

1 semester
2 semesters
College Credit
Career Academy

AGRICULTURE

Reach out with specific questions at nsffa@north-scott.k12.ia.us
View the full flowchart of Agriculture Classes: [click here](#)
Details: <https://www.northscottffa.org/about-us>

(1) Designates classes that fulfill the requirement for the Regent Admission Index Core Classes. Go to the "New Standards for Automatic Admission to Iowa's Public Universities," In this handbook, to [click here](#) or to your counselor for additional information about the RAI
(2) Qualifies for personal finance graduation requirement and high school credit

HIGH SCHOOL COURSES

High School Course Name	Grade	Semester	Brief Description
Introduction to Agri, Food, & Tech	9, 10, 11, 12	Year-long	Hands-on class, focused on feeding the world
Agricultural Biology (1)	9	Year-long	Fulfills Biology requirement, student must also be in Intro to Ag
Ag Engineering	10, 11, 12	Fall	Focus on precision agriculture and engineering processes
Ag Mechanics	10, 11, 12	Spring	Identification and cause and correction of equipment failures
Floral Design	10, 11, 12	Fall	Create various floral arrangements using various designs
Culinary Meat Selection & Cookery	10, 11, 12	Fall/Spring	Gain skills in meat cookery and selection
Foods of Animal Origin	10, 11, 12	Fall/Spring	Preparation of meat, dairy, egg, and honey products
Food Product Development	10, 11, 12	Fall/Spring	Make new food products from creation to marketing
Animal Care & Handling	10, 11, 12	Fall	Proper treatment, handling, & training of dogs and small animals
Sustainable Ag & Wildlife	10, 11, 12	Year-long	Aquaculture and fisheries, hydroponics, & animal and plant care
Agricultural Leadership & Comm.	10, 11, 12	Year-long	Lead the agriculture program, be a part of the Ag Leadership Team
Veterinary Assistant 1	10, 11, 12	Year-long	First year of veterinary assistant certificate program
Veterinary Assistant 2	11, 12	Year-long	Second year of veterinary assistant certificate program
Ag Work Based Learning	11, 12	Fall/Spring	Students gain hands on experiences at internship location
Agricultural Business (2)	12	Fall	Basics of running a business and managing its finances.

COLLEGE COURSES

Course #	Course Name	College Credits	Grade	Semester	Brief Description	ISU Transfer
College Courses Open to All Students						
AGA 390	Renewable Natural Resources	3	11, 12	Spring	Overview of ecosystems context	AGRON 1200
AGS 119	Advanced Animal Science	2	11, 12	Fall	Focus on different industries	ANS 1140
AGH 221	Principles of Horticulture	3	11, 12	Spring	Basics of plant care	HORT 2210

Note: Enrollment in an agriculture course or pathway automatically enrolls a student as an FFA member through the National Affiliation Process.

