Minutes of the Graduate Council  
May 3, 2011 - 3:30 p.m.  
Room 212, KSU Student Union


Graduate School: C. Shanklin, J. Guikema, S. Schlender, M. Sellner, T. Sonnentag

1. Opening remarks
   Dean Shanklin recognized the following scholarship recipients and Graduate Student Council Officers:
   - Graduate Student Council Officers 2010-2011:
     President, Megan Miller; President Elect, Matthew Sellner; Secretary, Jedidiah Riley; Treasurer, Graciela Andrango
   - Introduction of 2011-2012 Graduate Student Council Officers:
     President: Matthew Sellner; President Elect: Tammy Sonnentag; Secretary: Jennifer Miller; Treasurer: Graciela Andrango
   - 2011 Alvin & RosaLee Sarachek Pre-Doctoral Honors Fellowship in Molecular Biology:
     Mauricio Montero Astúa, doctoral candidate in Plant Pathology; Major Professor, Dr. Anna Whitfield
   - 2011 Alvin & RosaLee Sarachek Scientific Travel Awards:
     - Erica Cain, doctoral candidate in Biology; Major Professor: Dr. Alexander Beeser
     - Vinod K. Mony, doctoral candidate in Biology; Major Professor: Dr. Michael Hermann
   - 2011 KSU Alumni Association Award Recipients:
     - Graduate Award for Outstanding Leadership & Service: Steve Bellinger, doctoral candidate in Nuclear Engineering
     - Graduate Award for Outstanding Academics: Nihar Ranjan Mohanty, doctoral candidate in Chemical Engineering
   - Recognition of Graduate Council members:
     Certificates were presented to those Graduate Council members whose terms have been completed at the end of the current academic year.

2. Minutes of the April 5, 2011 were approved as presented.

3. Graduate School Actions and Announcements
   The following appointments for non-graduate faculty to teach graduate courses (emergency approval) and graduate faculty memberships were approved by the Dean of the Graduate School.

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Department/Program</th>
<th>Date approved by Graduate School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheryl Ragar</td>
<td>Assistant Professor</td>
<td>American Ethnic Studies</td>
<td>4/17/2011</td>
</tr>
</tbody>
</table>
Non-Graduate Faculty to Teach Graduate Courses (emergency approval)

Name          Position          Department/Program          Date approved
Roger Friedmann  Instructor          English                        4/17/2011

4. Academic Affairs Committee – Mark Linville, Chair
On behalf of the Academic Affairs Committee, Mark Linville, chair, proposed approval of the following faculty members for graduate faculty. The motion passed.

Membership
Name                Position                  Department/Program
Yvonne A.-Boadu    Research Asst Professor         Family Studies & Human Services
Clifford Blair     Adjunct Professor            Statistics
Chenggen Chu       Adjunct Professor            Agronomy
Jessica Stamm      Assistant Professor           Industrial & Man. Systems Engineering
Jesse Poland       Adjunct Asst Professor          Agronomy

5. Course and Curriculum items
On behalf of the Academic Affairs Committee, Mark Linville, chair, proposed to approve the following course changes and additions. The motion passed.

Expedited Course Changes:

<table>
<thead>
<tr>
<th>Current Course Description</th>
<th>Proposed Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 622 – Cellular and Developmental Biology of the Nervous System. (3) I. in even years.</td>
<td>BIOL 622 – Cellular and Developmental Biology of the Nervous System. (3) II. An introduction to the cellular and molecular biology and embryology of developing brains and nervous systems of vertebrates and some model invertebrates. Pr.: Two courses in biology.</td>
</tr>
<tr>
<td>An introduction to the cellular and molecular biology and embryology of developing brains and nervous systems of vertebrates and some model invertebrates. Pr.: Two courses in biology.</td>
<td></td>
</tr>
</tbody>
</table>

RATIONALE: The course covers a very active research area in biology. Thus, the frequency of the course offering will be increased from once every two years to once every year. The switch in semesters from Fall to Spring fits the teaching schedule of the instructor.

EFFECTIVE DATE: Spring 2012
<table>
<thead>
<tr>
<th>Current Course Description</th>
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</table>
| **BIOL 687 - Microbial Ecology.** (3) II, in odd years. The ecology of aquatic and terrestrial microorganisms in their natural environment. **Pr.: BIOL 455.** | **BIOL 687 - Microbial Ecology.** (3) II, in odd years. The ecology of aquatic and terrestrial microorganisms in their natural environment. **Pr.: BIOL 455 or BIOL 529.**  
**RATIONALE:** The instructor requires that students have taken either BIOL 455 or BIOL 529 as prerequisites to this class. This change is to correct the prerequisite in the catalog. |
| **BIOL 697 – Topics in Biology.** (1-6) I, II, S. **Pr.: Consent of instructor.** | **BIOL 697 – Topics in Biology.** (1-6) I, II, S. Special course offering in an area of faculty expertise and/or supervised independent study project. **Pr.: Consent of instructor.**  
**RATIONALE:** A course description has been added to clarify course purpose. |
| **BIOL 698 – Problems in Biology.** (1-8) I, II, S. **Pr.: Consent of instructor.** | **BIOL 698 – Problems in Biology.** (1-8) I, II, S. Undergraduate research project pursued under the direction of a faculty mentor. A minimum of 45 hours of research effort is expected over the semester for each credit hour the student is enrolled. **Pr.: Consent of instructor.**  
**RATIONALE:** A course description has been added to clarify course purpose and expectations. |
| **BIOL 699 – Undergraduate Seminar in Biology.** (1) I, II. **Pr.: Consent of instructor.** | **BIOL 699 – Undergraduate Seminar in Biology.** (1) I, II. Attendance at seminars or journal clubs with topics of a biological nature. A summary and personal reflection on each meeting is submitted for course credit. **Pr.: Consent of instructor.**  
**RATIONALE:** A course description has been added to clarify course purpose and expectations. |

**EFFECTIVE DATE:** Spring 2013

**EFFECTIVE DATE:** Fall 2011
<table>
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<tr>
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<tr>
<td><strong>KIN 655 – Fitness Promotion. (3) I. The study of the implementation and promotion of preventive health programs for populations at work, hospitals, and community fitness settings. Pr.: KIN 310 and KIN 335.</strong></td>
<td><strong>KIN 655 - Fitness Promotion. (3) I. The study of the implementation and promotion of preventive health programs for populations at work, hospitals, and community fitness settings. Pr.: Grade of C or higher in KIN 310, 335, 345.</strong></td>
</tr>
<tr>
<td><strong>RATIONALE:</strong> Change in prerequisites to coincide with other KIN courses.</td>
<td><strong>EFFECTIVE DATE:</strong> Fall 2011</td>
</tr>
<tr>
<td><strong>MANGT 641 – Management of Quality: (3) II. Development of quality as a management philosophy through the study of ideas from contemporary quality philosophies of Deming, Juran, and Taguchi. Statistical process control charting as a process and quality improvement tool and product and process design as important components of quality. PR: MANGT421</strong></td>
<td><strong>MANGT 541 – Management of Quality: (3) II. Development of quality as a management philosophy through the study of ideas from contemporary quality philosophies of Deming, Juran, and Taguchi. Statistical process control charting as a process and quality improvement tool and product and process design as important components of quality. PR: MANGT421</strong></td>
</tr>
<tr>
<td><strong>Rationale:</strong> Graduate students rarely take this course and changing it to a 500-level course provides necessary resource flexibility to cover this course.</td>
<td><strong>Effective Date:</strong> Fall 2011</td>
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<tr>
<td>Current Course Description</td>
<td>Proposed Course Description</td>
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<tr>
<td><strong>FROM:</strong> MKTG 642 – Marketing Research (3) I.II. Designed to acquaint the students with the marketing research literature, concepts, methods, and techniques. The emphasis in this course is on how to actually conceptualize and conduct a marketing research project as well as use research as an aid for marketing management decisions. Topics include the marketing research industry, defining the marketing research problem, research design formulation, data collection, data preparation and analysis, communicating the research project, and international and ethical dimensions of marketing research.</td>
<td><strong>TO:</strong> MKTG 642 – Marketing Research (3) I.II. Designed to acquaint the students with the marketing research literature, concepts, methods, and techniques. The emphasis in this course is on how to actually conceptualize and conduct a marketing research project as well as use research as an aid for marketing management decisions. Topics include the marketing research industry, defining the marketing research problem, research design formulation, data collection, data preparation and analysis, communicating the research project, and international and ethical dimensions of marketing research.</td>
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<tr>
<td><strong>Requisites</strong></td>
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<tr>
<td>Prerequisite: STAT 351, CIS 101, CIS 102, CIS 103, MKTG 400 and MKTG 450.</td>
<td>Prerequisite: GENBA 166 or CIS 101, CIS 102, and CIS 103, STAT 351, MKTG 400 and MKTG 450.</td>
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<td><strong>UGE course</strong></td>
<td><strong>UGE course</strong></td>
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<td>No</td>
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**Rationale:**
One of the objectives of the recent revision of the core curriculum for the Bachelor of Science in Business Administration degree is to ensure that graduates have appropriate competency in information technology as it applies in a business setting. All business graduates are required to successfully complete GENBA 166. The change in the pre-requisite reflects this requirement.

