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**Agribusiness Science & Technology - Agribusiness Management Program**

**Course Curriculum**

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| **Semester 01**   (Tuition: $2,460  Books: $460-$790) | | |
| **Course #** | **Course Title** | **Credits** |
| 10-006-116 | Introduction to Soils | 3 |
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| Credits: 3 Lecture Hours: 36 Lab Hours: 36 Course is designed to provide the student with fundamental knowledge of soil and soil composition. Students will study soil types, formation factors, physical properties, biological properties and basic soil chemistry. Units covering tillage, conservation, pH and soil management will also be included. Students will gain the skills required to interpret soil survey maps and recognize qualities of various soil types. The student will perform soil sampling, residue measurements, compaction assessments and soil loss determinations per crop rotation guidelines. | | |
| 10-006-121 | Agribusiness Computer Applications | 2 |
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| Credits: 2 Lecture Hours: 18 Lab Hours: 36 Students will develop skills in the use of agricultural applications of computer technologies including: Farmworks; creating and using spreadsheets in Excel; creating and using documents in Word; creating documents in Power Point; using email; using farm financial record keeping programs; using an IPAD and apps; and appropriate social media etiquette. | | |
| 10-006-169 | Career Development in Agriculture | 2 |
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| Credits: 2 Lecture Hours: 18 Lab Hours: 36 Student will develop individual leadership and employment qualities, in addition to exploring the agricultural industry and available careers. Subjects to be covered include; personal evaluation, goal setting, career opportunities, career exploration, current issues in agriculture, employment preparation, and interviewing skills. Also included are units covering workplace regulations, employment seeking, and motivational styles and techniques. | | |
| 10-006-180 | Animal Science | 3 |
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| Credits: 3 Lecture Hours: 36 Lab Hours: 36 This course provides fundamental knowledge of the animal science field. Topics include animal health, animal environments, anatomy and physiology, genetics and reproduction, animal feedstuffs, and job related safety. Participants will experience animal concepts through the completion of hands-on activities. | | |
| 10-801-195 | Written Communication *\* OR \** |  |
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| Credits: 3 Lecture Hours: 54 Students develop writing skills through prewriting, drafting, revising, and editing. Students complete writing assignments designed to help the learner analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Students develop critical reading and thinking skills through the analysis of a variety of written documents. | | |
| 10-801-136 | English Composition 1 | 3 |
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| Credits: 3 Lecture Hours: 54 This course is designed for learners to develop knowledge and skills in all aspects of the writing process. Planning, organizing, writing, editing and revising are applied through a variety of activities. Students will analyze audience and purpose, use elements of research and format documents using standard guidelines. Individuals will develop critical reading skills through analysis of various written documents. | | |
| 10-804-107 | College Mathematics | 3 |
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| Credits: 3 Lecture Hours: 54 This course is designed to review and develop fundamental concepts of mathematics in the areas of algebra, geometry, trigonometry, measurement and data. Algebra topics emphasize simplifying algebraic expressions, solving linear equations and inequalities with one variable, solving proportions and percent applications. Geometry and trigonometry topics include; finding areas and volumes of geometric figures, applying similar and congruent triangles, applying Pythagorean Theorem, and solving right triangles using trigonometric ratios. Measurement topics emphasize the application of measurement concepts and conversion techniques within and between U.S. customary and metric system to solve problems. Data topics emphasize data organization and summarization skills, including: frequency distributions, central tendency, relative position and measures of dispersion. Special emphasis is placed on problem solving, critical thinking and logical reasoning, making connections, and using calculators. | | |
|  |  | **16** |
| **Semester 02**   (Tuition: $2,960  Books: $580-$800) | | |
| **Course #** | **Course Title** | **Credits** |
| 10-006-104 | Animal Nutrition *\* OR \** |  |
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| Credits: 3 Lecture Hours: 36 Lab Hours: 36 The student will demonstrate how to formulate and balance rations for all forms of livestock. In addition, they will also be able to know the nutritional needs of various species and identify different feedstuffs. Students will be familiar with the laws and regulations on livestock feeding along with reading, interpreting, and making recommendations from feed test reports and tags. They will also be able to successfully understand the digestive systems of monogastric and ruminant animals. | | |
| 10-006-126 | Pest ID & Mgt/Crop Scouting | 3 |
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| Credits: 3 Lecture Hours: 36 Lab Hours: 36 The student will learn and develop skills, practices, and principles of identifying and managing pests that are a problem for a variety of common regionally grown agricultural crops. The student will learn control measures and application; proper use and safety measures; how to identify insects, weeds, and diseases in crops; various stages of growth related to timeliness of treatment; and methods of applying control measures. The student will learn principles to follow regarding the different ways of crop scouting. | | |
| 10-006-114 | Legal Aspects of Agribusiness | 3 |
