluation	2
ASI	608	Dairy Food Processing & Technology	3
ASI	610	Processed Meat Operations	2
ASI	640	Poultry Products Technology	3
ASI	671	Meat Selection and Utilization	2
ASI	777	Meat Technology	3
FDSCI	660	International Study Experience Food Sci0-6	
GRSC	101	Intro to Grain Science and Industry	3
GRSC	150	Principles of Milling	3
GRSC	505	Cereal & Feed Analysis	3
GRSC	625	Flour and Dough Testing	3
GRSC	635	Baking Science I	2
GRSC	636	Baking Science I Lab	2
GRSC	737	Baking Science II	3
GRSC	738	Baking Science II Lab	1

BUSINESS, MANAGEMENT & ECON ELECTIVES

ACCTG	231	Accounting Business Operations	3
ACCTG	241	Accounting Investing & Financing	3
MANGT	420	Management Concepts	3
MKTG	400	Marketing	3
FINAN	450	Principles of Finance	3
AGEC	120	Ag Econ & Agribusiness	3
AGEC	308	Farm and Ranch Management	3
AGEC	318	Food & Agribusiness Management	3
AGEC	410	Agricultural Policy	3
AGEC	415	Global Ag Econ, Hunger & Poverty	3
AGEC	420	Commodity Futures	3
AGEC	505	Agricultural Market Structures	3
AGEC	515	Food and Agribusiness Marketing	3
AGEC	516	Ag Law and Economics	3
AGEC	520	Market Fund & Futures Opt Trad	3
AGEC	570	Food Mfg, Distribution & Retailing	3
AGEC	599	Food and Agribusiness Strategies	3
AGEC	605	Price Analysis and Forecasting	3
AGEC	623	International Agriculture Trade	3
AGEC	632	Agribusiness Logistics	3
AGEC	680	Risk Management	3
ECON	120	Prin Micro Economics	3
ECON	520	Intermediate Micro Economics	3
MANGT	300	Intro to Total Quality Management	1
MANGT	366	Management Info Systems	3
MANGT	390	Business Law I	3
MANGT	421	Intro to Operations Management	3
MANGT	530	Industrial & Labor Relations	3
MANGT	531	Personnel & Human Resource Mgmt.	3
MKTG	450	Consumer Behavior	3
MKTG	541	Retailing	3
MKTG	542	Prof Selling and Sales Management	3

RATIONALE: The department annually updates the professional and processing electives list to incorporate new courses and remove those no longer being taught. The list is a suggested electives list that allows for specialization and flexibility to reflect the professional goals of students. The list is not inclusive of all possible professional and processing electives, but is an updated guide of suggested electives and those that have been commonly used.

IMPACT: The Division of Biology, Department of Chemistry, and Department of Communication Studies, Theater and Dance have been notified. The Department of Chemistry and the Department of Communication Studies, Theater and Dance have indicated no concerns with the changes. A response has not been received from the Division of Biology.

EFFECTIVE DATE: Fall 2009

Horticulture, Forestry and Recreation Resources

Horticulture Major: Landscape Design Option

FROM:

TO:

<p>Landscape Design Option</p> <p>Pest Management Elective-----2</p> <p>HORT 583 Survey of Hort. Ornamental & Food Crop Pests 1</p> <p>HORT 587 Turfgrass Diseases & Their Mgt 1</p> <p>HORT 588 Turfgrass Weeds & Their Mgt. 1</p> <p>HORT 589 Turfgrass Insects & Their Mgt. 1</p> <p>Biology Elective-----3-4</p> <p>BIOL 320 Economic Botany 3</p> <p>BIOL 529 Fundamentals of Ecology 3</p> <p>BIOL 551 Taxonomy of Flowering Plants 4</p>	<p>Landscape Design Option</p> <p>Pest Management Elective-----2</p> <p>HORT 583 Survey of Hort. Ornamental & Food Crop Pests 1</p> <p>HORT 587 Turfgrass Diseases & Their Mgt 1</p> <p>HORT 588 Turfgrass Weeds & Their Mgt. 1</p> <p>HORT 589 Turfgrass Insects & Their Mgt. 1</p> <p><u>PLPTH 590 Landscape Diseases 2</u></p> <p>Biology Elective-----3-4</p> <p><u>Any BIOL course numbered 300 or higher.</u></p>
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RATIONALE: Course was inadvertently omitted from Pest Management Elective list when the Landscape Design Curriculum was modified for Fall 2008. We wish to correct this. Desire to broaden the choice of courses for the students in the Biology Elective category.

IMPACT: The Division of Biology has been notified, and they have indicated they have no concerns about the changes. The Department of Plant Pathology supports this change.

