

**College of Agricultural Sciences and Natural Resources**  
**Curriculum Committee**  
**Summary of Actions**  
**March 10, 2017**

<sup>1</sup> Faculty Action

Unit Title and Number	Type of Action Requested Courses (new, revisions, deletions, ACE certification and recertification)	Approved CASNR	Approved CASNR Faculty	Approved UCC	Approved Graduate Council
AECN 340 - Quantitative Methods in a Agribusiness	<p><b>New Course</b>  <b>AECN 340. Quantitative Methods in Agribusiness</b> (3 cr I, II) Lec 3. Prereq: ECON 312 Intermediate Microeconomics <i>Students can take ECON 312 as a prerequisite or concurrently.</i> Spreadsheet-based, real-world, example-driven approach to economic decision making. Learn how to apply, integrate and adapt economic theory tools and use quantitative data to address current important issues in agricultural markets and to think critically and analytically about economic issues in general and managerial decisions in particular. Use Excel to organize, analyze and present quantitative data and learn how quantitative data can be used to support economic decision making in agribusiness</p>	3/10/17			
BSEN 212B - Computational Tools and Modeling for Agricultural and Biological Systems Engineering: Control System	<p><b>Change of Prerequisites</b>  <b>BSEN 212B. Computational Tools and Modeling for Agricultural and Biological Systems Engineering: Control Systems</b> (AGEN 212B) (1 cr, II) Lec 1, lab 3. Prereq: AGEN/BSEN 112/112H, ELEC 211 or ELEC 213 or PHYS 212, or parallel, or permission. <i>This is a 5-week mini-course in which the lab time entails a combination of a 2<sup>nd</sup> lecture and followup laboratory applications.</i>            Introduction to microcontroller based embedded systems for agricultural and biological applications. Fundamental principles of microcontrollers and embedded systems through binary and hexadecimal number systems, digital logic, programming in integrated development environment, and microcontroller peripherals. Common agricultural and biological microcontroller input and output devices.</p>	3/10/17			
MSYM 262 - Problem Solving in Mechanized Systems Management	<p><b>Change of Prerequisites</b>  <b>MSYM 262. Problem Solving in Mechanized Systems Management</b> (1 cr II) Lec 1. Prereq: MATH 102, MSYM 109 or PHYS 141 or PHYS 151 or PHYS 211. Open to MSYM majors only.            Use of computational tools to solve problems relevant to mechanized systems management. Professional communication of technical information. Discussion of current and emerging issues relevant to the major.</p>	3/10/17			