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| Credits: 3 Lecture Hours: 36 Lab Hours: 36 Course provides the student with information pertinent to the regulation and legal liability of an agribusiness. Course content includes several topics relevant to anyone employed in the industry of agriculture. Specific units include; legal descriptions and applications, agricultural legislation, government sponsored programs offered through the USDA and WDATCP, contractual agreements, insurance, debt collection, bankruptcy, transportation, and employment liability. Upon successful completion of this course, the student will demonstrate knowledge of and ability to access laws pertaining to and regulating the industry of agriculture. | | |
| 10-006-133 | Agribusiness Financial Management | 3 |
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| Credits: 3 Lecture Hours: 36 Lab Hours: 36 This course will cover financial documents and practices as they relate to agribusinesses. Students will learn how agribusinesses use financial statements to analyze the financial health of a business. This course will give students a basic understanding of how to manage working capital and obtain financing. Management of activities that determine financial health of a business will be explored. | | |
| 10-006-136 | Agricultural Commodity Marketing | 3 |
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| Credits: 3 Lecture Hours: 36 Lab Hours: 36 Operation and use of agricultural commodity markets and institutions as applied to enterprise and firm risk management. Cash markets; futures markets and futures option markets; basis; hedging and forward pricing; price discovery; fundamental analysis; technical analysis and risk management strategies. Activities of commodity futures exchanges; the mechanics of trading futures contracts; the use of futures trading for hedging and forward pricing; and options, basis behavior, and hedging strategies for selected commodities. | | |
| 10-070-104 | Ag Safety, Electrical & Maintenance | 2 |
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| Credits: 2 Lecture Hours: 18 Lab Hours: 36 Students will learn skills necessary to help them make general repairs and identify proactive maintenance steps of all types of equipment throughout a farmstead. Safety while performing daily tasks will be included in every unit. Emphasis areas include selecting personal protective equipment, working around cattle, crop storage, farm chemicals and fluids storage, safety awareness of electrical systems both on equipment and around the farmstead, selecting proper tools to perform maintenance procedures, and ATV safety. Students will gain an understanding of viewing the farmstead with a safety focus to recognize farm hazards and being aware of corrective measures that are needed to make the farmstead safe for all personnel on the farm. | | |
| 10-101-101 | Accounting 1, Part 1 | 2 |
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| Credits: 2 Lecture Hours: 18 Lab Hours: 36 Students obtain a basic understanding of accounting principles and procedures. Emphasis will be given to journals, ledgers, accounts, terms, and systems used by accounting personnel. | | |
| 10-801-196 | Oral/Interpersonal Communication | 3 |
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| Credits: 3 Lecture Hours: 54 Students demonstrate competency in speaking, verbal and nonverbal communication, and listening skills through individual presentations, group activities and other projects. | | |
|  |  | **19** |
| **Semester 03**   (Tuition: $440) | | |
| **Course #** | **Course Title** | **Credits** |
| 10-006-197 | Agribusiness Internship | 3 |
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| Credits: 3 Lecture Hours: 0 Occupational Hours: 216 The student will have the opportunity to apply course work to a practical, on-the-job situation. Goals and task lists are followed. Prerequisites: Legal Aspects of Agribusiness (10-006-114) or Farm Animal Reproduction (10-006-150) or Pest ID & Management/Crop Scouting (10-006-126) | | |
|  |  | **3** |
| **Semester 04**   (Tuition: $2,300  Books: $290-$560) | | |
| **Course #** | **Course Title** | **Credits** |
| 10-006-134 | Agricultural Equipment Management | 3 |
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| Credits: 3 Lecture Hours: 36 Lab Hours: 36 Course will provide the student with the knowledge necessary to make decisions related to equipment management. Study will include equipment industry, power units, harvesting, and equipment management principles. A unit on equipment appraisal will be included, as will the operation of combine harvesting. Students will take part in activities off campus to reinforce classroom material. Labs will be used effectively to support information presented in lecture classes. Students will perform skills of equipment valuation, operation, and replacement strategies. | | |
| 10-006-137 | Agribusiness Marketing & Promotion | 3 |
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| Credits: 3 Lecture Hours: 36 Lab Hours: 36 This course will apply principles of marketing to an agricultural business. Student will develop understanding and skills related to the relationship between a business and their customers. Units of study will include analyzing market potential, identifying target markets, evaluating market trends and understanding competitive behavior. Students will create a branding plan for a business and outline methods of connecting with the customer base. Also included will be a comprehensive overview of the food chain from producer to consumer, demographics, and consumer buying decisions. Factors impacting the international marketing of agricultural products will be studied. | | |
| 10-006-163 | Agribusiness Management | 3 |
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| Credits: 3 Lecture Hours: 36 Lab Hours: 36 This course will offer the student the opportunity to become familiar with the current trends and practices used in the management of Agricultural businesses. Topics of study will include an overview of the food and fiber system, business organizations, role of management, marketing, forecasting, long range planning, personnel management and strategies of business competitiveness. Student will develop skills in assessing business performance. | | |
| 10-804-189 | Introductory Statistics *\* OR \** |  |