EFFECTIVE DATE: Fall 2009

Graduate Curriculum Changes

Agricultural Economics

FROM:

Ph.D. Agricultural Economics Program (current)

Topic Area	Credit Hours
Economic Theory	18
ECON 735 Mathematical Economics	3
ECON 940 Advanced Microeconomic Theory I	3
ECON 945 Advanced Microeconomic Theory II	3
ECON 805 Income and Employment Theory I	3
ECON 905 Income and Employment Theory II	3
and select one of the following: ECON 801, ECON 823 ECON 832, ECON 860, ECON 890, ECON 915, ECON 920, ECON 925, ECON 927, ECON 947, ECON 948, ECON 955, or ECON 981	3
Research Methodology	12
ECON 930 Econometrics II	3
AGEC 901 Research Methods in Economics	3
AGEC 936 Quantitative Topics in Agricultural Economics	3
and select one of the following:	
STAT 770 Theory of Statistics I	3
STAT 771 Theory of Statistics II	3
ECON 890 Time Series Econometrics	3
ECON 890 Microeconomics Panel Data Econometrics	3
Additional Required Agricultural Economics Courses	6
AGEC 905 Agricultural Demand and Price Analysis	3
AGEC 923 Economics of Agricultural Production	3
General Electives* (700 level and higher)	24
* Includes the following M.S. level course prerequisites	
ECON 830 Econometrics I	3
AGEC 712 Optimization Techniques for Agricultural Economics	3
AGEC 823 Production Economics II	3
AGEC 805 Agricultural Marketing	3
STAT 706 Basic Elements of Statistical Theory	3
	60 Total Course Hours
	30 Dissertation Hours
	90 Total Credit Hours

The following courses developed for the Masters of Agribusiness are not allowed on a student's program of study:
AGEC 700, AGECE 701, AGECE 713, AGECE 720, AGECE 730, AGECE 760, AGECE 761, and AGECE 770.

Ph.D. Agricultural Economics
Specialty Areas (current)

Agribusiness

FINAN 815 Managerial Finance I
MANGT 820 Behavioral Management Theory
MKTIB 810 Marketing Concepts and Research
AGEC 890 Advanced Food and Agribusiness Management
~~ECON 925 Location of Economics Activities (may be replaced with ECON 947 or 948)~~

Community and Regional Economics

ECON 832 Public Sector Analysis
ECON 925 Location of Economic Activities
ECON 955 Theory and Methods of Regional Economic Analysis
SOCIO 832 Sociology of Community
AGEC 955 Advanced Topics in Community and Regional Economics

International Development

~~ECON 860 Growth and Development Theories~~
~~AGEC 815 International Agricultural Development~~
~~AGEC 816 Farming Systems Approach to Sustainable Development~~
~~SOCIO 824 Qualitative Methodology~~

Natural Resources

AGEC 825 Natural Resource Policy
AGEC 925 Advanced Resource and Environmental Economics
~~ECON 947 Industrial Organization (may be replaced with IMSE 983)~~

Price Analysis/Marketing

~~AGEC 905 Agricultural Demand and Price Analysis~~
~~AGEC 936 Quantitative Topics in Agricultural Economics~~
STAT 730 Multivariate Statistical Methods (may be replaced with STAT 880)
~~AGEC 810 Price and Income Policies for Agriculture (may be replaced with MKTIB 810)~~

Trade

~~AGEC 840 International Markets and Agricultural Trade~~
~~ECON 981 International Trade Theory and Policy~~
~~Econ 947 Industrial Organization (may be replaced with AGEC 810)~~

Production/Farm Management/Finance

~~AGEC 923 Economics of Agricultural Production~~
AGEC 812 Advanced Farm Economics (may be replaced with FINAN 815)
Select 2 from the following list: ~~AGEC 936, IMSE 864, IMSE 982, IMSE 983, IMSE 830, IMSE 991 or EECE 870~~

TO:

Ph.D. Agricultural Economics
Program (proposed)

Topic Area	Credit Hours
Economic Theory	18
ECON 735 Mathematical Economics	3
ECON 940 Advanced Microeconomic Theory I	3
ECON 945 Advanced Microeconomic Theory II	3
ECON 805 Income and Employment Theory I	3
ECON 905 Income and Employment Theory II	3
and select one of the following: ECON 801, ECON 823 ECON 832, ECON 860, ECON 890, ECON 915, ECON 920, ECON 925, ECON 927, ECON 947, ECON 948, ECON 955, or ECON 981	3
Research Methodology	12
ECON 930 Econometrics II	3
AGEC 901 Research Methods in Economics	3
AGEC 936 Quantitative Topics in Agricultural Economics	3
and select one of the following:	
STAT 770 Theory of Statistics I	3
STAT 771 Theory of Statistics II	3
ECON 890 Time Series Econometrics	3
ECON 890 Microeconomics Panel Data Econometrics	3
Additional Required Agricultural Economics Courses	6
AGEC 905 Agricultural Demand and Price Analysis	3
AGEC 923 Economics of Agricultural Production	3
Specialty Area	6
General Electives* (700 level and higher)	18
* <u>Must include</u> the following M.S. level courses <u>or their equivalent</u>	
ECON 830 Econometrics I	3
AGEC 712 Optimization Techniques for Agricultural Economics	3
AGEC 823 Production Economics II	3
AGEC 805 Agricultural Marketing	3
STAT 706 Basic Elements of Statistical Theory	3
	60 Total Course Hours
	30 Dissertation Hours
	90 Total Credit Hours

The following courses developed for the Masters of Agribusiness are not allowed on a student's program of study:
AGEC 700, AGECE 701, AGECE 713, AGECE 720, AGECE 730, AGECE 760, AGECE 761, and AGECE 770.