**Impact on Other Units:**
The Department of Computing and Information Sciences has been contacted and approves of this change.

**Effective Date:** Fall 2011

<table>
<thead>
<tr>
<th>STAT 710 – Sample Survey Methods. (2) I, in even years. Design, conduct, and interpretation of sample surveys. <strong>Pr.:</strong> STAT 702 or STAT 703.</th>
<th>STAT 710 – Sample Survey Methods. (2) I, in even years. Design, conduct, and interpretation of sample surveys. <strong>Pr.:</strong> STAT 510 or 770.</th>
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<tbody>
<tr>
<td><strong>RATIONALE:</strong></td>
<td><strong>RATIONALE:</strong></td>
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<tr>
<td>Higher level or pre-requisites provides the necessary background for STAT 710.</td>
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<tr>
<td><strong>IMPACT:</strong></td>
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<td>None</td>
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<td>Fall 2011</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>STAT 716</td>
<td>Nonparametric Statistics</td>
</tr>
<tr>
<td>STAT 717</td>
<td>Categorical Data Analysis</td>
</tr>
<tr>
<td>STAT 720</td>
<td>Design of Experiments</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Name</td>
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<tr>
<td>STAT 722-</td>
<td>Experimental Design for Product Development and Quality Improvement.</td>
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</tbody>
</table>

**RATIONALE:** Specified pre-requisites corrected.  
**IMPACT:** None  
**EFFECTIVE DATE:** Fall 2011

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 730 –</td>
<td>Multivariate Statistical Methods.</td>
<td>(3)</td>
<td>II. Multivariate analysis of variance and covariance; classification and discrimination; principle components and introductory factor analysis; canonical correlation; digital computing procedures applied to data from natural and social sciences. Pr.: STAT 704 and 705.</td>
<td>STAT 704 and 705 or STAT 713.</td>
</tr>
</tbody>
</table>

**RATIONALE:** STAT 713 is taken by graduate students in Statistics and covers material offered in STAT 704 and 705 but at a higher level.  
**IMPACT:** None  
**EFFECTIVE DATE:** Fall 2011

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<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>STAT 736 –</td>
<td>Bioassay.</td>
<td>(2)</td>
<td>II, in odd years. Direct assays; quantitative dose-response models; parallel line assays; slope ratio assays; experimental designs for bioassay; covariance adjustment; weighted estimates; assays based on quantal responses. Pr.: STAT 704 and 705.</td>
<td>STAT 704 and 705 or STAT 713.</td>
</tr>
</tbody>
</table>

**RATIONALE:** STAT 713 is taken by graduate students in Statistics and covers material offered in STAT 704 and 705 but at a higher level.  
**IMPACT:** None  
**EFFECTIVE DATE:** Fall 2011
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Offerings</th>
<th>Prerequisites</th>
<th>Rationale</th>
<th>Impact</th>
<th>Effective Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 799</td>
<td>Topics in Statistics</td>
<td>(1-3) I, II, S.</td>
<td>Pr: STAT 703 or 770 and consent of instructor.</td>
<td></td>
<td>Change in pre-requisite to instructor permission provides flexibility in required background needed for particular topics offering.</td>
<td>None</td>
<td>Fall 2011</td>
</tr>
<tr>
<td>STAT 860</td>
<td>Linear Models I</td>
<td>(3) I.</td>
<td>Subspaces, projections, and generalized inverses; multivariate normal distribution, distribution of quadratic forms; optimal estimation and hypothesis testing procedures for the general linear model; application to regression models, correlation model.</td>
<td>Pr: STAT 704, 705, 771.</td>
<td>Higher level of pre-requisites provides the necessary background for STAT 860.</td>
<td>None</td>
<td>Fall 2011</td>
</tr>
<tr>
<td>Course</td>
<td>Title</td>
<td>Credits</td>
<td>Offered</td>
<td>Prerequisites</td>
<td>Rationale</td>
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<td>STAT 880</td>
<td>Time Series Analysis</td>
<td>(3)</td>
<td>I, in odd years</td>
<td>Autocorrelation function; spectral density; autoregressive integrated moving average processes; seasonal time series; transfer function model; intervention analysis; regression model with time series error. Pr.: STAT 705, 770.</td>
<td>Higher level of pre-requisites provides the necessary background for STAT 880.</td>
<td>None</td>
<td>Fall 2011</td>
</tr>
<tr>
<td>STAT 901</td>
<td>Rank and Robustness</td>
<td>(2)</td>
<td>I, in odd years</td>
<td>A study of robust and rank-based procedures for estimation and testing in one- and two-sample location problems and linear models. Topics may include: norm-based inference; asymptotic theory; asymptotic relative efficiency; evaluating robustness via the influence function and breakdown; R-estimates, M-estimates, U-statistics. Pr.: STAT 771, 860</td>
<td>Change in term offered allows a realignment of STAT 901, 902, 903 and 904 so that 902 and 903 can be taught within the same academic year, which is preferred since material in 903 depends directly on material in 902. Chance in pre-requisite removes redundancy.</td>
<td>None</td>
<td>Fall 2011</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Term</td>
<td>Prerequisites</td>
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<tr>
<td>STAT 902</td>
<td>Generalized Linear Models</td>
<td>(2) II</td>
<td>in</td>
<td>even years. Statistical models based on the exponential family of distributions where a function of the mean response is linear in the covariates. Applications to non-normal and discrete data, including binary, Poisson and gamma regression, and log-linear models. Topics include likelihood-based estimation and testing, model-fitting, residual analysis, over-dispersed models, quasi-likelihood, and the use of computer packages. Pr.: STAT 704, 705, 720.</td>
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<tr>
<td>STAT 903</td>
<td>Spatial and longitudinal Data</td>
<td>(2) I</td>
<td>in</td>
<td>odd years. Statistical analysis of spatially and temporally correlated data, including inference for continuous and discrete data based on linear, nonlinear and generalized linear models and methods. Inferential objectives include prediction of response and estimation of correlation/covariance structures. Pr.: STAT 720, 771, 861.</td>
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<tr>
<td>STAT 902</td>
<td>Generalized Linear Models</td>
<td>(2) I</td>
<td>in</td>
<td>odd years. Statistical models based on the exponential family of distributions where a function of the mean response is linear in the covariates. Applications to non-normal and discrete data, including binary, Poisson and gamma regression, and log-linear models. Topics include likelihood-based estimation and testing, model-fitting, residual analysis, over-dispersed models, quasi-likelihood, and the use of computer packages. Pr.: STAT 860.</td>
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</table>

RATIONALE: Change in term offered allows STAT 902 and 903 to be taught within the same academic year, which is preferred since material in 903 depends directly on material in 902. Change in pre-requisite corrects the level of background study required for STAT 902.