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| Credits: 3 Lecture Hours: 54 Students display data with graphs, describe distributions with numbers, perform correlation and regression analyses, and design experiments. They use probability and distributions to make predictions, estimate parameters, and test hypotheses. They draw inferences about relationships including ANOVA. | | |
| 10-804-123 | Math with Business Applications | 3 |
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| Credits: 3 Lecture Hours: 54 Students use real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, and apply math concepts to the purchasing/buying process, the selling process, and apply basic statistics to business/consumer applications. | | |
| 10-809-199 | Psychology of Human Relations *\* OR \** |  |
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| Credits: 3 Lecture Hours: 54 Students explore the relationship between the general principles of psychology and our everyday lives. Students are given the opportunity to achieve a deepened sense of awareness of themselves and others. This understanding enables students to improve their relationship with others at work, in the family, and in society. | | |
| 10-809-172 | Introduction to Diversity Studies | 3 |
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| Credits: 3 Lecture Hours: 54 Students draw from several disciplines to reaffirm the basic American values of justice and equality by learning a basic vocabulary, a history of immigration and conquest, principles of transcultural communication, legal liability and the value of aesthetic production to increase the probability of respectful encounters among people. In addition to an analysis of majority/minority relations in a multicultural context, the topics of ageism, sexism, gender differences, sexual orientation, the disabled and the American Disability Act (ADA) are explored. Ethnic relations are studied in global and comparative perspectives. | | |
|  |  | **15** |
| **Semester 05**   (Tuition: $2,490  Books: $100-$330) | | |
| **Course #** | **Course Title** | **Credits** |
| 10-006-128 | Nutrient Management Planning | 2 |
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| Credits: 2 Lecture Hours: 18 Lab Hours: 36 Course will cover advanced application of nutrient management principles. Special attention will be given to nutrient credits and the management of applied nutrients in consideration of the environment. Meeting requirements of the 590 standard will be followed. | | |
| 10-006-135 | Agribusiness Sales and Services | 3 |
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| Credits: 3 Lecture Hours: 36 Lab Hours: 36 Course will offer the student knowledge necessary in a career of sales and customer service. Units of study will include customer behavioral traits, lead development, sales openings, product knowledge, transactional analysis, sales closings, and customer service. Students will document knowledge and skill development through preparation of individual career progress project. The student will be required to create videotaped sales presentations for examination in class. | | |
| 10-006-138 | Employment Relations | 2 |
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| Credits: 2 Lecture Hours: 18 Lab Hours: 36 Introduces topics that relate to employment in an agricultural environment. Topics include personality, relationships, decision-making and social relations as they apply to everyday living and working in both family and non-family businesses. Personnel management techniques include: development of goals, determining personnel needs, finding and recruiting the right people, training, performance appraisals, promotions and terminations. | | |
| 10-006-150 | Farm Animal Reproduction *\* OR \** |  |
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| Credits: 3 Lecture Hours: 36 Lab Hours: 36 The student will learn the physiology and anatomy of the male and female reproductive tract of livestock. Also, covered in this course are hormones that effect the reproductive tract and the estrus cycle of the female. The student will become familiar with the reproductive disease of males and females. Finally an introduction to the common reproductive protocols and technology used within the industry. | | |
| 10-006-113 | Precision Ag Technologies | 3 |
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| Credits: 3 Lecture Hours: 36 Lab Hours: 36 Student will study fundamental processes of the Global Positioning System (GPS) with emphasis on its application to agricultural production. Technical aspects of the GPS satellites, differential correction, and hardware will be covered. The specific applications of the technology in agriculture for navigation, mapping, soil management, variable rate technology (VRT), and yield monitoring will be discussed and demonstrated by the student. Student will gain exposure to technology cost, and potential economic benefit of technology application. Student will also be introduced to the operation of Geographic Information Systems (GIS). | | |
| 10-006-168 | Agribusiness Records and Analysis | 3 |
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| Credits: 3 Lecture Hours: 36 Lab Hours: 36 This course will cover the creation and analysis of records used in the agribusiness industry. Units of study include business planning based on record keeping systems used. Practical application of commercial business and farm tax forms will be performed. Advance use of depreciation schedules, net worth statements, and cash flow analysis will be applied. Long term planning will also include investment strategies to maximize net worth. Focus will be placed on the 21 financial ratios and performance indicators. Upon successful completion of this course, the student will demonstrate the ability to complete applicable tax forms, make producer recommendations, determine ramifications of business activity, and calculate both personal and business financial health. | | |
| 10-809-195 | Economics | 3 |
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| Credits: 3 Lecture Hours: 54 Students will develop analytical skills central to how a market-oriented system operates and the factors that influence national economic policy. Students will apply basic concepts and analyses to a variety of contemporary problems and public policy issues. These concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment, and global economic issues. | | |
|  |  | **16** |
| **Total Credits: 69** | | |
| **Estimated Total Tuition: $10,650** | | |