Ph.D. Agricultural Economics
Specialty Areas (proposed)

Agribusiness (*two of the following with at least one from AGEC 880 or AGEC 890*)

AGEC 890	Advanced Food and Agribusiness Management
<u>AGEC 880</u>	<u>Agribusiness Industry Structures</u>
FINAN 815	Managerial Finance I
MANGT 820	Behavioral Management Theory
MKTG 810	Marketing Concepts and Research
<u>ECON 947</u>	<u>Industrial Organization*</u>

Community and Regional Economics (*two of the following*)

ECON 832	Public Sector Analysis*
ECON 925	Location of Economic Activities*
ECON 955	Theory and Methods of Regional Economic Analysis*
SOCIO 832	Sociology of Community
AGEC 955	Advanced Topics in Community and Regional Economics

International Development/Trade/Policy (*two of the following*)

<u>AGEC 815</u>	<u>International Agricultural Development</u>
<u>AGEC 840</u>	<u>International Markets and Agricultural Trade</u>
<u>AGEC 810</u>	<u>Price and Income Policies for Agriculture</u>
<u>ECON 860</u>	<u>Growth and Development Theories*</u>
<u>ECON 981</u>	<u>International Trade Theory and Policy*</u>

Natural Resources

AGEC 825	Natural Resource Policy
AGEC 925	Advanced Resource and Environmental Economics

Price Analysis/Marketing

<u>AGEC 810</u>	<u>Price and Income Policies for Agriculture. or</u>
<u>AGEC 880</u>	<u>Agribusiness Industry Structures</u>

and one of the following

STAT 730	Multivariate Statistical Methods
STAT 880	Time Series Analysis
<u>ECON 890</u>	<u>Time Series Econometrics or Panel Data Econometrics*</u>

Production/Farm Management/Finance

AGEC 812	Advanced Farm Economics (may be replaced with FINAN 815)
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and one of the following

IMSE 864, IMSE 982, IMSE 983, IMSE 830, IMSE 991 or EECE 870

Students are encouraged to consult with their advisor(s) about additional courses to enhance their training in a field. Alternative specialties, or variances to those described above, may be designed by a student's supervisory committee with the approval of the graduate committee.

*No course can be used to meet both a specialty and a core program requirement

RATIONALE: The proposed changes to the PhD Specialty Areas address disparities across specialties in the number of credit hours required. As currently constituted, specialty (or field) requirements vary from two to five courses in addition to core requirements, resulting in an incentive to choose a specialty with fewer requirements. The proposed change results in a uniform requirement of two courses for a specialty, and removes from specialty areas any courses that are already part of the core requirements. The typical requirement for a specialty field at other institutions is two semester courses. Our Economics Department, with whom this Ph.D. is jointly administered, also requires two courses for a specialty area.

One substantive change to individual specialty areas is the combining of the existing International Development and Trade specialties into a combined International Development/Trade/Policy specialty. The change offers students more flexibility to target specialized interests within a broader topic area.

The wording at the bottom– “Alternative specialties may be designed by a student’s supervisory committee with the approval of the graduate committee.” – does not represent a change. Our Policies and Procedures document already contains similar language but it hadn’t been placed on this page. The wording “No course can be used to meet both a specialty and a core program requirement” enforces the idea that a specialty requires two courses in addition to the core requirements.

The proposal also involves listing the 6-hour specialty requirement as a separate line on our PhD Program description, thereby reducing the number of General Electives from 24 to 18. The proposal also involves a minor change in the wording in the General Electives section from “Includes the following M.S. level course prerequisites” - which is somewhat ambiguous and could be interpreted to mean either ‘must include’ or ‘may include’ - to “Must include the following M.S. level courses or their equivalent.” Some of the listed courses are no longer required prerequisites – hence the word ‘prerequisites’ is dropped.

The proposed changes were unanimously approved at Dept. of Agricultural Economics faculty meetings on November 13 and December 9, 2008.

IMPACT: Because some of their courses appear in the current or proposed specialties, the Economics Department (Dr. Bill Blankenau), Sociology Department (Dr. Gerad Mittendorf), and the College of Business (Dr. Jeff Katz) have been notified about the proposed changes. None have communicated any concerns about the changes. The proposed changes are expected to have minimal impact on courses in other Departments.