MSYM 342 - Animal Housing Systems	<p><b>Change of Prerequisites and Semester Offered</b></p> <p><b>MSYM 342. Animal Housing Systems</b> (3 cr I) Lec 2, lab 2. Prereq: <u>MSYM 109 or general physics: PHYS 141 or PHYS 151 or PHYS 211.</u></p> <p>Production facilities for livestock and poultry will be developed with emphasis on building and feedlot layout, ventilation, heating and cooling systems; energy utilization; and construction materials and methods.</p>	3/10/17			
MSYM 354 - Soil Conservation and Watershed Management	<p><b>Change of Prerequisites</b></p> <p><b>[IS] MSYM 354. Soil Conservation and Watershed Management</b> (SOIL 354, WATS 354) (3 cr I) Lec 2, lab 3. Prereq: <u>AGRO/SOIL 153; and MSYM 109 or equivalent PHYS 141 or PHYS 151 or PHYS 211.</u></p> <p>Watershed hydrology, soil erosion, erosion control, water management, and land surveying and mapping. Includes rainfall-runoff relationships; determination of watershed characteristics; terraces, waterways, vegetative filters, and residue management; ponds, wetlands, non-point source pollution control, and water conservation; profile and topographic surveying.</p>	3/10/17			
MSYM 364 - Agricultural Products Processing and Handling	<p><b>Change of Prerequisites and Semester Offered</b></p> <p><b>MSYM 364. Agricultural Products Processing and Handling</b> (3 cr II) Lec 2, lab 2. Prereq: <u>MSYM 109 or general physics. PHYS 141 or PHYS 151 or PHYS 211.</u></p> <p>Analysis of processing and handling operations. Chemical and physical characteristics of agricultural products. Application of psychrometrics. Power requirements, capacities, and efficiencies of drying and conveying systems. Discussion of safety issues, logistics, and survey of industry technologies.</p>	3/10/17			
MSYM 412 - Hydraulic Power Systems	<p><b>Change of Prerequisites, Semester Offered and Description</b></p> <p><b>MSYM 412. Hydraulic Power Systems</b> (3 cr II) Lec 2, lab 2. Prereq: <u>MSYM 245 and 312.</u></p> <p>Theory and application of fluids under controlled pressure to perform work in mobile and industrial applications. <u>Positive displacement (PD) pumps, linear and rotary hydraulic actuators (hydraulic cylinders and motors), valves, and electric over hydraulic systems will be studied in detail. Fluid power circuit development on both hydraulic benches and computer simulated environments will be performed with emphasis on circuit analysis, and system troubleshooting.</u></p>	3/10/17			
MSYM 433/833 - Equipment and Tractor Testing	<p><b>Change of Prerequisites and Semester Offered</b></p> <p><b>MSYM 433/833. Equipment and Tractor Testing</b> (3 cr II) Lec 2, lab 2. Prereq: <u>MSYM 312 232; and STAT 218 or STAT/MATH 380 or MECH 321.</u> Offered <u>spring</u> semester in even-numbered calendar years.</p> <p>Principles and procedures involved in testing agricultural equipment and tractors. Actual test planned, scheduled, conducted and reported. Test may be based upon procedures used at the Nebraska Tractor Testing Laboratory or involve other equipment being used for research in the department.</p>	3/10/17			

MSYM 452/852 - Irrigation Systems Management	<p><b>Change of Prerequisites</b>  <b>MSYM 452/852. Irrigation Systems Management</b> (AGRO 452, WATS 452) (3 cr I) Lec 2, lab 2. Prereq: MSYM 109 or <u>general physics</u>; <u>PHYS 141 or PHYS 151 or PHYS 211. AGRO/SOIL 153</u> recommended.  Irrigation management and the selection, evaluation, and improvement of irrigation systems. Includes soil-water measurement, crop water use, irrigation scheduling, irrigation efficiency, measurement of water flow, irrigation systems, groundwater and wells, pumping systems, applying chemicals with irrigation systems, and environmental and water resource considerations.</p>	3/10/17		
STAT 821 - Statistical Methods I	<p><b>Change of Prerequisites</b>  <b>STAT 821. Statistical Methods I</b> (3 cr I, II) Lec. Prereq: Matrix Algebra; concurrently taking STAT 882, or passed STAT 882 <u>with grade of B or higher</u>, or passed STAT 880 <u>with grade of B or higher</u>. <i>Designed for Statistics MS majors and minors.</i>  Introduction to essential statistical methods and supporting design and modeling theory for professional statistical practice. First in a three semester sequence. Focus of this course on methods for single response variable and non-hierarchical study design.</p>	3/10/17		
STAT 822 - Statistical Methods II	<p><b>Change of Prerequisites</b>  <b>STAT 822. Statistical Methods II</b> (3 cr I, II) Lec 3. Prereq: STAT 821; concurrently taking STAT 883 or passed STAT 883 <u>with grade of B or higher</u>; or passed STAT 880 <u>with grade of B or higher</u>. <i>Course is designed for Statistics MS majors and minors.</i>  A continuation of Statistical Methods I. Second in a three semester sequence on essential statistical methods and supporting design and modeling theory for professional statistical practice. Focus in this course of methods for single response variable and multiple sources of random variation.</p>	3/10/17		
STAT 823 - Statistical Methods III	<p><b>Change of Prerequisites</b>  <b>STAT 823. Statistical Methods III</b> (3 cr I, II) Lec 3. Prereq STAT 822; STAT 883 <u>with grade of B or higher</u>; or STAT 880 <u>with grade of B or higher</u>. <i>This course is designed for Statistics MS Majors.</i>  Introduction to essential statistical methods and supporting design and modeling theory for professional statistical practice. Third in a three semester sequence. Focus of this course on methods for situations that extend beyond the single-response-variable, designed study cases featured in Statistical Methods I and II. These include multivariate statistics, non-linear models, nonand semi-parametric statistics, observational studies, and other theory and methods deemed appropriate as statistical science continues to evolve.</p>	3/10/17		

