

**College of Agricultural Sciences and Natural Resources**  
**Curriculum Committee**  
**Summary of Actions**  
**May 12, 2017**

1 Faculty Action

Unit Title and Number	Courses (new, revisions, deletions, ACE certification and recertification)	Approved CASNR	Approved CASNR Faculty	Approved UCC	Approved Graduate Council
AGEN 443 - Design of Light-Frame Structures	<b>Change of Prereq.</b> <b>AGEN 443. Design of Light-Frame Structures (3 cr)</b> Prereq: <u>AGEN 324</u> or <u>MECH 325</u> or <u>parallel</u> . Engineering design for strength, economy, function and safety of light-frame structures; emphasis on wood, concrete, and steel elements; design project required.	5/12/17			
AGRU 888 - Teaching Undergraduate Science	<b>Addition of UG Level and Crosslisting</b> <b>AGRI 488/888. Teaching Undergraduate Science (SCIL 488/888) (1 cr I) Lec 1.</b> The dynamics of undergraduate student learning. Begin to develop the reflective practice of progressive instructional improvement. Interpreting improved educational outcomes in terms of the ability of the instructor to manipulate undergraduate student interactions with instructional materials in an active learning environment.	5/12/17			
ASCI 101 - Introduction to Animal Sciences	<b>Deletion of Course</b> <b>ASCI 101. Introduction to Animal Sciences (1 cr I) Lec 1, lab 2:</b> Survey of careers, internships, skills and information resources for students interested in animal sciences, animal health and veterinary medicine. General skills and information for success in college.	5/12/17			
ASCI 181 - Beef Industry Scholars - Freshman Seminar	<b>Deletion of Prereq.</b> <b>ASCI 181. Beef Industry Scholars - Freshman Seminar (1 cr II) Lec 1. Prereq: Acceptance into the Nebraska Beef Industry Scholars (NBIS) program. ASCI 181 is 'Letter grade only'.</b> Introduction to the Nebraska and United States beef industry. Discussion of issues by invited beef industry leaders and on-site visits of industry organizations.	5/12/17			
ASCI 240 - Anatomy and Physiology of Domestic Animals	<b>Change of Prereq.</b> <b>[ES] ASCI 240. Anatomy and Physiology of Domestic Animals (4 cr I, II) Lec 3, lab 3, rct.</b> Prereq: <u>BIOS 101</u> or <u>LIFE 120</u> or equivalent; and <u>CHEM 105</u> or <u>CHEM 109</u> or equivalent. Fundamentals of the anatomy and physiology of domestic animals.	5/12/17			

<p>ASCI 300A - Principles of Intercollegiate Livestock and Meats Evaluation and Judging-Principles of Meat Evaluation, Grading and Judging</p>	<p><b>Deletion of Prereq.</b>  <b>ASCI 300A. Principles of Intercollegiate Livestock and Meats Evaluation and Judging-Principles of Meat Evaluation, Grading and Judging (1 cr II) Lab 4. Prereq: ASCI 200.</b>  Comparative evaluation of meat characteristics of beef carcasses, beef primal cuts, pork carcasses, pork primal cuts, and lamb carcasses. Federal grade standards for beef carcass and application of USDA Institutional Meat Purchase Specifications.</p>	<p>5/12/17</p>		
<p>ASCI 315 - Animal Growth and Development</p>	<p><b>Change of Prereq.</b>  <b>ASCI 315. Animal Growth and Development (3 cr II) Lec 3. Prereq: ASCI 240 or 340</b>  Provide insight into the growth and development of the structural tissues in animals. The physiological, genetic, nutritional, and environmental factors that can affect growth and development of animals will be discussed in terms of both livestock and domestic animals.</p>	<p>5/12/17</p>		
<p>ASCI 320 -Animal Nutrition and Feeding</p>	<p><b>Change of Prereq.</b>  <b>ES] ASCI 320. Animal Nutrition and Feeding (3 cr I, II) Lec 2, lab 2, rct. Prereq: ASCI 240 or 340 or equivalent, CHEM 106 or 251 or equivalent.</b>  Fundamentals of nutrition and feeding of domestic livestock, nutrients and nutrient requirements, characteristics of feedstuffs, methods of feeding, and the feed industry.</p>	<p>5/12/17</p>		