IMPACT: None

EFFECTIVE DATE: Fall 2011
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Offered</th>
<th>Prerequisites</th>
<th>Description</th>
<th>Rationale</th>
<th>Impact</th>
<th>Effective Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 904</td>
<td>Resampling Methods.</td>
<td>(2) II</td>
<td>even</td>
<td></td>
<td>Application, theory, and computational aspects of resampling methods. Topics include parametric, nonparametric, jackknife, and finite-population resampling; bootstrap confidence intervals and hypothesis tests; randomization theory and permutation tests; application to regression; implementation using statistical software. Additional topics may include double bootstrap, dependent data, efficient resampling. Pr.: STAT 771, 860.</td>
<td>Change in pre-requisite removes redundancy.</td>
<td>None</td>
<td>Fall 2011</td>
</tr>
<tr>
<td>STAT 904</td>
<td>Resampling Methods.</td>
<td>(2) II</td>
<td>even</td>
<td></td>
<td>Application, theory, and computational aspects of resampling methods. Topics include parametric, nonparametric, jackknife, and finite-population resampling; bootstrap confidence intervals and hypothesis tests; randomization theory and permutation tests; application to regression; implementation using statistical software. Additional topics may include double bootstrap, dependent data, efficient resampling. Pr.: STAT 860.</td>
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<tr>
<td>STAT 945</td>
<td>Problems in Statistical Consulting.</td>
<td>(1) I, II</td>
<td></td>
<td></td>
<td>Principles and practices of statistical consulting. Supervised experience in consultation and consequent research concerning applied statistics and probability associated with on-campus investigations. Pr.: STAT 720 or 722, restricted to majors.</td>
<td>Statistical design concepts covered in STAT 720 are required as pre-requisites background for STAT 945.</td>
<td>None</td>
<td>Fall 2011</td>
</tr>
<tr>
<td>STAT 945</td>
<td>Problems in Statistical Consulting.</td>
<td>(1) I, II</td>
<td></td>
<td></td>
<td>Principles and practices of statistical consulting. Supervised experience in consultation and consequent research concerning applied statistics and probability associated with on-campus investigations. Pr.: STAT 720, restricted to majors.</td>
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</tr>
<tr>
<td>STAT 950</td>
<td>Advanced Studies in Probability and Statistics.</td>
<td>(1-3) I, II, S.</td>
<td></td>
<td>STAT 771</td>
<td>Theoretical studies of advanced topics in probability, decision theory, Markov processes, experimental design, stochastic processes, or advanced topics. May be repeated. Pr.: STAT 771.</td>
<td>Change in pre-requisite to instructor permission provides flexibility in required background needed for a particular advanced studies offering.</td>
<td>None</td>
<td>Fall 2011</td>
</tr>
<tr>
<td>STAT 950</td>
<td>Advanced Studies in Probability and Statistics.</td>
<td>(1-3) I, II, S.</td>
<td></td>
<td>Instructor consent</td>
<td>Theoretical studies of advanced topics in probability, decision theory, Markov processes, experimental design, stochastic processes, or advanced topics. May be repeated. Pr.: Instructor consent.</td>
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</table>
Non-Expedited New Courses

ADD: AGCOM 844. Theory in Agricultural Communications (3) I. The study of major communication theories and theorists in the context of agricultural communications.

RATIONALE: Professionals in Agricultural Communications seeking graduate level education should develop a deeper appreciation for the theoretical underpinnings of their discipline and of work in their field. This course is part of the AG IDEA courses that will be included in the M.S. in Agricultural Education and Communication program proposal.

IMPACT: The School of Journalism and Mass Communications (Steve Smathers and Angela Powers) and the Department of Communication Studies, Theatre and Dance (Charlie Griffin) have been contacted. The Department of Communication Studies, Theatre and Dance has responded.

EFFECTIVE DATE: Fall 2012

ADD: AGEC 615. Global Agricultural Development. (3) I. Current issues in global agricultural systems and international agricultural development from an economic perspective. Students will engage in microeconomic study of important contemporary issues affecting the global agricultural economy including technological change, policy, environmental stressors and global treaties. Three hrs lec per week. Pr.: AGEC 315 and AGEC 500. K-State 8: (3) Ethical Reasoning and Responsibility and (4) Global Issues and Perspectives

RATIONALE: This course is designed to build mastery in the area of international agricultural development and contribute to the "Global Issues Perspectives" in the K-State 8 general education curriculum.

IMPACT: No negative impact on other departments is expected.

EFFECTIVE DATE: Fall 2012

ADD: AGED 810. Social Data Analysis in Communications and Agricultural Education. (3) II. A course in measurement and analysis as related to social science research and evaluation. The course takes an applied approach to organizing data, analyzing data according to research and evaluation objectives and/or hypotheses, using descriptive and inferential statistics, and interpreting data. Students gain practical experience in data entry and using SPSS for calculating statistics through laboratory exercises.

RATIONALE: This course is currently offered through AG-IDEA and will become one of the courses for students selecting the Thesis option in the proposed Agricultural Education and Communication Masters Degree Program.

IMPACT: The Department of Curriculum and Instruction in the College of Education (Gail Schroyer) and the Department of Statistics (Jim Neill) have been contacted and have responded indicating support of the proposal.

EFFECTIVE DATE: Spring 2012

ADD: AGED 830. The History and Leadership of the Land Grant University. (3) I. The course will provide a historical overview of the evolution and development of land-grant colleges/universities. It will reflect on the fundamental beliefs of those who conceptualized and implemented the land-grant college and university
The course will enable students to examine early public mandates and subsequent successes of these special institutions of higher education, as well as evaluate significant education, research, and public service developments and new initiatives needed for land-grants to effectively serve society in the future. It is expected that students will gain an understanding of and benefits derived from the institutions that comprise the land-grant college and university family, as well as envision developments and opportunities that will mold the future of these special institutions that represent the land-grant legacy.

RATIONALE: Professionals in Extension Education seeking graduate level education should develop a deeper appreciation for the total role of the Land Grant University in addition to their working knowledge of the extension function of the tri-partite mission. The historical aspects of the Land Grant provide important foundational knowledge for current challenges. Further, those seeking advanced leadership positions within the Cooperative Extension Service will be provided with fundamentals of leadership challenges and opportunities within this unique setting. This course is part of the Ag IDEA courses that will be included in the Agricultural Education and Communication Masters Degree Program proposal.

IMPACT: It is not believed that any other units currently offer courses in this area.
EFFECTIVE DATE: Fall 2012

ADD: AGED 840. Advanced Theory and Methods of Teaching Agriculture. (3) I. This course will use contemporary and foundational theory and research on teaching and learning processes in the application and organization of instructional methods and techniques in formal and non-formal educational settings particularly in agriculture, food and natural resources disciplines.