EFFECTIVE DATE: Summer 2009

New Graduate Curriculum(s)

Horticulture, Forestry and Recreation Resources

**New Program Proposal
Basic Program Information**

1. Proposing Institution: Kansas State University
2. Title of proposed program: Graduate Certificate in Horticultural Therapy
3. Degree to be offered: Graduate Certificate
4. Anticipated date of implementation: Fall 2009
5. Responsible department(s): Horticulture, Forestry, and Recreation Resources

Program Proposal Narrative

This proposal responds to the need for graduate-level horticultural therapy practitioner training to keep pace in the allied-therapy health field; the increasing number of requests for a horticultural therapy curriculum offered via distance education; an international and national demand to K-State for educational opportunities in horticultural therapy; and the strategic prioritization efforts of the Department of Horticulture, Forestry, and Recreation Resources and the College of Agriculture.

Horticultural therapy is a method in which a trained Horticultural Therapist uses live plants and the growing environment to heal and rehabilitate people. There are four essential elements in the practice of horticultural therapy: 1) a defined treatment procedure that focuses on horticultural or gardening activities; 2) a client with a diagnosed problem who is in treatment for that problem; 3) a treatment goal that can be measured and evaluated, and; 4) a trained professional to deliver the treatment. Treatment goals in horticultural therapy programs typically target social, psychological, physical, and cognitive health outcomes. Horticultural therapy practitioners often time work as private consultants that work with a variety of client groups and settings while others are directly hired by one institution. From a recent survey of registered horticultural therapists, the most common settings for horticultural therapy programs were vocational training centers, rehabilitation hospitals, nursing homes, botanic gardens, veteran's facilities, hospice, alcohol treatment centers and cancer treatment centers.

Horticultural therapy is considered a complimentary therapy along with physicians, psychiatrists, psychologists, occupational therapists, physical therapists, behavioral specialists, vocational skills instructors, and others. Thus horticultural therapy practitioners must be experts on the medical and psychological benefits of gardening and facilitating improvement of the patients' physical, social, and mental well-being.

A. Educational Objectives

Upon completing the graduate certificate program in horticultural therapy students will

- Be able to explain the delivery models and systems used in settings where horticultural therapy is currently practiced and where it is emerging as a service
- Have achieved entry-level competence through a combination of academic and fieldwork education
- Be prepared to articulate and apply horticultural therapy theory and evidence-based evaluations and interventions to achieve expected outcomes
- Be prepared to be a lifelong learner and keep current with evidence-based professional practice
- Uphold the ethical standards, values, and attitudes of the horticultural therapy profession
- Understand the distinct roles and responsibilities of the horticultural therapist
- Be prepared to advocate as a professional for the horticultural therapy services offered and for the recipients of those services
- Be prepared to be an effective consumer of the latest research and knowledge bases that support practice and contribute to the growth and dissemination of research and knowledge

B. Certificate Program Courses

The Graduate Certificate in Horticultural Therapy consists of 16 credit hours in required courses.

Required courses:

HORT 750 Orientation to Horticultural Therapy 1 cr
HORT 751 Human Issues in Horticultural Therapy 3 cr
HORT 752 Horticulture in Horticultural Therapy 3 cr
HORT 753 Clinical Skills in HT 6 cr
HORT 755 Practicum in Horticultural Therapy 3 cr

COURSE DESCRIPTIONS

HORT 750 Orientation to Horticultural Therapy 1cr (Fall, Spring)

This course will introduce students to online delivery methods, graduate level research, writing and technology skills, create a community of practice, and introduce students to the profession of horticultural therapy.

HORT 751 Human Issues in Horticultural Therapy 3cr (Fall, Spring)

This course will explore human issues in horticulture generally, and human issues in horticultural therapy specifically. Consideration of selected topics and issues such as people-plant relationship theories, horticultural therapy as a specialized allied health field, health-care gardens and their use, societal impacts on horticultural therapy, and research issues. Provides students with a knowledge and understanding of the literature in horticultural therapy and develops an appreciation of the interrelationships involved in this multidisciplinary area.

HORT 752 Horticulture in Horticultural Therapy 3cr (Spring)

Application of horticulture principles and practices in therapeutic settings; considerations for greenhouse systems operations and management in therapeutic settings; landscape maintenance, fruit and vegetable gardening, and production horticulture as part of a therapeutic program; and plant propagation for production and therapy.

HORT 753 Clinical Skills in Horticultural Therapy 6cr (Summer through Fall)

This course begins summer semester, concludes fall semester, and requires two 5-day on-site experiences. Development of horticultural therapy skills and methodology is presented through real-life case studies. New developments and applications of gardening or horticultural activities for special populations will be emphasized. Procedures for management of horticultural therapy programs, designing therapeutic or rehabilitation activities, and evaluation methods will be discussed. Instruction, practice, and evaluation of clinical skills with population groups typically served through horticultural therapy. Pr.: HORT 751.