<p>ASCI 322 - Equine Nutrition</p>	<p><b>Addition of Prereq.</b>  <b>ASCI 322. Equine Nutrition (2 cr II) Lec 2. Prereq: ASCI 320 recommended. Offered in odd numbered calendar years.</b>  Equine nutrition including digestive anatomy and physiology. Nutritional requirements of horses as related to growth, reproduction, and performance. The relationship of nutrition to disease and environment. Management practices and application of current equine nutritional research.</p>	<p>5/12/17</p>		
<p>ASCI 330- Animal Breeding</p>	<p><b>Change of Name, Prereq., and Description</b>  <b>[ES] ASCI 330. Animal Breeding and Genetics (4 cr I) Lec 3, lab 2. Prereq: AGRO 215 or BIOS 206; STAT 218 or MATH 106 or equivalent.</b>  Principles of animal genetics and genomics, and their application to improvement of livestock and companion animals. Topics include: characterization of allelic and genetic variation associated with animal performance, principles of selection, inbreeding and crossbreeding, advances in molecular genetics, and their applications to the development of breeding programs to enhance animal productivity and well-being.</p>	<p>5/12/17</p>		
<p>ASCI 340 - Animal Physiological Systems</p>	<p><b>Change of Prereq.</b>  <b>ASCI 340. Animal Physiological Systems (4 cr I) Lec 3, lab 2. Prereq: LIFE 120/421; CHEM 109-110; MATH 102, 103, 104, or 106.</b>  A comprehensive look at the major physiological systems that comprise the mammalian body. Anatomical organization and functionality of the nervous system, muscle, cardiovascular system, respiratory system, digestive system, urinary system, reproductive system, endocrine system, and immune system. Labs offer hands-on learning experiences through dissections, clinical demonstrations, and interactive multimedia.</p>	<p>5/12/17</p>		

<p>ASCI 341 - Physiology and Management of Reproduction</p>	<p><b>Change of Prereq.</b>  <b>ASCI 341. Physiology and Management of Reproduction (4 cr I) Lec 2, lab 3, rct 1. Prereq: ASCI 240 or 340.</b>  Comparative anatomy and physiology of reproduction in domestic animals. Endocrine regulation of reproductive function, patterns of reproduction, economic consequences of sub-optimal reproductive performance, environmental influences on reproductive efficiency, application of selected techniques for controlling reproduction. Laboratory provides application of techniques used in reproductive management.</p>	<p>5/12/17</p>		
<p>ASCI 381 - Beef Industry Scholars - Practicum</p>	<p><b>Change of Prereq.</b>  <b>ASCI 381. Beef Industry Scholars - Practicum (1 cr II) Lec 1. Prereq: Acceptance into the Nebraska-Beef Industry Scholars (NBIS) program; ASCI 311E, ALEC 350 417. ASCI 381 is 'Letter grade only'.</b>  Financial risk management, beef processing, animal health, and related emerging issues.</p>	<p>5/12/17</p>		
<p>ASCI 450 - Horse Management</p>	<p><b>Change of Prereq.</b>  <b>ACE 10) ASCI 450. Horse Management (3 cr I) Lec 2, lab 2. Prereq: Senior standing or permission; ASCI 320; ASCE 330; ASCI 341; ASCI 330 recommended.</b>  Light horse production. Nutrition, reproduction, management, housing, and principle usage of light horses.</p>	<p>5/12/17</p>		
<p>ASCI 481 - Beef Industry Scholars - Beef Summit</p>	<p><b>Change of Prereq.</b>  <b>ASCI 481. Beef Industry Scholars - Beef Summit (1 cr I) Lec 1. Prereq: Acceptance into the Nebraska-Beef Industry Scholars (NBIS) program; ASCI 381. ASCI 481 requires working with the Nebraska Cattlemen and the instructor to develop the summit. ASCI 481 is 'Letter grade only'.</b>  Identification of a major issue confronting the Nebraska beef industry. Organize a Nebraska summit meeting to discuss and bring the identified issue to resolution.</p>	<p>5/12/17</p>		