RATIONALE: The majority of education professionals pursuing this degree program are baccalaureate graduates of teacher education programs and have taken an undergraduate level course in teaching methods. Such courses are completed prior to professional experience. Practitioners will benefit greatly by further exploring teaching methods through the lens of their classroom experience. Using this advanced background as a foundation for the course, students will be challenged to expand their pedagogical skill set. This course is part of the Ag IDEA courses that will be included in the M.S. in Agricultural Education and Communication program proposal.

IMPACT: The Department of Curriculum and Instruction in the College of Education (Gail Shroyer) has been contacted and has responded indicating support of the proposal.
EFFECTIVE DATE: Fall 2012

ADD: AGED 858. Program Planning and Evaluation in Agricultural and Extension Education. (3) II. This course is designed for students who are interested in the development and evaluation of agricultural and extension education programs. The course is designed to help students in the following areas: Acquire an understanding of program development from theory to practice; Strengthen their skills in planning, designing, implementing, evaluating and accounting for educational programs of targeted audiences; and provide application of program planning and evaluation concepts through experiential learning and class projects.

RATIONALE: This course is part of the AG IDEA courses that will be included in the Agricultural Education and Communication Masters Degree Program proposal.

IMPACT: No other department teaches a similar course.
EFFECTIVE DATE: Spring 2012
ADD: AGED 859. Management of Volunteers in Agricultural and Extension Education. (3) II. This course is intended to prepare students to be effective managers of volunteer programs, or to challenge those students already engaged in those roles to improve on their existing skills. Theory will be emphasized in the course, only in so much as it is essential to be grounded in theory in order to apply it. Major topics of the course will include, but are not limited to: volunteer recruitment, training, evaluation, and reward. This is an active course where students will be required to be active in and outside of class sessions.

RATIONALE: This course is part of the AG IDEA courses that will be included in the Agricultural Education and Communication Masters Degree Program proposal.

IMPACT: No other department teaches a similar course.

EFFECTIVE DATE: Spring 2012

ADD: AGED 890. Master’s Project. (1-3) I, II, U. Students select and prepare a project designed to improve their professional practice. It may be the construction of a professional portfolio or project to represent the student’s learning throughout the master’s degree program.

RATIONALE: This course is intended to be a capstone course for those students selecting the Project Option in the new Agricultural Education and Communication Masters Degree Program.

IMPACT: The department of Curriculum and Instruction in the College of Education (Gail Shroyer) has been contacted and has responded indicating support of the proposal.

EFFECTIVE DATE: Spring 2012

ADD: AGED 899. Master’s Thesis. (1-6) I, II, U. A master’s thesis presents the results of an original investigation or a problem or topic within the student’s classroom or educational field approved by the candidate’s supervisory committee.

RATIONALE: This course is intended to be a capstone experience for students in the new M.S. in Agricultural Education and Communication that is being proposed.

EFFECTIVE DATE: Spring 2012

ADD: CIS 755 Advanced Computer and Information Security: (3) II. In-depth coverage of advanced theoretical and practical security techniques with emphasis on construction of new systems and auditing and repair of existing security-critical systems using rigorous design, risk analysis, and engineering methods and application of state-of-the-art theoretical tools. PR: CIS 551 or CIS 751.

RATIONALE: With escalating threats coming from the cyberspace, it has become imperative for everyone to obtain necessary education and training in information assurance and cybersecurity. While the current Computing and Information Sciences security curriculum is adequate for the general population of computing an information science students, there is an increased demand for computer scientists and software engineers who specialize in building, maintaining, and auditing secure software. The goal of this course is to build on the current introductory cybersecurity curriculum and create a class that will train future cybersecurity engineers. This will be an advanced course in computer and information security with an emphasis on thorough
understanding of key concepts. Building on knowledge and skills acquired from the introductory security course (CIS 551/751), this course will cover a smaller number of advanced theoretical and practical topics, favoring depth instead of breadth. Covered areas include distributed system security, trusted and trustworthy computing, applied cryptography, privacy and anonymity, and advanced access control. After this course, students will be able to not only apply existing theoretical and practical solutions to specific problems, but also combine and extend existing tools in novel ways. Students also learn to critically and thoroughly examine existing systems to spot and repair security flaws. Most material is already available, but some will be changed to keep pace with the state of the art in computer security research. The course will be part of the "Security" track of the CIS-MSE program and will also be offered to distance learning students. Depending on the number of distance students enrolled, lectures may be pre-recorded or delivered live at alternate times. This course has already been offered in Spring of 2011 as a CIS 590/798, with 5 on-campus students and 1 distance student enrolled. Two of the on-campus students are undergraduates, and this course will be geared for advanced undergraduates, Master's students, and beginning PhD students.

Impact: None.

Effective: Spring 2012.

ADD: CIS 833 Information Retrieval and Text Mining: (3) I. Theory and practice of search engines for retrieving textual information; basic and advanced topics, with emphasis on newer technologies that go beyond simple keyword search; the use of MapReduce framework to process large collections of documents. PR: CIS 732 and instructor permission.

RATIONALE: Advances in Web technologies have resulted in large amounts of data available online. As a consequence, information retrieval, which can be used to transform these data into useful information, has received a lot of attention in recent years. Information Retrieval (IR) refers to the processing, indexing and querying of unstructured or loosely structured information. This course is focused on the theory and practice of search engines for retrieving textual information (including web documents). Basic and advanced topics in IR are covered, with emphasis on newer technologies that go beyond simple keyword search. The MapReduce framework is also introduced in the context of processing large collections of documents. Programming assignments provide hands-on experience with retrieval systems and MapReduce/Hadoop technologies. The skills that students acquire are very useful in today's Web industry. More advanced topics in IR are studied through final class projects, which could lead to interesting Master or Ph.D. thesis topics. This course has been already offered three times to on-campus students. Thus, all the course materials for on-campus students are already available. The course will be part of the "Data Mining and Information Retrieval" track of the CIS-MSE program and will also be offered to distance learning students. Lectures will be recorded for distance students. The last three offerings of this course in Fall 2008, 2009 and 2010 had 11, 14 and 13 students, respectively.

Impact: None.

Effective: Spring 2012.

Add: CIS 834 Machine Learning for Bioinformatics: (3) II, odd years. The course will cover some of the most important machine learning algorithms (including semi-supervised and transfer learning algorithms) and their applications to bioinformatics. PR: Either CIS 732 or CIS 734, and instructor permission.

RATIONALE: Advances in high-throughput experiments and sequencing technologies have resulted in large amounts of data in biological sciences. This has led to unprecedented opportunities for large-scale knowledge discovery in a number of areas, including characterization of macromolecular sequence-structure-function
relationships and discovery of complex genetic regulatory networks, among others. Machine learning algorithms offer some of the most cost-effective approaches to automated knowledge discovery in emerging data-rich disciplines. In this course, some of the most important machine learning algorithms and their applications to bioinformatics are discussed. The instructor(s) will provide the background for the biological problems discussed in this course and will describe machine learning algorithms that can be used to address these problems. The application of the algorithms to biological problems will be discussed using recent bioinformatics research papers. Students are expected to write critical reviews for all papers discussed, and to lead the discussion of 2-3 papers. This course was offered to on-campus students in Fall 2008 and is being offered again in Spring 2011. Thus, many basic course materials for on-campus students are already available, although the papers discussed will be changing as the research in this area advances. The course will be part of the "Bioinformatics" track of the CIS-MSE program and will also be offered to distance learning students. Lectures will be recorded for distance students and live paper presentations will be replaced with online sessions where students discuss the assigned reading assignments. The Fall 2007 offering of this course had 5 students, and the current offering in Spring 2011 has 8 students.

Impact: None.
Effective: Spring 2012.

