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| **Course Offerings: Agriculture** |
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| **Agriscience** Suggested Grade Level: 9-10 Credit: 1 |
| Agriscience introduces the scientific agricultural approach to plant/land science and animal science. Agricultural career opportunities will be emphasized in each class. This course will serve as the introductory course to the Ag Ed curriculum. Laboratory experiences relating to basic and current technology will be part of the program. Content may be enhanced by utilizing appropriate computer applications. Leadership development will be provided through FFA. Each student will be expected to have a supervised agricultural experience program and keep appropriate records. **This course is a prerequisite for all other agriculture courses.** |
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| **Agricultural Construction Skills I** Suggested Grade Level: 10 Credit: 1 |
| Develops skills such as calculating a bill of materials, basic carpentry, basic welding, basic plumbing, basic masonry, shop safety, tool identification, interpreting plans, calculating, painting, and small engine mechanics. The primary focus of this course will be to introduce students to basic skills involved in the various forms of construction and mechanics. |
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| **Animal Science** Suggested Grade Level: 10 Credit: 1 |
| Animal Science develops basic knowledge and skills pertaining to livestock identification, selection, nutrition, reproduction and genetics, health management, and marketing of one or more species of farm animals. The latest biotechnological applications will be included. The content may be enhanced with appropriate computer applications. Leadership development will be provided through FFA. Each student will be expected to have a supervised agricultural experience program. |
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| **Equine Science** Suggested Grade Level: 10 Credit: 1 |
| Equine science develops knowledge and skill pertaining to breed identification and selection, anatomy, physiology, nutrition, genetics and reproductive management, training principles, grooming, health disease, parasite control and sanitation practices relevant to the horse industry.Content may be enhanced with appropriate computer applications. Leadership development will be provided through FFA. Each student will be expected to have an agricultural experience program. |
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| **Floriculture & Floral Design** Suggested Grade Level: 10 Credit: 1 |
| Floriculture and Floral Design provides instruction to develop floral design techniques using silk, dried, and fresh flowers, operation and management techniques of a florist business, identification, production and cultural maintenance practices of plants used in floral design and interior landscaping. Content may be enhanced by utilizing appropriate technology. Leadership development will be provided through FFA. Each student will be expected to have a supervised agricultural experience program. |
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| **Greenhouse Technology** Suggested Grade Level: 10 Credit: 1 |
| Greenhouse technology provides instruction in greenhouse structures and greenhouse environment regulations, plant growth and development, propagation, production and maintenance of bedding and container produced plants, and principles of vegetable production. Content may be enhanced with appropriate technology. Leadership development will be provided through FFA. Each student will be expected to have a supervised agricultural experience program. |
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| **Ag. Business/Farm Management** Suggested Grade Level: 11-12 Credit: 1 |
| This course introduces the free enterprise system, the study of economic principles, risk management, business law, budgets, finance, recordkeeping, career exploration, managing production/inventory, equipment, credit and taxes, market analysis and developing a business plan.  **Career Pathway: Agribusiness (Required); Animal Science systems; Horticulture and Plant Science Systems** |
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| **Agricultural Construction Skills II** Suggested Grade Level: 11-12 Credit: 1 |
| Prepares students to construct and maintain agricultural structures and equipment. Topics covered include workplace safety, career exploration, interpreting plans, calculating a bill of materials, welding processes, metal fabrication, painting, and small engines mechanics. Classroom projects involving welding and painting will be incorporated into the class experience.  **Career Pathway: Ag Power, Structural, Technical Systems (Required)** |
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| **Agriculture Employability Skills** Suggested Grade Level: 11-12 Credit: 1 |
| Agricultural employability skills provides opportunities to develop skills in job searching, preparing resumes, writing letters of application, job interviews, attitude at work, communicating effectively through speeches and presentations, human relations, and accepting responsibilities.  **Career Pathway: Agribusiness (Required); Ag Power, Structural, Technical Systems; Horticulture & Plant Science Systems; Animal Science Systems, Environmental Science and Natural Resources (Elective for all these)** |
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| **Agricultural Math** Suggested Grader Level: 12 Credit: 1 |
| *Pre-requisite: Algebra 2 and Agriscience.* This course is designed to emphasize high school math core content by utilizing agricultural education as the content for delivering the math concepts. A correlation to the math content in the Common Core State Standards was used in developing this course to count as a 4th math elective. Content: Agricultural Math for the math elective component. |