<p>ASCI 482 - Beef Industry Scholars - National Beef Industry Policy</p>	<p><b>Change of Prereq.</b>  <b>ASCI 482. Beef Industry Scholars - National Beef Industry Policy (AECN 482) (1 cr II) Lec 1. Prereq: ASCI 481; ASCI 395A or ASCI 395B or GRAS 490 or AECN 495C. ASCI 482 requires attending the National Cattlemen's Beef Association (NCBA) annual convention and then, communicating the new policy and issues to local organizations and undergraduate student groups. ASCI 482 is 'Letter grade only'.</b>  Discuss and dissect issues from the NCBA convention researching the pros and cons of current and proposed policy.</p>	<p>5/12/17</p>		
<p>ASCI 485 - Animal Systems Analysis</p>	<p><b>Change of Prereq.</b>  <b>(ACE 10) [IS] ASCI 485. Animal Systems Analysis (3 cr I, II) Lec 2, rct 2. Prereq: Junior or Senior standing; ASCI 250; AECN 201; or permission. Capstone course. ASCI 485 is for majors in the College of Agricultural Sciences and Natural Resources with an interest in careers in livestock production units, the meat industry, or related agribusiness.</b>  Goal setting, information gathering, and application of problem solving methods in animal science. Develops ability to analyze and solve problems in all segments of animal science by integration of information from all pertinent disciplines and sources.</p>	<p>5/12/17</p>		

<p><b>ASCI 486 - Animal Biological Systems</b></p>	<p><b>Change of Prereq.</b>  <b>ACE 10) [IS] ASCI 486. Animal Biological Systems (3 cr I) Lec 2, rct 2. Prereq: Junior or Senior standing; ASCI 240 or 340; ASCI 320; AGRO 215 or BIOS 206. Capstone course. ASCI 486 is for seniors with an interest in careers involving animal science disciplines, animal biology, and related fields.</b>  How to integrate information from the animal science disciplines to understanding animals as biological systems. The processes of growth, adaptation, and lactation. Analyzing the interrelationship of each discipline within animal production. Using case studies, scenarios, and problem solving assignments to examine how alterations in nutrition and metabolism, genetic makeup, endocrine profile and/or the environment impact or effect the animal as a whole.</p>	<p>5/12/17</p>		
<p>ASCI 490A - Animal Science Internship: Beef Feedlot Management</p>	<p><b>Change of Prereq.</b>  <b>ASCI 490A. Animal Science Internship: Beef Feedlot Management (1-3 cr, max 3) Fld. Prereq: ACGT 201, AGEN 325 and 452, ASCI 422 and 457, and permission. Acceptance into the Beef Feedlot Management Program.</b>  Management internship in a beef feedlot. Organizational and financial structure of the beef feedlot and experience in making decisions related to: animal production, marketing, business management, and personnel management.</p>	<p>5/12/17</p>		
<p>ASCI 944 - Quantitative Methods for Genomics of Complex Traits</p>	<p><b>Change of Prereq.</b>  <b>ASCI 944. Quantitative Methods for Genomics of Complex Traits (STAT 844) (3 cr II) Lec 3. Prereq: ASCI 861U or AGRO/ASCI/HORT 931 or BIOS 818 or equivalent; STAT 802 or 821 or equivalent.</b>  Quantitative genetic analysis of complex traits. Quantitative methodologies for connecting phenotypes with high-dimensional genomic information to understand polygenic traits from both prediction and inference perspectives.</p>	<p>5/12/17</p>		
<p>BSEN 112 - Computer-Aided Problem-Solving</p>	<p><b>Change of Prereq.</b>  <b>[ES] BSEN 112. Computer-Aided Problem-Solving (AGEN 112) (2 cr II) Lec 2. Prereq: BSEN 100/AGEN 100 and high school physics, or permission. MATH 106 or parallel.</b>  Problem solving techniques and procedures through the use of Excel, MATLAB, and graphical methods. Emphasis on problem/solution communications with topics and problems from agricultural engineering and biological systems engineering.</p>	<p>5/12/17</p>		