ADD: ENTOM 837 - Plant-Virus-Vector Interactions. (2) I, 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. Rec. Pr.: one of the following: BIOCH 521, BIOCH 522, ENTOM 830, ENTOM 875, or PLPTH 500. Cross-listed as PLPTH 837.

RATIONALE: This course is the same as PLPTH 837 which is already offered in the Department of Plant Pathology. We propose to cross-list PLPTH 837 as ENTOM 837 to better promote the course among Entomology graduate students.

IMPACT: The Department of Plant Pathology has approved this change and will be cross-listing the course.

EFFECTIVE DATE: Fall 2011

ADD: FSHS 765 Military Personal Finance (3) This course gives an overview of the topics relevant to the financial planning process. The course adapts the topics to address the unique needs, terminology, benefits, and resources that impact military service members and their families. Topics covered are: status of service member; financial readiness; financial management; recordkeeping; cash flow management; risk management; credit and debt management; savings, education planning, and investment management; tax management; retirement management; estate management; and special topics.

When Offered: Fall, Spring, Summer

RATIONALE: The ability to manage personal finances is challenging for many members of the Armed Forces. Personal financial problems have become a growing problem that can impact mission readiness of the service member. The purpose of this class is to train financial planners and counselors to help military service and family members effectively deal with financial issues.

EFFECTIVE DATE: Fall 2011
IMPACT ON OTHER UNITS: None

ADD: FSHS 909 Topics in Personal Financial Planning Credits: (0-3) Recent research, theory construction, and
program development in personal financial planning, which will focus on selected relevant topics. Designed for doctoral students in personal financial planning.

When Offered: As needed/As requested

RATIONALE: The doctorate emphasis in Personal Financial Planning was established in Summer 2009. The proposed course serves as an option for special topics courses without the reliance on the general FSHS special topics course number.

EFFECTIVE DATE: Fall 2011
IMPACT ON OTHER UNITS: None

ADD: GENAG 712. Occupational and Agricultural Injury Prevention. (3), II. Explores traumatic injuries and their prevention in occupational and agricultural settings. Topics include falls, workplace violence, animal handling, mobile equipment, fixed machines, work tools, electrical hazards, fires, and explosions. This is a distance course.

RATIONALE: The course will help students master the fundamental knowledge and skills to manage traumatic injury hazards in the workplace. The course is being developed in part to address a need for graduate and continuing education for occupational safety and health professionals, as identified in a recent survey conducted by the Division of Continuing Education. In addition, it is anticipated the course will be incorporated as a core offering in a proposal currently under development for an interdisciplinary distance-based master of science degree in occupational and agricultural safety and health.

IMPACT: This distance-based course includes some topics similar to those in non-distance courses taught by Industrial and Manufacturing Systems Engineering. However, the proposed Injury Prevention course is being designed to serve different needs and a different population of students. Rather than focusing on engineering, the new course will reflect a broad, "safetygeneralist" approach to injury prevention based on the model described by the Board of Certified Safety Professionals in their discussion, "The Safety Professional Today" (http://www.bscp.org/safetyprofessional). In other words, the course will introduce students to an interdisciplinary concept of injury prevention, drawing broadly on the social and behavioral sciences, biological sciences, and other fields. All content related to engineering is intended simply to help students become informed consumers (not designers) of common control devices, such as PTO shields. To summarize the differences with IMSE courses: (1) the proposed course will include a strong emphasis on safety in agriculture and agriculture-related industries; (2) it will be based on an interdisciplinary approach to injury prevention; (3) it will be designed for students who do not have an engineering/mathematics background; (4) no attempt will be made to teach engineering methods or design; and (5) the course will be taught through distance education. The Departments of Industrial and Manufacturing Systems Engineering (Bradley Kramer) and Biological and Agricultural Engineering (Joe Harner) have been contacted and have responded indicating no objection to the course.

EFFECTIVE DATE: Spring 2012

ADD: GENAG 812. Managing Occupational and Agricultural Safety and Health. (3), I. Examines program management and leadership issues in occupational and agricultural safety and health. Topics include business aspects of safety and health, management functions, workforce involvement, program development, motivation and leadership, program evaluation, ethics of safety and health, responding to the needs of a diverse workforce, and innovative program management for changing economic and societal contexts. This is a distance course.
RATIONALE: The course will help students master the fundamental knowledge and skills to manage occupational and agricultural safety and health programs. The course is being developed in part to address a need for graduate and continuing education for occupational safety and health professionals, as identified in a recent survey conducted by the Division of Continuing Education. In addition, it is anticipated the course will be incorporated as a core offering in a proposal currently under development for an interdisciplinary distance-based master of science degree in occupational and agricultural safety and health.

IMPACT: No negative impact on other departments is expected. The Department of Management (Chwen Sheu) has been contacted; they responded with no objection to the course.

EFFECTIVE DATE: Fall 2012

ADD: GERON 700 Gerontechnology: (3) An interdisciplinary approach to the understanding of the biological, environmental, and social spheres where technology and gerontology meet. Topics include the interrelationship between population dynamics and technological change, technological research and devices that may improve elders' lives, particular issues for rural communities, and the social and cultural meanings, challenges, and benefits of gerontechnologies. Particular emphasis will be given to placing both population aging and technological change in a broader social perspective.

K-State 8: Social Sciences, Global Issues and Perspectives
When Offered: Spring

RATIONALE: Gerontechnology is a new and quickly growing field of study defined as the study of technology and aging for the purpose of ensuring good health, full social participation and independent living throughout the lifespan. Due to the growth of the Masters in Gerontology program new courses are needed to accommodate the growing number of students. This course will keep the gerontology program current and provide an opportunity for KSU students to explore this topic as a potential emphasis for their degree program. This course will be available to undergraduate students in the secondary major in gerontology as well as to students in the Great Plains IDEA online Masters and online Certificate programs in Gerontology.

EFFECTIVE DATE: Fall 2011
IMPACT ON OTHER UNITS: None

ADD: GERON 710 Creativity and Aging: (3) What happens to creativity as a person ages? This unique class will help students to understand developmental and pathological changes in the brain that can lead to changes in creative output over time. Through hands-on experiences and direct association with older adults, students will grow an appreciation for creativity produced and inspired by older people. This course is intended to provide experiences that will help the student to create art programs for older adults.

K-State 8: Social Sciences, Aesthetic Experience and Interpretive Understanding
When Offered: Spring, Summer

RATIONALE: This course helps to fulfill our commitment to offer electives to undergraduate gerontology students. As faculty at KSU have retired and have not been replaced by others with an interest in aging, course selections have become limited in our fast growing program. This course will focus on positive aging and gives students hands-on experiences with creative programming for elders. We believe this helps them to be competitive in the job market. This course will be available to undergraduate students in the secondary major in gerontology as well as to students in the Great Plains IDEA online Masters and online Certificate programs in Gerontology.
ADD: GRAD 850 – Foundations of Homeland Security. 3. I. This introductory course provides the foundational framework for the Homeland Security program and surveys the major policies, practices, concepts, and challenges confronting practitioners in Homeland Security. Topics include an overview of threats to homeland security and an introduction to the roles, functions, and policies of organizations and government structures at the federal, tribal, state, and local levels. The National Response Framework (NRF) and National Incident Management System (NIMS) are studied.

RATIONALE: This course will be used as part of a graduate certificate program that is being developed and that will be offered collaboratively between Kansas State University and the U.S. Command and General Staff College. The course content was developed based on results of the 2008 needs analysis, the 2011 Homeland Security Symposium and feedback from a 10-member advisory board and five curriculum reviewers with expertise in the field. It will survey the major policies, practices, concepts and challenges impacting practicing professionals in the complex field of homeland security.