EASTERN IOWA COMMUNITY COLLEGE CAREER ACADEMIES

Course #	Course Name	College Credits	Grade	Semester	Brief Description	ISU Transfer
Agriculture Academy*						
AGS 315	Principles of Animal Nutrition	3	11, 12	Fall	Digestive systems of livestock	ANS 2000 T
AGC 918	Seminar 1	1	11, 12	Fall	Discussion-based agricultural leadership	CTE
AGA 210	Corn & Soybean Prod.	3	11, 12	Fall	Maximize economic yield of crops	AGRON 2800
AGS 352	Genetics	1.5	11, 12	Fall	Principles of genetics in ag.	ANS 2000 T
AGA 285	Crop Protection	3	11, 12	Spring	Pesticide applicator	AGRON 2830
AGA 182	Introduction to Soil Science	3	11, 12	Spring	Physical, chemical, biologicals of soil	AGRON 1820
AGB 231	Futures and Options	1.5	11, 12	Spring	Future markets operations	ECON 2000 T
Horticulture Academy*						
AGH 112	Intro to Turfgrass Mgmt	3	11, 12	Fall	Care for turfgrasses	HORT 1000 T
AGC 918	Seminar 1	1	11, 12	Fall	Discussion-based ag leadership	CTE
AGH 143	Equipment Repair	3	11, 12	Fall	Maintain horticulture equipment	HORT 1000 T
AGH 252	Horticulture Pest Management	3	11, 12	Spring	Pesticide Applicator Certification	ENT 2000 T
AGH 142	Landscape Construction	3	11, 12	Spring	Install landscapes & hardscapes	HORT 1000 T
Diesel Technology Academy*						
AUT 115	Shop Safety	1	11,12	Fall	Basic shop safety training	CTE
AUT 606	Basic Electricity	3	11,12	Fall	Diesel electrical principles lab	CTE
DSL 815	Preventative Maintenance	1	11,12	Spring	Diesel preventative maintenance	CTE
AUT 614	Electrical I	3	11,12	Spring	Automotive battery and systems	CTE

AGRICULTURE

Introduction to Agriculture, Food, and Technology	Grade: 9-12	HS Credit: 2
Prerequisites: none	Semesters: 2	

Description: Students participating in the Introduction to Agriculture, Food, and Technology course will experience hands-on activities, projects, and problems. Student experiences will involve the study of communication, the science of agriculture, food, plants, animals, and technology. While surveying the opportunities available in agriculture, students will learn to solve problems, conduct research, analyze data, work in teams, and take responsibility for their work, actions, and learning.

Agricultural Biology	Grade: 9	HS Credit: 2
Prerequisites: none	Semesters: 2	

Description: Agricultural Biology is a one-year laboratory science course. Using agriculture as the learning vehicle, the course emphasizes the principles, central concepts and relationships among the following topics: the molecular and cellular aspects of life, the chemical and structural basis of life, growth and reproduction in plants and animals, plant and animal genetics, ecological relationships among plants, animals, humans and the environment, and the similarities between animals and humans. Opportunities are provided for students to participate in FFA.

Sustainable Agriculture & Wildlife	Grade:10-12	HS Credit: 1
Preferred Prerequisites: Intro to Ag, Food, and Tech	Semesters: 1	

Description: Sustainable Ag & Wildlife is a course designed to collect students’ experiences in agriculture and natural resources. Woven throughout the course are projects and problems based on environmental science and preserving our ecosystems. Students will focus on wildlife and field biology, agronomic conservation, and sustainable animal production. In the Regional Innovation Center, students will work with aquaculture and hydroponic systems to sustainably raise fish and plants!

Agricultural Engineering	Grade: 10-12	HS Credit: 1
Preferred Prerequisites: Intro to Ag, Food, & Tech	Semesters: 1	

Description: Agricultural Engineering is designed to prepare students for the wide array of career opportunities in agricultural engineering. Students are immersed in inquiry-based exercises that tie in the math and science of agricultural mechanics and engineering. Throughout the course, students apply technical skills while becoming competent in the process used to understand the STEM components of agriculture. The class pairs well with other industrial technology courses as they focus on the reason behind specific engineering and mechanical processes.

Agricultural Mechanics **Grade: 10-12** **HS Credit: 1**

Preferred Prerequisites: Intro to Ag, Food, & Tech **Semesters: 1**

Description: Students will learn how electrical, fluid, diesel, precision, and mechanical systems function. Then they will use their mechanical skills to identify and communicate the cause and correction of equipment failures. The course will expose students to the newest agricultural technologies that support equipment industries while connecting them with future employers.

Animal Care & Handling **Grade: 10-12** **HS Credit: 1**

Preferred Prerequisites: Intro to Ag, Food, & Tech **Semesters: 1**

Description: Throughout this course students will learn various skills in relation to caring, training, and effectively communicating with animals. This course will allow students to explore careers such as pet grooming, dog trainer, vet tech, and more. By the end of this course students will be set up to receive the Canine Care and Training Industry Certification through the Continental Kennel Club.