<p>BSEN 212A - Computational Tools and Modeling for Agricultural and Biological Systems Engineering: MATLAB</p>	<p><b>Change of Prereq.</b>  <b>BSEN 212A. Computational Tools and Modeling for Agricultural and Biological Systems Engineering: MATLAB (AGEN 212A) (1 cr I, II) Lec 1. Prereq: AGEN/BSEN 112/H2H, or permission.</b>  Introduction to tools needed to develop computation-intense solutions for a wide variety of problems relevant to agricultural and biological systems engineering. Advanced problem solving techniques are illustrated using examples of scripts.</p>	<p>5/12/17</p>		



<p>BSEN 212B - Computational Tools and Modeling for Agricultural and Biological Systems Engineering: Control Systems</p>	<p><b>Change of Prereq.</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 #12H, 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 2nd 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>	<p>5/12/17</p>		
<p>BSEN 212E - Computational Tools and Modeling for Agricultural and Biological Systems Engineering: LabVIEW</p>	<p><b>Change of Prereq.</b>  <b>BSEN 212E. Computational Tools and Modeling for Agricultural and Biological Systems Engineering: LabVIEW</b> (AGEN 212E) (1 cr I, II) Lec 1. Prereq: AGEN/BSEN 112 #12H, or permission.  Introduction to tools needed to develop computation-intense solutions for a wide variety of problems relevant to agricultural and biological systems engineering. Advanced problem solving techniques are illustrated using examples of scripts, simulation methods, graphical programming, and their combination.</p>	<p>5/12/17</p>		
<p>BSEN 303 - Principles of Process Engineering</p>	<p><b>Change of Prereq.</b>  <b>BSEN 303. Principles of Process Engineering</b> (AGEN 303) (3 cr) Lec 3. Prereq: MATH 221 or permission. <i>MECH 310 or CIVE 310 or CHME 332 is recommended.</i>  Introduction to performance parameters and characteristics of pumps, fans, presses, and solids handling, size reduction, separation and agitation equipment. Application of the various technologies studied with analysis of example systems.</p>	<p>5/12/17</p>		
<p>BSEN 317 - Introduction to Biomedical Engineering</p>	<p><b>Change of Prereq.</b>  <b>BSEN 317. Introduction to Biomedical Engineering</b> (3 cr I) Lec 3. Prereq: PHYS 211; MATH 221 or parallel and one semester of biology and LIFE 120 or BIOS 101.  Research areas and applications related to biomedical engineering including bioelectricity, biosensors, biomechanics, cardiovascular mechanics, tissue engineering, biotechnology, and medical imaging. Identifying engineering methods used to develop biomedical technologies and communicating technical knowledge to a wide variety of audiences.</p>	<p>5/12/17</p>		
<p>BSEN 350 - Soil and Water Resources Engineering</p>	<p><b>Change of Prereq. and Addition of when Offered</b>  <b>BSEN 350. Soil and Water Resources Engineering</b> (AGEN 350) (3 cr I) Lec 2, lab 3. Prereq: MATH 221; and parallel: MECH 310 or CIVE 310 or CHME 332  Introduction to soil and water resources and the engineering processes used to analyze watersheds. Soil water relations, evapotranspiration, precipitation, runoff, erosion, flow in natural waterways and through reservoirs, wetland and groundwater hydrology, and water quality. Geographic information system utilized to develop maps and analyze watershed characteristics. A selected watershed is investigated.</p>	<p>5/12/17</p>		

<p>BSEN 416/816 - Introduction to Biomaterials</p>	<p><b>Change of Prereq.</b>  <b>BSEN 416/816. Introduction to Biomaterials (3 cr) Lec 3.</b> Prereq: BSEN/AGEN 225 or MECH 325; BIOC 321 or BIOC 431. <u>BSEN 416/816 requires the evaluation of current primary literature in the field.</u>  Introduction to all types of bio-materials, metals, ceramics, polymers, and natural materials. Characterization of biomaterials, mechanical and physical properties, cell-biomaterials interactions, degradation, and host reaction to biomaterials. FDA testing and applications of biomaterials, implants, tissue engineering scaffolds, artificial organs, drug delivery, and adhesives.</p>	<p>5/12/17</p>	