IMPACT: Given the domestic focus of homeland security this course will not impact other campus units. The existing security studies program limits its scope to an international focus. This course will not compete with security studies enrollments as the target population is specifically regional homeland security professionals and Command and General Staff College (CGSC) students who are enrolled in the CGSC homeland security elective track but who wish to expand their knowledge of the field with a graduate certificate from K-State.

EFFECTIVE DATE: Fall 2011

ADD: GRAD 851 – Homeland Security Threats. 3. I. Students will understand the various types of disasters, methodologies of disaster recovery, and roles and responsibilities of Federal, State, and local government. It will address the impact of disasters, including acts of terrorism, to include economic, physical, emotional, and psychological effects. Students will understand how disasters affect society, risk mitigation strategies, and how the levels of government coordinate to address disaster impacts.

RATIONALE: This course will be used as part of a graduate certificate program that is being developed and that will be offered collaboratively between Kansas State University and the U.S. Command and General Staff College. The course content was developed based on results of the 2008 needs analysis, the 2011 Homeland Security Symposium and feedback from a 10-member advisory board and five curriculum reviewers with expertise in the field. This course examines the various types of disasters which seriously disrupt the functioning of society, including natural and human precipitated events.

IMPACT: The focus of this course is on natural and man-made disasters including technological, using an 'all-hazards' framework. The uniqueness of this course is its focus on the impacts of all-hazards events and the operational and organizational dynamics of our domestic response systems. Existing security studies courses have a focus on a sociological and psychological understanding of international (versus domestic) terrorism therefore covering a significantly different aspect of threats.

EFFECTIVE DATE: Fall 2011

ADD: GRAD 852 – Organizations Amid Crisis. 3. I. The fundamental concepts and subject areas necessary for an organization to address in preparing for catastrophic emergency events and other events encountered by
organizations as a result of homeland security are examined. It outlines the organization and practical steps required to develop an effective crisis response plan. The relationships between private and public service organizations, including governmental, nonprofit, and hybrid types are studied.

RATIONALE: This course will be used as part of a graduate certificate program that is being developed and that will be offered collaboratively between Kansas State University and the U.S. Command and General Staff College. The course content was developed based on results of the 2008 needs analysis, the 2011 Homeland Security Symposium and feedback from a 10-member advisory board and five curriculum reviewers with expertise in the field. It will focus on the nature of organizations that constitute the homeland security preparation and response system and the operational and organizational dynamics of the emergency and crises response system.

IMPACT: The uniqueness of this course is the focus on the interrelated operations of private, non-profit, and public service, and governmental and military players at an applied level of practice. Given the course target population includes regional homeland security professionals and U.S. Command and General Staff College (CGSC) students enrolled in the CGSC homeland security track the impact on other K-State academic programs is minimized. The College of Business has indicated there will be no conflict between their course offerings and this proposed course. Some of the content overlaps with selected courses required in the Master's of Public Administration, but GRAD 852 focuses on the fundamental concepts related to preparing organizations for catastrophic emergencies.

EFFECTIVE DATE: Fall 2011

ADD: GRAD 853 – Homeland Security Process and Management. 3. I. Students will understand strategic, political, legal, and organizational challenges associated with the defense of the U.S. homeland, efforts that are under way to meet these challenges, and possible policy options. Intergovernmental responsibilities and relationships of local, state, and federal agencies in an “all-hazards” approach to disasters are emphasized. Major policy and regulatory issues of emergency management, including the role of the military in response to disaster operations, are examined.

RATIONALE: This course will be used as part of a graduate certificate program that is being developed and that will be offered collaboratively between Kansas State University and the U.S. Command and General Staff College. The course content was developed based on results of the 2008 need analysis, the 2011 Homeland Security Symposium and feedback from a 10-member advisory board and five curriculum reviewers with expertise in the field. It serves as the basis for understanding the intergovernmental responsibilities and relationships of local, state and federal agencies in an "all-hazards" approach to preparing and responding to manmade and natural disasters.

IMPACT: This course will provide a thorough understanding of the strategic, political, legal, and organizational issues and practices essential to management professionals practicing in the field of domestic Homeland Security. Given the course target population includes regional homeland security professionals and U.S. Command and General Staff College (CGSC) students enrolled in the CGSC homeland security track the impact on other K-State academic programs is minimized. The College of Business has indicated there will be no conflict between their course offerings and this proposed course.

EFFECTIVE DATE: Fall 2011
**ADD: HORT 630. General Viticulture.** (3) II, odd years. Focus is on aspects of grapes, from vine anatomy to final products produced from them. Includes cultivars, propagation, canopy management, diseases, weed control, physiology, anatomy, irrigation, wine production, climates and soils. Three hours lecture a week. Rec. Pr.: HORT 520.

RATIONALE: This course will augment the graduate program course offerings in Horticulture and is an elective in the proposed Graduate Certificate in Advanced Horticulture.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2011

**ADD: HORT 695. Introduction to Permaculture.** (3) I, odd years. Exploration of a thinking/design methodology that seeks to provide for the physical needs of humans, including food, water, shelter, energy, etc. while doing so in an environmentally-friendly, sustainable manner. Three hours lecture a week. Rec. Pr.: HORT 201 and HORT 275.

RATIONALE: This course will augment the graduate program course offerings in Horticulture, particularly for the new M.S. specialization in Urban Horticulture, and is an elective in the proposed Graduate Certificate in Advanced Horticulture.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2011

**ADD: HORT 715. Advanced Interiorscaping.** (3) II, even years. Focus is the physiological principles and industry practices in the production, moving, care, and maintenance of interior plants. This course will provide students the career tools to design, install and maintain interior plantscapes through knowledge of interior plant physiology, care and maintenance. Two hours lecture and two hours lab a week. Rec. Pr.: HORT 201 and BIOL 500.

RATIONALE: This course will augment the graduate program course offerings in Horticulture and is an elective in the proposed Graduate Certificate in Advanced Horticulture.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2011

**ADD: HORT 720. Environmental Nursery Production.** (3) II, odd years. Cultural practices used with nursery production will be presented with focus on the adoption of best management practices, conservation of resources, scientific research-based investigations related to nursery cultural practices, potential risks to nursery personnel, and off-site movement of air-borne materials and effluents to surrounding areas and public watersheds. Three hours lecture a week. Rec. Pr.: HORT 575.

RATIONALE: This course will augment the graduate program course offerings in Horticulture and is an elective in the proposed Graduate Certificate in Advanced Horticulture.

IMPACT: No impact on other departments.
ADD: HORT 760. Business Management for Horticultural Enterprises. (3) I. Focus is on developing a detailed business plan for the service, design and production businesses in horticulture that incorporates considerations of start-up capitalization, insurance, investments, legal accounting and employee compensation. Strategic decision-making and aspects of a horticulture firms that are unique to its industries, such as product seasonality and perishability, will be discussed. Three hours lecture a week. Rec. Pr.: HORT 500-level or above.

RATIONALE: This course will augment the graduate program course offerings in Horticulture and is an elective in the proposed Graduate Certificate in Advanced Horticulture.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2011

ADD: HORT 775. Plant Breeding Methods in Horticulture. (3) I, even years. Focus is on introductory plant breeding principles with emphasis on traditional methods of developing improved cultivars of cross-pollinated, self-pollinated, and asexually-propagated horticultural crops, and the genetic principles on which breeding methods are based. The course provides a general background in all areas of plant breeding as a foundation for mastering more complex breeding principles. Three hours lecture a week. Rec. Pr.: ASI 500 and STAT 300-level or above.