Floral Design **Grade: 10-12** **HS Credit: 1**

Preferred Prerequisites: none **Semesters: 1**

Description: This is a comprehensive course designed to immerse students in the enchanting world of floral artistry. This course will provide you with a solid foundation in the principles of design, a deep understanding of the historical significance of florals, insights into careers within the floral industry, and hands-on experiences to cultivate your own floral design skills.

Food Product Development **Grade: 10-12** **HS Credit: 1**

Preferred Prerequisites: none **Semesters: 1**

Description: Students complete hands-on activities, projects, and problems that simulate actual concepts and situations in the food science and safety industry, allowing students to build skills. Students investigate areas of food science, including food processing, food product development, and marketing. Make your own food product and then sell it in the Regional Innovation Center Marketplace!

Foods of Animal Origin **Grade: 10-12** **HS Credit: 1**

Preferred Prerequisites: none **Semesters: 1**

Description: Food Science of Animal Origin focuses on the principles, practices and issues impacting the food industry. Students will learn how to produce safe, wholesome, nutritious, and palatable meat, dairy, and egg products. Experiences will include product evaluation, classification, value determination, and utilization.

Culinary Meat Selection & Cookery

Grade: 10-12

HS Credit: 1

Preferred Prerequisites: none

Semesters: 1

Description: This class focuses on the attainment in culinary techniques, food safety, meat selection and retail cut identification of meat products. Students will be able to determine the ideal cuts of meat and evaluation of meat products for consumption. Different cookery methods will be used including grilling and smoking meats.

Veterinary Assistant 1

Grade: 10-12

HS Credit: 2

Preferred Prerequisites: Sustainable Ag and/or Animal Care

Semesters: 2

Description: The Veterinary Science Certificate Program (VSCP) provides students with the knowledge and skills necessary to become a veterinary assistant (VA). VSCP also provides a sound platform for students who wish to pursue an associate, undergraduate, or graduate degree in veterinary science. This class will include working on both the technical and professional skills necessary to serve in the veterinary career path. Work outside of class hours may be required to gain certification and a deeper knowledge of working with both companion animals (pets) and livestock in a variety of settings.

Veterinary Assistant 2

Grade: 11-12

HS Credit: 2

Prerequisites: Veterinary Assistant 1

Semesters: 2

Description: This course is a continuation of the Veterinary Science Certificate Program (VSCP). VSCP also provides a sound platform for students who wish to pursue an associate, undergraduate, or graduate degree in veterinary science. This class will include working on both the technical and professional skills necessary to serve in the veterinary career path. Work outside of class hours may be required to gain certification and a deeper knowledge of working with both companion animals (pets) and livestock in a variety of settings.

Agricultural Leadership & Communications

Grade: 10-12

HS Credit: 2

Preferred Prerequisites: Intro to Ag, Food, & Tech

Semesters: 2

Description: This class serves as an advanced class for students serving in a leadership role within the agriculture department. Students will put theory into action as they plan and implement activities for the agriculture department. Topics will include advanced public speaking, parliamentary procedure, business etiquette, and community service. Students enrolled in the course help guide the course of the agriculture program as a part of the program's Leadership.

Agricultural Work Based Learning

Grade: 10-12

HS Credit: 1

Preferred Prerequisites: Enrollment in additional ag class

Semesters: 1

Description: The course will allow students to build upon their Foundational Supervised Agricultural Experience (SAE) activities by gaining real-world, hands-on experience through engaging in a school-based enterprise. Students will partake in the management and operation of the Regional Innovation Center store including the facilitation of product lines, marketing, and other planning components of running a

Agricultural Business

Grade: 12

HS Credit: 1

Preferred Prerequisites: Enrollment in additional ag class **Semesters: 1**

Description: Ag Business is written for current and aspiring business leaders wishing to take advantage of the latest technologies for managing crop production. This series examines the key to survival of any enterprise- good business management. This class examines "real-world" problems and offers practical solutions in the areas of marketing, financing, equipment selection, and crop/livestock/wildlife management. Participation outside of class is encouraged. Qualifies for personal finance graduation requirement and high school credit.