<p>BSEN 446/846 - Unit Operations of Biological Processing</p>	<p><b>Change of Prereq.</b>  <b>BSEN 446/846. Unit Operations of Biological Processing (AGEN 446/846) (3 cr) Lec.</b> Prereq: AGEN/BSEN 225 and AGEN/BSEN 344 <del>CHEM 332 or equivalent</del>.  Application of heat, mass, and moment transport in analysis and design of unit operations for biological and agricultural materials. Evaporation, drying, distillation, extraction, leaching, thermal processing, membrane separation, centrifugation, and filtration.</p>	<p>5/12/17</p>	
<p>BSEN 470 - Design I in Agricultural and Biological Systems Engineering</p>	<p><b>Change of Prereq.</b>  <b>BSEN 470. Design I in Agricultural and Biological Systems Engineering (AGEN 470) (1 cr I, II) Lec 1.</b> Prereq: BSEN or MEGH 130 and AGEN or BSEN 344; Prereq or Parallel: AGEN or BSEN 460 and at least two courses from primary emphasis area; or Professional admission into AGEN or BSEN and permission.  Definition, scope, analysis, and synthesis of a comprehensive design problem within the areas of emphasis in the Department of Biological Systems Engineering. Identification of a client's engineering problem to solve, and development of objectives and anticipated results.</p>	<p>5/12/17</p>	
<p>CDEV 816 - Nebraska Rural Government Law Fundamentals</p>	<p><b>New Course</b>  <b>CDEV 816. Nebraska Rural Government Law Fundamentals (1 cr)</b>  A practical introduction to county and rural community government in Nebraska. Topics include state law and local governments; local government functions; land use regulation and zoning; drinking water and wastewater regulation; and local government taxes and spending.</p>	<p>5/12/17</p>	
<p>CDEV 817 - Nebraska Rural Government Finance Fundamentals</p>	<p><b>New Course</b>  <b>CDEV 817. Nebraska Rural Government Finance Fundamentals (1 cr) Prereq: CDEV 816</b> recommended.</p>	<p>5/12/17</p>	
<p>CDEV 818 - Community Engagement</p>	<p><b>New Course</b>  <b>CDEV 818. Community Engagement (ALEC 818) (1 cr) Lec 3.</b>  This course will provide a foundational knowledge of community engagement. This will include understanding a community's readiness to change; strategies to engage community's members and strategies to determine goals and indicators to achieve change. Participants will review and critique various community engagement and readiness processes, gaining an understanding of approaches advantages and limitations. Through case studies, experiential learning and discussions, participants will develop a skillset for community engagement processes that lead to long term change.</p>	<p>5/12/17</p>	

CDEV 819 - Community Action Strategies	<p><b>New Course</b>  <b>CDEV 819. Community Action Strategies (1 cr) Lec 3.</b>  The course is designed to provide a foundational understanding of community action planning. Participants will review and critique various community action planning processes, gaining an understanding of process advantages and limitations. Through case studies and discussions, participants will develop a skillset for community planning that clarifies what will be done and resources needed to accomplish the goals for long-term impacts.</p>	5/12/17			
CDEV 825 - Sustainable Economic Development	<p><b>New Course</b>  <b>CDEV 825. Sustainable Economic Development (1 cr) Lec 1.</b>  This course provides an overview of the connections between communities and their local systems and how they work together in affecting long-term community and economic development. Students will be introduced to the complex issues facing local communities, from human capital and environmental concerns to infrastructure and economic development. Tools and strategies for addressing these issues will be a focus of the course lectures and readings.</p>	5/12/17			