HORT 755 Practicum in Horticultural Therapy 3cr (Fall, Spring)

The practicum is a means of demonstrating the interconnections between ‘theory’ and ‘practice’. By conducting a practicum project, students demonstrate the ability to apply concepts and ideas from their study of horticultural therapy to a specific population or setting. Pr.: HORT 752, HORT 753

C. Meeting the Educational Objectives

The educational objectives will be achieved through program content that will include:

- *Foundational content*: prerequisite coursework in the behavioral and horticultural sciences
- *Basic tenets of horticultural therapy*: the history and philosophical base of the profession; the application of horticulture as therapy in various settings and with various population groups; the role of horticulture in the promotion of health and the prevention of disease and disability; client and facility assessment to formulate an intervention plan (HORT 751, HORT 753)
- *Horticultural therapy theoretical perspectives*: describe theories that underlie the practice of horticultural therapy; compare and contrast models of practice; how to use theories and models in horticultural therapy evaluation and intervention (HORT 751)
- *Screening, evaluation, and referral*: the use of standardized and non-standardized screening and assessment tools to determine the need of horticultural therapy intervention; the selection of appropriate assessment tools based on client needs and contextual factors; procedures and protocols when administering assessments; factors that might bias assessment results, such as culture, disability status, and situational variables; documentation procedures to adhere to facility, local, state, federal, and reimbursement agencies (HORT 753, HORT 755)
- *Formulation and implementation of an intervention plan*: the use of evaluation findings based on appropriate theoretical approaches, models of practice, and frames of reference to develop

horticulture-based intervention plans and strategies based on the stated needs of the client as well as data gathered during the evaluation process in collaboration with the client and others (HORT 752, HORT 753, HORT 755)

- *Context of service delivery:* the differentiation among the contexts of health care, education, community, and social systems as they relate to the practice of horticultural therapy; the current policy issues and social, economic, political, geographic, and demographic factors that influence the contexts for practice of horticultural therapy; the role and responsibility of the practitioner to address changes in service delivery policies to effect changes in the system, and to identify opportunities in emerging practice areas; the trends in models of service delivery and their potential effect on the practice of horticultural therapy (HORT 750, HORT 751, HORT 753)
- *Management of horticultural therapy services:* how the various practice settings (e.g. medical institutions, school systems, community systems) affect the delivery of horticultural therapy services; the impact of contextual factors on the management and delivery of horticultural therapy services; how to plan, develop, organize, and market the delivery of services (HORT 753, HORT 755)
- *Research:* the importance of research, scholarly activities, and the continued development of a body of knowledge relevant to the profession of horticultural therapy; how to locate, understand, and evaluate information, including the quality of research evidence; the use of research literature to make evidence-based decisions; how to understand and critique the validity of research studies, including designs (both quantitative and qualitative) and methodologies (HORT 750, HORT 751)

D. Program Need

a. Student Demand

There are several indicators in support of student interest in this program.

Beginning in 1991, the first distance education course in horticultural therapy was offered at K-State. HORT 780, a one-credit course, was taught as a series of 15 videotape lectures. Since this first distance education course, there have been continued requests for more horticultural therapy distance education offerings. Currently there are four courses offered via distance education: HORT 256, Human Dimensions of Horticulture; HORT 525, Horticulture for Special Populations; HORT 640, Problems in Horticulture/Horticulture Therapy; and HORT 880, Topics in Horticulture/Horticulture Therapy. With little to no marketing, enrollment in the distance education courses since the 2003-2004 academic year has averaged 33 students per year; HORT 256 has averaged 20 students; HORT 525 6 students; HORT 640 5 students; and HORT 880 3 students (see table below). HORT 525 and HORT 640 are available for undergraduate or graduate credit with 33-35% of students enrolling for graduate credit (see table below). *These enrollment numbers show that Distance Education is an important component of the HT program.* A large percentage of students are non-traditional, involved with family or employment situations and unable to relocate to Manhattan, Kansas.

Enrollment in Horticultural Therapy Distance Education Courses

Course	2003-2004	2004-2005	2005-2006	2006-2007	Total	4 year average
HORT 256	28	17	15	21	81	20
HORT 525	12	6	3	4	25	6
HORT 640	6	2	7	5	20	5
HORT 880	4	3	1	(not offered)	8	3

Graduate Enrollment in Horticultural Therapy Distance Education Courses

Course	2003-2004	2004-2005	2005-2006	2006-2007	Total
HORT 525	3	2	3	2	10
HORT 640	0	2	3	2	7
HORT 880	4	3	1	(not offered)	8

Saved email communication from perspective students to Shoemaker demonstrates the interest in graduate education and distance learning opportunities. All inquiries were for graduate education, the majority of the inquiries were for information on a Masters program, and almost half also asked if there were distance learning opportunities.

Email inquiries about graduate education received by Shoemaker

Year	Inquiries about a M.S.	Inquiries about a Ph.D.	Inquiries about distance learning
2007 - 2008	25	4	10

Since 2001, 14 students have worked in the area of horticultural therapy for their M.S. in the HFRR campus-based program. Of those students, 8 of them wanted to learn how to be a horticultural therapy practitioner and none of them have continued in a Ph.D. program. If a graduate-level practitioner training program had been available, 8 of the 14 would have chosen that option over our current research-based M.S. program. It is not known how many of them would have preferred a distance education graduate program.