AGRICULTURE - AGRONOMY

AGA182 Introduction to Soil Science

Grade: 11-12

HS Credit: 1

Prerequisites:

College Credit: 3 Credits

Description: This course introduces students to the physical, chemical and biological properties of soils, their formation, classification, and distribution. Students will use soil survey and other informational sources in balancing agronomic, economic, and environmental concerns in soil management.

AGA 210 Corn and Soybean Production

Grade: 11-12

HS Credit: 1

Prerequisites:

College Credit: 3 Credits

Description: This course covers the principles of corn and soybean production relative to managerial decisions needed to produce maximum economic yield. This course is designed to enable the student to learn and discuss the most current issues and research information dealing with the commercial and specialized production of corn and soybeans. Special focus will be placed on management's critical thinking abilities in relation to the above production factors and the economical and responsible use of all resources.

AGA 285 Crop Protection

Grade: 11-12

HS Credit: 1

Prerequisites:

College Credit: 3 Credits

Description: This course introduces students to the safe handling and use of agricultural chemicals, the biology and control of agronomic pests, and the economic resources used to control those pests. Students will also learn about integrated pest management strategies and how to follow laws regarding the use of pesticides. Students will take the state pesticide applicator's exam upon completion of this course. Residents of states other than Iowa should be able to successfully complete those equivalent requirements in those states.

AGA 390 Introduction to Renewable Resources

Grade: 11-12

HS Credit: 1

Prerequisites:

College Credit: 3 Credits

Description: This course will provide an overview of soil, water, plants, and animals as renewable natural resources in an ecosystem context. The history and organization of resource management and concepts of integrated

resource management will be covered.

AGRICULTURE - BUSINESS

AGB 231 Futures and Options

Grade: 11-12 HS Credit: 1

Prerequisites:

College Credit: 1.5 Credits

Description: This course focuses on the principles of futures market operations, terminology, contract specifications and charting of trends. Hedging and how it fits in farm operations will be also be discussed.

AGRICULTURE - HORTICULTURE

AGH 112 Introduction to Turfgrass Management

Grade: 11-12 HS Credit: 1

Prerequisites:

College Credit: 3 Credits

Description: This course is an introduction to discussing the establishment and maintenance practices used on turfgrasses, including plant classification, plant characteristics, warm and cool-season grasses, soils, and selection of turfgrasses for a site. Students will learn how to apply principles and practices involved in the successful maintenance of turfgrass areas.

AGH 142 Landscape Construction

Grade: 11-12 HS Credit: 1

Prerequisites:

College Credit: 3 Credits

Description: Principles and practices of landscape construction will be explained. Curriculum encompasses process from initial client contact to installation of plant material and hardscape. Laboratory work in the course involves landscape installation using various materials and techniques.

AGH 143 Equipment Repair

Grade: 11-12 HS Credit: 1

Prerequisites:

College Credit: 3 Credits

Description: This course is designed for basic maintenance of mechanical, hydraulic, and electrical systems of horticulture equipment. Major topics will include safety, tools, small engine maintenance (both 2-cycle and 4-cycle), trouble shooting, and other equipment used in the horticulture industry.

AGH 152 Landscape Design Techniques

Grade: 12 HS Credit: 1

Prerequisites:

College Credit: 3 Credits

Description: This course introduces the students to landscape design and the different aspects involved. It also provides a basic understanding of the different types of landscapes and the principles, materials, and elements that go into their design.

AGH 221 Principles of Horticulture

Grade: 11-12

HS Credit: 1

Prerequisites:

College Credit: 3 Credits

Description: This course is a study in horticulture. The goal of this course is to provide the basic knowledge in horticulture science and clearly illustrate how that knowledge is applied in both home and production agriculture.