CDEV 826 - Fundamentals of Business Analysis	<p><b>New Course</b>  <b>CDEV 826. Fundamentals of Business Analysis (1 cr) Lec 3.</b>  The course is designed to provide a basic overview of business development skills for professionals who manage economic development organizations and provide initial business analysis for consideration of community investments. Through assigned case studies and course assignments, participants will be able to analyze key performance statements and ratios to help determine viability of business enterprises within their community. The course will engage participants through the use of group discussions based on readings, case studies and course assignments.</p>	5/12/17			
CDEV 827 - Community Workforce Development	<p><b>New Course</b>  <b>CDEV 827. Community Workforce Development (1 cr) Lec 3.</b>  CDEV 820, Community Workforce Development: current workforce issues and trends</p>	5/12/17			
MSYM 109 - Physical Principles in Agriculture and Life Sciences	<p><b>Change of Prereq.</b>  <b>(ACE 4) [ES] MSYM 109. Physical Principles in Agriculture and Life Sciences (4 cr I;H)</b>  Lec 3, rct 1. Prereq: MATH 101 or 102 or 103 or 104 or 106; or with a grade of C or better completed within the last 11 months; or, placement in MATH 102 or 104 or 106. (or-higher) within the last 11 months. <i>Students cannot receive credit for both MSYM 109 and any one of the following: PHYS 141, or 151 or 211.</i>  Fundamental principles of mechanics, heat, electricity, magnetism and electromagnetism and their relationship to energy utilization and conservation. Principles then applied to problem situations in agriculture and life sciences.</p>	5/12/17			

<p>NRES 322 - Environmental Education Curricula</p>	<p><b>New Course</b>  <b>NRES 322. Environmental Education Curricula (3 cr I, II) Lec 3.</b>  National curricula are available to formal and non-formal environmental and STEM (science, technology, engineering, and math) educators. Become certified in a series of national environmental education curricula such as Project WILD, Project WET, Project Aquatic WILD and Project Learning Tree. Apply skills and curricula by teaching others through experiential service learning.</p>	<p>5/12/17</p>		
<p>NRES 441 - Zoo Keeping and Management</p>	<p><b>New Course with ACE 10 Designation (ACE 10) NRES 441. Zoo Keeping and Management (3 cr I, II) Lec 3, lab 2.</b>  Examine and build on the knowledge, skills and abilities needed to work in a zoo in various capacities including animal keeping, guest services and curation. Acquire knowledge in all aspects needed to manage zoos including individual species care, collections, guest services, species conservation, and AZA accreditation. Become familiar with the concepts and challenges associated with the biological, educational, ethical, and administrative aspects of zoo science through partnerships and interactions with local zoos.</p>	<p>5/12/17</p>		
<p><b>New degree programs, options, specializations, certificates, minors (undergraduate and graduate)</b></p>				
<p>None</p>				
<p>Curriculum Committee Approval Only: Substitution/waivers, student appeals, bulletin copy (format, consistency, accuracy, editorial), operating procedures for the curriculum committee</p>				
<p>None</p>				
<p>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</p>				
<p>The Planning and Transition Meeting will be Thursday, June 8.</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 May 30, 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