The American Horticultural Therapy Associations new professional registration criterion requires college accredited horticultural therapy instruction. Currently, most individuals receive their horticultural therapy instruction through certificate programs at public gardens or not-for-profit institutes. This creates a new demand for college credit horticultural therapy instruction.

The campus-based BS in horticultural therapy was discontinued due to consistent low enrollment. The department currently offers campus-based horticultural therapy specializations at the undergraduate and graduate level. Enrollment for the undergraduate horticultural therapy specialization continues to be low. *The typical HT student is a non-traditional student, may be a career-changer, is typically place-bound, and usually has at least one higher-education degree (AHTA Board research, Chicago Botanic Garden market research). These characteristics of our primary student body explain why they are not likely to or are not able to move to Manhattan to participate in our campus-based undergraduate program but are highly likely to participate in a distance-education graduate program.*

b. Demand for Graduates

The dramatic changes in the health care field over the past ten years, primarily the shift to managed care, have influenced the profession of horticultural therapy and other allied therapy professions such as art therapy, music therapy, and occupational therapy. A study of these allied therapy professions by the AHTA Professional Standard Task Force in 2004 determined that the current registration process offered by AHTA would not be considered adequate by insurance companies and the educational standards were very sub-standard in today’s marketplace. As a result, AHTA has focused on raising the educational and competency requirements for registered clinicians. Starting in fall 2008, a bachelor’s degree and a minimum number of college credits in three subject areas [horticultural therapy (9 credits), horticulture (12 credits), and human services (12 credits)], will be required. The biggest challenge with these new standards for registration will be obtaining the college credit requirement in horticultural therapy. *There are very few universities currently offering coursework in horticultural therapy and only K-State offers courses via distance education.*

c. Locational and comparative advantages

Currently there are no other comparable programs in the State of Kansas or the nation. The AHTA web site lists two other universities offering an option in horticultural therapy at the undergraduate level (Rutgers University and University of Maine – Orono) and two university certificate programs at the undergraduate level. All of these are campus-based programs.

E. Administrative Structure

Administrative oversight of the certificate program will exist within the HFRR department with a close partnership with the Division of Continuing Education. Within HFRR, a program coordinator (Shoemaker) will have primary responsibility for administering the program, with support of the Graduate Committee for admissions decisions.

To gain admission, students will be approved for admission by the HFRR department Graduate Committee and by the Graduate School. Students will apply directly to the graduate certificate coordinator, the coordinator will forward to the HFRR department Graduate Committee for approval of recommendations for admission, and then forward to the Graduate School recommendations for admission.

Admission requires evidence of completion of a bachelor's degree from an accredited university with a grade point average above 3.0 on a 4.0 scale in the junior and senior years; two years of professional work experience; and college course work in horticulture (minimum of three courses), health and human services (minimum of two courses in subjects such as psychology and human development), and statistics. Applicants should have proficiency in the computer operations necessary to complete web-based distance courses. For international students a score of at least 600 (paper-based test) or 100 (IBT-internet-based test) on the TOEFL will be required.

F. Budget

Part I. Anticipated Enrollment	Implementation Year		Year 2		Year 3	
	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
A. Headcount		20		35		40
B. Total SCH taken by all students in program	245		300		350	
Part II. Program Cost Projection						
A. In implementation year one, list all identifiable General Use costs to the academic unit(s) and how they will be funded. In subsequent years, please include only the additional amount budgeted.						
	Implementation Year		Year 2		Year 3	
<u>Base Budget:</u>	--\$14,636--		--\$--		--\$30,000--	
Salaries						
OOE	--\$600--		--\$29,000--		--\$25,000--	
Total	--\$15,236--		--\$29,000--		--\$55,000--	

Implementation Year: The needs in the first year will be met with

- budgeted salary and operating expense lines of existing faculty (internal reallocation is not indicated above)
- Revenue of \$83,801 from:
 - \$15,236 in grant funds to be used for course development has been awarded from the Division of Continuing Education
 - Tuition and fees to HFRR @ \$177/credit hour = \$43,365
 - HORT 753 Materials fee @ \$210/credit hour = \$25,200

Year 2: The needs in the second year will be met with

- budgeted salary and operating expense lines of existing faculty (internal reallocation is not indicated above)
- Revenue of \$82,200 from:
 - Tuition and fees to HFRR @ \$186/credit hour = \$55,800
 - HORT 753 Materials fee @ \$220/credit hour = \$26,400

Year 3: The needs in the third year will be met with

- budgeted salary and operating expense lines of existing faculty (internal reallocation is not indicated above)
- Revenue of \$95,970 from:
 - Tuition and fees to HFRR @ \$195/credit hour = \$68,250
 - HORT 753 Materials fee @ \$231/credit hour = \$27,720