AGH 252 Horticulture Pest Management

Grade: 11-12

HS Credit: 1

Prerequisites:

College Credit: 3 Credits

Description: This course introduces students to the safe handling and use of horticulture chemicals. Using integrated pest management (IPM) practices, students will explore updated philosophies that protect the environment while controlling common pest. Students will take the state pesticide applicator's exam upon completion of this course. Residents of states other than Iowa should be able to successfully complete equivalent requirements in those states.

AGRICULTURE - ANIMAL SCIENCE

AGS 119 Advanced Animal Science

Grade: 11-12

HS Credit: 1

Prerequisites:

College Credit: 2 Credits

Description: This course is designed to provide students with an understanding of the practices, management programs, labor requirements, reproduction programs, gestation periods, sanitation, health, and disease control concerns of livestock management. The student will also gain background knowledge needed to comprehensively advise livestock producers on livestock production enterprises.

AGS 315 Principles of Animal Nutrition

Grade: 11-12

HS Credit: 1

Prerequisites:

College Credit: 3 Credits

Description: This course is a study of the digestive systems of farm livestock including the basic food nutrients, how and why they are needed by the animals, and the individual nutrient requirements of each farm animal depending on the stage of growth, development, or function. This course also covers topics such as selection of feeds for feeding farm animals and the procedures used to determine what feeds to use. Students will select the proper feed rations to use and learn to formulate balanced feed rations.

AGS 352 Genetics

Grade: 11-12

HS Credit: 1

Prerequisites:

College Credit: 1.5 Credits

Description: This course deals with basic genetic principles as applied to crop and livestock science. Topics will include selection, breeding systems, breeding animals on individual type, progeny testing, and genetic improvement. Seed selection based on hybrid characteristics and basic biotechnological advances will be discussed.

AGRICULTURE - COMPREHENSIVE

AGC 918: Seminar

Grade: 11-12 HS Credit: 1

Prerequisites:

College Credit: 1 Credit

Description: This course is designed to offer the student an opportunity to present and discuss current topics, problems, ideas that do not relate to current course content and discuss questions pertaining to the agricultural industry. Instructors will guide discussions and attempt to provide conclusions and develop attitudes conducive to successful farm business management. A major portion of each Seminar course is devoted to the educational programming and leadership activities of Postsecondary Agricultural Students (PAS) organization. This is the first of four sequential courses that are required for graduation from the Farm Management Program.

DIESEL TECHNOLOGY

AUT 115 Automotive Shop Safety

Grade: HS Credit: 1

Prerequisites:

College Credit: 1 Credit

Description: This course is designed to acquaint the student with the proper personal and shop safety procedures needed to function in an automotive or truck shop. Students will learn general safety rules and work place safety including Right to Know and Occupational Safety and Health Administration (OSHA) Regulations. Basic first aid will also be discussed.

AUT 606 Basic Automotive Electricity/ Electronics **Grade: 11-12 HS Credit: 1**

Prerequisites:

College Credit: 3 Credits

Description: This course introduces the student to basic electrical and electronic principles applied to automotive electrical circuits. Lab sessions are spent turning theory into hands-on practice.

DSL 815 Preventative Maintenance **Grade: 11-12 HS Credit: 1**

Prerequisites: AUT 115

College Credit: 1 Credit

Description: This course provides students with the opportunity to learn how to perform preventative maintenance (P.M.) inspection of the cab, electric components, frame, and trailers for diesel trucks.

AUT 614 Automotive Electrical I **Grade: 11-12 HS Credit: 1**

Prerequisites:

College Credit: 3 Credit

Description: This course introduces the student to basic automotive battery, charging, and starting systems. The operating principles will be discussed during the lecture sessions. Lab sessions will be spent practicing testing, diagnosis, and repair.