RATIONALE: This course will augment the graduate program course offerings in Horticulture and is an elective in the proposed Graduate Certificate in Advanced Horticulture.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2011

ADD: HORT 820. Quantitative Agricultural Remote Sensing. (3) I, odd years. Focus is on the theory and application of remote sensing to quantifying soil and vegetation characteristics relevant to agriculture and natural biosystems, including turfgrass. Three hours lecture a week. Rec. Pr.: AGRON 305 and PHYS 100-level or above.

RATIONALE: This course will augment the graduate program course offerings in Horticulture and is an elective in the proposed Graduate Certificate in Advanced Horticulture.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2011

ADD: STAT 701 – Fundamental Methods of Biostatistics. (3) I, II, S. A course emphasizing concepts and practice of statistical data analysis for the health sciences. Basic techniques of descriptive and inferential statistical methods applied to health related surveys and designed experiments. Populations and samples, parameters and statistics; sampling distributions for hypothesis testing and confidence intervals for means and proportions involving one sample, paired samples and multiple independent samples; odds ratios, risk ratios,
simple linear regression. Use of statistical software to facilitate the collection, manipulation, analysis and interpretation of health related data.

RATIONALE: The primary motivation for the development of an online course covering the basic principles and methods in biostatistics is to support accreditation needs of the Masters of Public Health program. A course with a focus on statistical methods as applied in the health sciences would be required to help meet the standards for accreditation established by the Council on Education for Public Health. Site visits for CEPH are scheduled for fall 2011. With areas of emphasis including food safety and biosecurity, zoonotic infectious diseases, public health nutrition and physical activity, the MPH program provides educational support for the university’s initiatives in the biosciences. It is also the case that an online course in biostatistics would enhance the Graduate Certificate in Applied Statistics program.

IMPACT: MPH program in the College of Veterinary Medicine.

EFFECTIVE DATE: Fall 2011

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Non-Expedited Curriculum Changes

Food Safety and Defense Certificate

<table>
<thead>
<tr>
<th>FROM</th>
<th>TO:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Courses for Food Safety and Defense Certificate (8 hours)</td>
<td>The certificate program requires 12 credit hours comprised of core and elective courses, as outlined below. Students must complete the required 12 credit hours with a cumulative GPA of at least 3.0 and may have no grade lower than a “B” in any certificate-program course. Students must be enrolled the semester the certificate program is completed.</td>
</tr>
<tr>
<td>FDSCI 600 - Microbiology of Food Credits: (2)</td>
<td>Core Requirements: 8 credits. Must take 4 courses from the list below.</td>
</tr>
<tr>
<td>FDSCI 690 - Principles of HACCP Credits: (2)</td>
<td>FDSCI 600 - Microbiology of Food Credits: (2) or</td>
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<tr>
<td>FDSCI 730 - A Multidisciplinary Overview of Food Safety and Security Credits: (2)</td>
<td>FDSCI 820 - Advanced Food Microbiology &amp; Biotechnology Credits: (2)</td>
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<tr>
<td>FDSCI 750 - Food Toxicsants Credits: (2)</td>
<td>FDSCI 690 - Principles of HACCP Credits: (2)</td>
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<tr>
<td>Elective Courses:</td>
<td></td>
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<tr>
<td>DMP 806 - Environmental Toxicology Credits: (2)</td>
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<td>DMP 854 - Intermediate Epidemiology Credits: (3)</td>
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<td>Course Code</td>
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<tr>
<td>FDSCI 713</td>
<td>Rapid Methods and Automation in Microbiology</td>
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<td>FDSCI 751</td>
<td>Food Laws and the Regulatory Process</td>
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<td>FDSCI 753</td>
<td>Risk Assessment for Food, Ag, &amp; Vet Med</td>
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<tr>
<td>FDSCI 810</td>
<td>Fermented Foods</td>
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<tr>
<td>FDSCI 820</td>
<td>Advanced Food Microbiology &amp; Biotechnology</td>
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<tr>
<td>KIN 818</td>
<td>Social and Behavioral Bases of Public Health</td>
</tr>
<tr>
<td>SOCWK 610</td>
<td>Topics in Social Work</td>
</tr>
<tr>
<td>FDSCI 730</td>
<td>A Multidisciplinary Overview of Food Safety and Security</td>
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<tr>
<td>FDSCI 731</td>
<td>Food Protection and Defense—Essential Concepts</td>
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<tr>
<td>FDSCI 750</td>
<td>Food Toxicants</td>
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<td><strong>Elective Courses:</strong></td>
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<tr>
<td></td>
<td>AGEC 710 - Comparative Food and Agriculture Systems</td>
</tr>
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<td></td>
<td>AGEC 805 - Agricultural Marketing</td>
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<td>AGEC 810 - Price, Income, and Trade Policies for Agriculture</td>
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<td>DMP 754 -- Introduction to Epidemiology</td>
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<td>DMP 816 -- Trade and Agricultural Health</td>
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<td>DMP 806 - Environmental Toxicology</td>
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<td>DMP 845 -- Food Safety Risk Analysis</td>
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<td></td>
<td>FDSCI 713 - Rapid Methods and Automation in Microbiology</td>
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<td></td>
<td>FDSCI 720 - Ethnic Foods: Food Safety, Food Protection and Defense</td>
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<td>FDSCI 725 - Food Analysis</td>
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<td>FDSCI 727 - Chemical Methods of Food Analysis</td>
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<td>FDSCI 751 - Food Laws and the Regulatory Process</td>
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<td>FDSCI 753 - Risk Assessment for Food, Ag, &amp; Vet Med</td>
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<td>FDSCI 791 - Advanced Applications of HACCP Principles</td>
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<td>FDSCI 810 - Fermented Foods</td>
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<td></td>
<td>FDSCI 815 - Advanced Food Chemistry</td>
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<td></td>
<td>FDSCI 820 - Advanced Food Microbiology &amp; Biotechnology</td>
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<tr>
<td></td>
<td>FDSCI 961 - Graduate Problems in Food Science</td>
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<td></td>
<td>Other courses as deemed appropriate by the Food Science Program Chair.</td>
</tr>
</tbody>
</table>

**Effective Date:** Fall 2011
RATIONALE: This revision provides more flexibility in the core course requirements for students that may have taken some of these core courses as an undergraduate. There are extensive updates and additions to the electives course offerings that have changed since the original certificate was approved in 2007.

### Master of Public Health degree program

<table>
<thead>
<tr>
<th>Required “Core” Courses for MPH Degree (14 hours)</th>
<th>Required “Core” Courses for MPH Degree (14 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMP 754 Introduction to Epidemiology or at least 3 hours of equivalent graduate or professional level epidemiology course credit (3 hours)</td>
<td>DMP 754 Introduction to Epidemiology or at least 3 hours of equivalent graduate or professional level epidemiology course credit (3 hours)</td>
</tr>
<tr>
<td>DMP 806 (2 hours)</td>
<td>DMP 806 (2 hours)</td>
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<tr>
<td>HMD 720 (3 hours)</td>
<td>HMD 720 (3 hours)</td>
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<tr>
<td>KIN 818 (3 hours)</td>
<td>KIN 818 (3 hours)</td>
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<tr>
<td>STAT 701 or 703 (3 hours)</td>
<td>STAT 701 (3 hours) Fundamental Methods of Biostatistics</td>
</tr>
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RATIONALE: Biostatistics is considered one of the five “core” areas of public health, and therefore, must be integrated into all MPH curricula. Initially, to complete an MPH degree at K-State, either STAT 702 or 703 (3 hours) was a required course. In consultation with the accrediting body for all MPH degrees, (the Council on Education for Public Health (CEPH)), and a review of the course content for STAT 702 and 703, we have been informed that the current statistics courses do not use enough biological data information and examples to offer the students a good understanding of biological data manipulation. Additionally, the program at K-State will not receive accreditation by CEPH until that deficiency is corrected.