Projected Revenue

Begin Fall 2009			Projected		
Year 1		Credits	Enrollment	SCH	Dept. Revenue ^z
Summer	DCE Grant				\$15,236
Fall	HORT 750	1	10	10	1,770
(10 Students)	HORT 751	3	10	30	5,310
Spring	HORT 750	1	10	10	1,770
(10 new Students)	HORT 751	3	10	30	5,310
	HORT 752	3	15	45	7,965
Summer	HORT 753	6	20	120	21,240
	Materials fee ^y		20		25,200
Total				245	\$83,801
Year 2					
Fall	HORT 750	1	10	10	1,860
(10 new Students)	HORT 751	3	10	30	5,580
Spring	HORT 750	1	5	5	930
(5 new Students)	HORT 751	3	5	15	2,790
	HORT 752	3	20	60	11,160
	HORT 755	3	20	60	11,160
Summer	HORT 753	6	20	120	22,320
	Materials fee		20		26,400
10 students graduate					
Total				300	\$82,200
Year 3					
Fall	HORT 750	1	10	10	1,195
(10 new students)	HORT 751	3	10	30	5,850
	HORT 898	2	15	30	5,850
5 students graduate					
Spring	HORT 750	1	10	10	1,195
(5 new Students)	HORT 751	3	10	30	5,850
	HORT 752	3	20	60	11,700
	HORT 755	3	20	60	11,700
Summer	HORT 753	6	20	120	23,400
	Materials fee		20		27,720
10 students graduate					
Total				350	\$ 95,970
3-Year Total					\$261,971

^z2009-2010 tuition @ \$431/credit hour, \$107/credit hour tuition + \$70/credit hour department fee = \$177/credit hour to department

2010-2011 tuition @ 452/credit hour (5% increase) = \$186/credit hour to department

2011-2012 tuition @ 475/credit hour (5% increase) = \$195/credit hour to department

^ymaterials fee for additional costs associated with the on-site clinical training component of HORT 753 such as transportation, food, program supplies, this is based on a budget provided by the Chicago Botanic Garden, a likely training site for HORT 753; Year 1 @ of \$210/credit hour; Year 2 @ \$220 (5% increase); Year 3 @ \$231 (5% increase)

Projected Expenses

2009		Expenses
Year 1		
Davis	.10 FTE	
Shoemaker	.70 FTE	
Williams	.15 FTE	
Faculty salary and benefits are budgeted lines of existing faculty		
Graduate Assistant for course development^x		\$14,636
Travel for HORT 753 planning^z		600
Total		\$15,236
Year 2		
Davis	.10 FTE	
Shoemaker	.70 FTE	
Williams	.15 FTE	
Faculty salary and benefits are budgeted lines of existing faculty		
Travel for HORT 753 2 trips, 5 days each		4,000
HORT 753 site fees \$1,250/student^y		25,000
Total		\$29,000
Year 3		
Davis	.10 FTE	
Shoemaker	.70 FTE	
Williams	.15 FTE	
GTA	.50 FTE	30,000
HORT 753 site fees \$1,250/student		25,000
Total		\$55,000
Expenses – 3 year total		99,236
Revenue – 3 year total		261,971
Net		162,735

^xDivision of Continuing Education grant funded

^y Based on budget prepared by Chicago Botanic Garden, a likely training site for HORT 753

G. Faculty

Core Faculty

Three HFRR faculty will serve as the core faculty in the program. All are tenured, two are full professors, and all are graduate faculty.

Greg Davis, Ph.D., Associate Professor of Landscape Horticulture will serve as co-instructor for HORT 752 and a student advisor

Candice Shoemaker, Ph.D., Professor of Horticulture and Human Health will serve as faculty coordinator for the program, and instructor for HORT 750, 751, 753, and 755

Kim Williams, Ph.D., Professor of Floriculture will serve as co-instructor for HORT 752 and a student advisor

H. Faculty Coordinator for the Certificate Program

Candice Shoemaker, Ph.D., Professor of Horticulture and Human Health
Department of Horticulture, Forestry, and Recreation Resources
2021 Throckmorton
Manhattan, KS 66506

I. Student Learning Outcomes and Assessment Plan

a. List all of the student learning outcomes for the program.

Upon completing the Graduate Certificate in Horticultural Therapy students will

1. Be able to explain the delivery models and systems used in settings where horticultural therapy is currently practiced and where it is emerging as a service
2. Have achieved entry-level competence through a combination of academic and fieldwork education
3. Be prepared to articulate and apply horticultural therapy theory and evidence-based evaluations and interventions to achieve expected outcomes
4. Be prepared to be a lifelong learner and keep current with evidence-based professional practice
5. Uphold the ethical standards, values, and attitudes of the horticultural therapy profession
6. Understand the distinct roles and responsibilities of the horticultural therapist
7. Be prepared to advocate as a professional for the horticultural therapy services offered and for the recipients of those services
8. Be prepared to be an effective consumer of the latest research and knowledge bases that support practice and contribute to the growth and dissemination of research and knowledge

b. Identify outcomes that will be assessed in the first three years of the plan.