<p>STAT 880 - Introduction to Mathematical Statistics</p>	<p><b>Deletion of Prerequisites and Addition of Note</b>  <b>STAT 880. Introduction to Mathematical Statistics (3 cr)</b> Lec 3. <i>STAT 880 is not open to students earning a MA or MS degree in mathematics or statistics. This course requires command of material covered in MATH 107 or 107J, and STAT 218. It is also recommended to have command of materials covered in MATH 208 or 208H.</i>  Introductory mathematical statistics. Probability calculus; random variables, their probability distributions and expected values; sampling distributions; point estimation, confidence intervals and hypothesis testing theory and applications.</p>	<p>3/10/17</p>	
<p>STAT 950 - Computational Statistics I</p>	<p><b>Change of Prerequisites</b>  <b>STAT 950. Computational Statistics I (3 cr)</b> Lec 3. Prereq: STAT 883; STAT 977-823 or concurrent enrollment. <i>Prior experience with "R" software is required.</i>  Statistical computing needed for research and advanced statistical analyses. Topics include: bootstrap, high performance computing, jackknife, Linux, Markov chain Monte Carlo, Monte Carlo simulation, numerical differentiation and integration, optimization, parallel processing, permutation tests.</p>	<p>3/10/17</p>	
<p>STAT 960 - Matrix Algebra Applications in Statistics</p>	<p><b>Deletion of Course</b>  <b>STAT 960. Matrix Algebra Applications in Statistics (2 cr)</b> Lec 2. Prereq: STAT *801 and *802.  Concepts and matrix operations useful to expanding determinants, computing matrix inverses, determining rank and linear, (in) dependence, and finding latent roots and latent vectors; introduction to matrix algebra applications in regression analyses and linear models.</p>	<p>3/10/17</p>	
<p>New degree programs, options, specializations, certificates, minors (undergraduate and graduate)2/10</p>			
<p>Approved a new option, "Forensic Chemistry" in the Forensic degree program.</p>			
<p>Curriculum Committee Approval Only: Substitution/waivers, student appeals, bulletin copy (format, consistency, accuracy, editorial), operating procedures for the curriculum committee</p>			
<p>Approved the revision of the Forensic Science degree program.</p>			
<p><b>Informational Items: Tabled items, calendar of meetings and deadlines, changes in membership, program changes in degree program that do not include the college core, ACE assessment reports</b> The</p>			
<p>Because of Spring Break, the March 24<sup>th</sup> meeting is cancelled. The next meeting will be April 14, 2017 at 11:30 am in the Nebraska East Union.</p>			

<sup>1</sup> If you have specific questions or concerns; please visit with your CASNR Curriculum Committee Representative to discuss the specific agenda item.

Any unit or group of at least five (5) faculty may challenge a decision of the Committee that requires faculty action by filing a written objection. The unit administrator will coordinate the written response to the Dean by March 27, 2017. Unless the concerns can be resolved with clarification, revision and/or withdrawal and re-submission, the matter in question will be brought before the full faculty for discussion, debate and vote. If no written objections are properly filed, the action will be considered approved by the College faculty and either implemented or forwarded to the appropriate University Committee (University Curriculum Committee, Graduate Council and/or Academic Planning Committee) with the faculty recommendation for approval.

<sup>2</sup> The CASNR Curriculum Committee serves as the Parent Unit for the following degree programs:  
B.S. in Applied Science, B.S. in Environmental Studies, B.S. in Forensic Science, B.S. in Integrated Science, B.S. in PGA Golf Management, B.S. in Grassland Studies, Master of Applied Science and Doctor of Plant Health.

The Center for Grassland Studies serves as the hosting unit for the PGA Golf Management Program.



No approval needed