Currently, the Department of Statistics has proposed adding a biostatistics course in their graduate courses.

The proposed new Biostatistics course (STAT 701 – Fundamental Methods of Biostatistics) aims to fulfill the competencies required for the MPH degree and will suffice as a stand-alone “core” course in biostatistics. Credit earned in biostatistics at other professional or graduate programs (at least 3 semester credit hours) may be substituted for STAT 701 as approved by the supervisory committee and program director.

Note the credit hour requirements for an MPH degree will remain the same at 42.

**EFFECTIVE DATE:** Fall 2011

### Certificate in Public Health Core Concepts certificate program
RATIONALE: The requirements for the Public Health Core Concepts Certificate mirrors the required “core” courses of the MPH degree. Currently, the Department of Statistics has proposed adding a biostatistics course to their graduate courses.

Changing the “core” courses required for the certificate matches the “core” courses required for the MPH degree and still meets the Graduate School requirements for a certificate program.

Note that the certificate program is not officially accredited by CEPH. Graduate students and professionals from other graduate programs who do not plan to seek an MPH degree upon completion of the certificate program may petition the Director of the MPH program to accept STAT 702 or 703 in lieu of STAT 701. All graduate students seeking an MPH degree must complete STAT 701 – Fundamental Methods of Biostatistics.

EFFECTIVE DATE: Fall 2011
MASTER OF SOFTWARE ENGINEERING: The goal of the K-State Master of Software Engineering (MSE) degree program is to produce software engineers with the skills and talents to produce the complex software-intensive systems of the future. The program is aimed at students with a degree in computer science, computer engineering, or a related engineering or science area. A K-State MSE graduate will be able to specify, design, implement, document, and maintain large and complex software systems in a variety of domains and specialty areas. The program will provide a background in the basic management techniques, technologies and tools used throughout the software industry today and tomorrow. The MSE program is designed to provide a solid foundation for tomorrow’s leaders in industry, government, non-profit, education, and other areas where software technology is indispensable.

Master's degree requirements:
The program of study for the MSE program consists of 33 credits that must include the following:

Core sequence (21 credits):
- CIS 740 - Software Engineering (3)
- CIS 744 - Advanced Software Analysis & Design (3)
- CIS 748 - Advanced Software Management (3)
- CIS 771 - Software Specification (3)
- CIS 841 - Verification and Validation (3)
- CIS 895 - MSE Project (six credits)

One of the following specialty sequences (6 credits):
Bioinformatics
- CIS 734 : Introduction to Genomics and Bioinformatics (3)
- CIS 834 : Introduction to bioinformatics and genomics (3)

Data Mining and Information Retrieval
- CIS 732 : Machine Learning and Pattern Recognition (3)
- CIS 833 : Information retrieval and bioinformatics (3)

Distributed Systems
- CIS 725 : Advanced Computer Networks (3)
- CIS 844 : Agent-Oriented Software Engineering (3)

Intelligent Systems
- CIS 730 : Principles of Artificial Intelligence (3)
- And one of the following
  - CIS 732 : Machine Learning and Pattern Recognition (3)
  - CIS 830 : Current Topics in Artificial Intell. (3)
  - CIS 844 : Agent-Oriented Software Eng. (3)

Security
- CIS 751 : Computer and Information Security (3)
- CIS 755 : Advanced Computer Security (3)

Web-based Systems
- CIS 726 : Advanced World Wide Web Technol. (3)
- And one of the following
  - CIS 732 : Machine Learning and Pattern Recognition (3)
  - CIS 833 : Information retrieval and bioinformatics (3)

Technical electives: Two additional computer science courses (700 level or above). Other technical courses may be substituted upon approval. (6 credits).

Notes
As part of CIS 895, each student will produce and present a "software portfolio" that contains a collection of documents related to the software development activity.

The student must receive a grade of B or better for all classes assigned by the Graduate Studies Committee and for each course used to satisfy the above requirements.
Non-Expedited Course Changes

FROM: PLPTH 837 - Plant-Virus-Vector Interactions. (2) I, 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.

TO: PLPTH 837 - Plant-Virus-Vector Interactions. (2) I, 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. Rec. Pr.: one of the following: BIOCH 521, BIOCH 522, ENTOM 830, ENTOM 875, or PLPTH 500. Cross-listed as ENTOM 837.

RATIONALE: Cross-list with ENTOM 837 to better promote the course among Entomology graduate students.

IMPACT: The Department of Entomology approves this change and is adding and cross-listing the course.

EFFECTIVE DATE: Fall 2011

Expedited Course Drop

DROP: MC 675 – International Advertising. (3) I. Overview of issues and challenges associated with advertising in a global environment, including cultural and economic differences, regulatory issues, and ethical and social responsibilities. Pr.: MC 110 or instructor permission.

RATIONALE: Course is no longer being offered.

EFFECTIVE DATE: Fall 2011

DROP: STAT 735 – Statistics in the Health Related Industries. (2) I, in odd years. Case studies and selected literature of applications of statistics to problems in pharmaceutical and health-related industries are discussed. Topics include pharmacokinetic analysis, covariance analysis, crossover studies, bioequivalence.

RATIONALE: The course was developed by a former faculty member and there are no plans to offer the course in the current Statistics curriculum.

IMPACT: None

EFFECTIVE DATE: Fall 2011

DROP: STAT 740 – Nonlinear Models. (3) S, in even years. Methods of estimating parameters of nonlinear models; procedures for testing hypotheses; construction of confidence intervals and regions; nonlinear analysis of covariance; quantal dose response and probabilistic choice models.

RATIONALE: The subject matter now overlaps with other currently offered classes in the Statistics curriculum.

IMPACT: None

EFFECTIVE DATE: Fall 2011

6. Graduate Student Affairs Committee – Daniel Higgins, Chair; Kelly Getty, Co-Chair
No Report

7. Graduate School Committee on Planning – Sue Williams, Chair
   No Report

8. Graduate School Committee on Assessment and Review – Esther Swilley, Chair
   The committee is continuing to review the documents of the current Board of Regents program review.

9. Graduate Student Council Information – Megan Miller, President

10. University Research and Scholarship

11. Graduate Fellowship Announcements
    -Department of Energy Fellowship: Deadline: June 30, 2011
      http://www1.eere.energy.gov/education/postdoctoral_fellowships/
    -SunShot Initiative Fellowship
      http://www1.eere.energy.gov/education/stp_fellowships.html

12. Graduate School Calendar of Events – May

   5/2 Graduate Student Council Meeting (12:00 pm – Union 213)

   5/3 Graduate Council Meeting (3:30 pm – Union 212)

   5/2 Deadline to participate in Spring Commencement. Online registration to participate in commencement must be completed. Beginning in late March, commencement information and the web address to register online to participate in commencement will be sent to those students whose Approval to Schedule Final Examination form has been received in the Graduate School.

   5/2 Deadline for Doctoral and MFA Degree Candidates Only: All requirements must be completed, including submission of your final examination ballot and final submission of your electronic dissertation (doctoral students only) to participate in Spring Commencement.

   5/6 To officially graduate in May 2011, your final examination ballot and the final copy of the electronic dissertation or master’s level thesis/report must be in the Graduate School.

   5/13 Graduate School Commencement (1:00 pm – Bramlage Coliseum)

13. Other business

   cc: Academic Deans and Directors
   Departments (please post)