SLOs #1, 2, 3 and 6 will be assessed in the first three years of the program.

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

Program SLOs	University-wide SLOs (Graduate Programs)			Program SLO is conceptually different from university SLOs
	Knowledge	Skills	Attitudes and Professional Conduct	
1. HT Delivery Models & Services	☆			
2. Entry level competence	☆	☆	☆	
3. Evidence-based HT programming	☆	☆	☆	
4. Roles and Responsibilities	☆		☆	

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

SLO	Direct Assessment Method	Indirect Assessment Measure	Who will be Assessed?
<i>1. Be able to explain the delivery models and systems used in settings where horticultural therapy is currently practiced and where it is emerging as a service</i>	Final exam questions will be included in each of the required courses to assess this SLO	Exit interview with the program director and completion of a self assessment survey asking students their confidence in performing each of the SLOs (in development).	All students enrolled in course All students upon completion of the certificate program
<i>2. Have achieved entry-level competence through a combination of academic and fieldwork education</i>	Midterm and final evaluation of practitioner performance during practicum (HORT 755). Scoring rubrics will be used for this assessment (in development).	Fieldwork supervisor evaluation. Self-assessment of implementation of horticultural therapy program. Exit interview with the program director and completion of a self assessment survey asking students their confidence in performing each of the SLOs (in development).	All students enrolled in HORT 755 All students upon completion of the certificate program
<i>3. Be prepared to articulate and apply horticultural therapy theory and evidence-based evaluations and interventions to achieve expected outcomes</i>	Final exam questions will be included in HORT 751 and HORT 753 Midterm and final evaluation of practitioner performance during practicum (HORT 755). Scoring rubrics will be	Fieldwork supervisor evaluation. Self-assessment of implementation of horticultural therapy program. Exit interview with the	All students enrolled in HORT 751, HORT 753, and HORT 755 All students upon completion of the certificate program

	used for this assessment (in development).	program director and completion of a self assessment survey asking students their confidence in performing each of the SLOs (in development).	
6. Understand the distinct roles and responsibilities of the horticultural therapist	Final exam questions will be included in HORT 751 and HORT 753 Midterm and final evaluation of practitioner performance during practicum (HORT 755). Scoring rubrics will be used for this assessment (in development).	Fieldwork supervisor evaluation. Self-assessment of implementation of horticultural therapy program. Exit interview with the program director and completion of a self assessment survey asking students their confidence in performing each of the SLOs (in development).	All students enrolled in HORT 751, HORT 753, and HORT 755 All students upon completion of the certificate program

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

SLO	Timetable for Assessment	Baseline Created
1. Be able to explain the delivery models and systems used in settings where horticultural therapy is currently practiced and where it is emerging as a service	Fall 2009 Spring/Fall 2010 Spring/Fall 2011 Exit interview and self-assessment developed Fall/Spring 2009-2010	3-year baseline created for all exams Pilot test 2010 and create a baseline 2011
2. Have achieved entry-level competence through a combination of academic and fieldwork education	Rubrics, practicum self-assessment, and fieldwork supervisor evaluation form developed Fall/Spring 2009-2010 Exit interview and self-assessment developed Fall/Spring 2009-2010	Pilot test 2010 and create a baseline 2011 Pilot test 2010 and create a baseline 2011
3. Be prepared to articulate and apply horticultural therapy theory and evidence-based evaluations and interventions to achieve expected outcomes	Fall 2009 Spring/Fall 2010 Spring/Fall 2011 Rubrics, practicum self-assessment, and fieldwork supervisor evaluation form developed Fall/Spring 2009-2010 Exit interview and self-assessment developed Fall/Spring 2009-2010	3-year baseline created for all exams Pilot test 2010 and create a baseline 2011 Pilot test 2010 and create a baseline 2011
6. Understand the distinct roles and responsibilities of the horticultural therapist	Fall 2009 Spring/Fall 2010 Spring/Fall 2011 Rubrics, practicum self-assessment, and fieldwork supervisor evaluation form developed Fall/Spring 2009-2010 Exit interview and self-assessment developed Fall/Spring 2009-2010	3-year baseline created for all exams Pilot test 2010 and create a baseline 2011 Pilot test 2010 and create a baseline 2011

Faculty will meet once each semester to assess the tools designed to assess the SLOs. Student scores will be examined and a baseline set. Survey results of students completing the program will be reviewed. Appropriate adjustments to the courses will be made as warranted.

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

The program faculty will work together to prepare the assessment rubrics, student exit survey, and field supervisor evaluation form. Since this is a new program, assessment will be viewed as "standard operating protocol" rather than an additional administrative requirement. Thus, assessment results will be the guide for understanding and improving student learning as we implement and build this program.

At each semester meeting that will focus on assessment results, the program faculty will consider the results in the context of the full curriculum as well as within the courses intended to target specific SLOs.

J. Endorsements

Letters of endorsement from HFRR, the College of Agriculture, and the Division of Continuing Education are attached.