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| **Agricultural Structures & Design** Suggested Grade Level: 11-12 Credit: 1 |
| *Suggested prerequisite: Agricultural Construction Skills I & II.* This course prepares students to evaluate, design and construct buildings and structures. Topics covered include: workplace safety, career exploration, structural design, evaluation and interpretation of construction plans, calculating a bill of materials, carpentry, insulation, plumbing, electricity, masonry, roofing, and siding. Students will use skills covered in class to construct a framed structure.  **Career Pathway: Ag Power, Structural, Technical Systems (Required)** |
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| **Animal Technology** Suggested Grade Level: 11-12 Credit: 1 |
| Animal Technology instruction concentrates on the advanced production practices and current biotechnological applications of one or more species of farm animals, based on the local community needs. Hands-on experiences will be emphasized. Content may be enhanced by utilizing appropriate computer applications. Leadership development will be provided through FFA. Each student will be expected to have a supervised agricultural experience program. Students have option to obtain college credit through Murray State University for Contemporary Ag. Issues. $130 tuition must be paid to MSU. Minimum ACT composite score of 18 for dual credit. |
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| **Forestry** Suggested Grade Level: 11-12 Credit: 1 |
| This course introduces the science of silviculture. The primary focus includes career opportunities, tree identification, tree production, forestry management, timber harvesting, wood utilization and the environmental and ecological aspects of forestry. Content may be enhanced with appropriate computer applications. Leadership development will be provided through FFA. Each student will be expected to have a supervised agricultural experience program. |
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| **Greenhouse Technology II** Suggested Grade Level: 11-12 Credit: 1 |
| Greenhouse technology II provides advanced instruction I greenhouse structures and greenhouse environment regulations, plant growth and development, propagation, production and maintenance of bedding and container produced plants, and principles of vegetable production.  **Career Pathway: Horticulture & Plant Science Systems (Required); Agribusiness; Environmental Science & Natural Resources** |
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| **Landscaping & Turf Management** Suggested Grade Level: 11-12 Credit: 1 |
| This course combines landscaping and turf management curriculum. The primary focus includes identification of landscape plants and their characteristics, site evaluation, site design, calculation of materials needed, costs for bidding, and installing landscape plans. Additionally the selection, culture and management of turf species used for lawns, golf courses, athletic fields and erosion control will also be included. Content may be enhanced by utilizing appropriate technology.  Students will service lawn and garden equipment.  Leadership development will be provided through FFA. Each student will be expected to have a supervised agricultural experience program. |
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| **Wildlife Resources** Suggested Grade Level: 11-12 Credit: 1 |
| Develops an awareness of wildlife industry resources. The primary focus is a study of ecology and ecosystems, wildlife habitat, population dynamics, management techniques that deal with wildlife in all areas and the regulations that affect the wildlife industry. Content may be enhanced with appropriate applied scientific laboratory activities and computer applications. Leadership development will be provided through FFA. Each student will be expected to have a supervised agricultural experience program. Students obtain hunter education orange card.  Along with content students will build wood duck boxes, deer shooting houses, and a turkey call. |
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| **Advanced Animal Science** Suggested Grade Level: 12 Credit: 1 |
| A freshman-level college course which introduces students to a survey of genetics, reproductive physiology, growth and development, nutrition and digestive physiology, anatomy, meat science, animal classification, current issues and overviews of the dairy, poultry, equine, beef, sheep, swine, and aquaculture industries. Opportunity is provided for students to earn three (3) hours of introductory college credit. Content may be enhanced by utilizing appropriate computer applications. Leadership development will be provided through FFA. Each student will be expected to have an agricultural experience program. Students have option to obtain college credit through Murray State University for Animal Science. $130 tuition must be paid to MSU. |
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| **Independent Study in Agricultural Education** Suggested Grade Level: 12 Credit: 1 |
| This Introduction to Agricultural Education course is designed for students who want to be an Agriculture teacher. This course includes essential aspects of career preparation, entry into the career, and advancement in agriculture education, extension (4-h), and leadership. Students obtain college credit through Murray State University. $130 tuition must be paid to MSU. |
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| **Ag. Co-Op** Suggested Grade Level: 12 Credit: 1-3 |
| This course will be offered to seniors who have completed three agriculture classes prior to senior year and be enrolled in or have taken Ag. Employability Skills. Participants must be on track to complete one of the Agriculture Career Pathways. |