

# AGRICULTURAL SCIENCE CLUSTER

## **T60111 Principles of Agriculture (7117)**

**Open to grades 9-12**

**2 semesters, 1 credit per semester**

**Meets requirements of: THD, AHD, Core 40**

**Dual Credit Might be Available**

This course prepares students who are interested in the study of Agriculture. Students will complete projects and learning activities that focus on hands-on real-life situations in the study of; animals, plants, soil, food, and horticultural sciences. There will also be activities studying agricultural business management, landscape management, natural resources and careers in agriculture, leadership and supervised agricultural experience. An activity and project-based approach is used along with team building to enhance the effectiveness of the student learning activities.

## **T60121 Animal Science (5008)**

**Open to grades 10-12**

**2 semesters, 1 credit per semester**

**Meets requirements of: THD, AHD, Core 40**

**Prerequisite(s): Principles of Agriculture**

**Note: Fulfills Core 40 Science Credit**

**Dual Credit Might be Available**

This course is a year-long program that provides students with an overview of the field of animal science. Students participate in a large variety of activities and laboratory work including real and simulated animal science experiments and projects. All areas studied can be applied to both large and small animals. Topics addressed include: anatomy and physiology, genetics, reproduction, nutrition, aquaculture, careers related to the industry, and management practices for the care and maintenance of animals.

## **T60131 Advanced Life Science: Animals (5070)**

**Open to grades 11-12**

**2 semesters, 1 credit per semester**

**Meets requirements of: THD, AHD, Core 40, NCAA**

**Prerequisite(s): Principles of Agriculture, Animal Science**

**Note: Qualifies as a Quantitative Reasoning Course**

**Note: Fulfills Core 40 Science Credit**

**Dual Credit Might be Available**

Advanced Life Science: Animals is a standards-based, interdisciplinary science course that integrates biology, chemistry, and microbiology in an agricultural context. Students enrolled in this course formulate, design, and carry out animal-based laboratory and field investigations as an essential course component. Students investigate key concepts that enable them to understand animal growth, development, and physiology as it pertains to agricultural science. This course stresses the unifying themes of both biology and chemistry as students work with concepts associated with animal taxonomy, life at the cellular level, organ systems, genetics, evolution, ecology, and historical and current issues in animal agriculture. Students completing this will be able to apply the principles of scientific inquiry to solve problems related to biology and chemistry in highly advanced agricultural applications of animal development.

## **T6022I Natural Resources (5180)**

**Open to grades 10-12**

**2 semesters, 1 credit per semester**

**Meets requirements of: THD, AHD, Core 40, NCAA**

**Prerequisite(s): Principles of Agriculture**

**Note: Fulfills Core 40 Science Credit**

**Dual Credit Might be Available**

Natural Resources provides students with a foundation in natural resources. Hands-on learning activities in addition to leadership development, supervised agricultural experience and career exploration encourage students to investigate areas of environmental concern. Students are introduced to the following areas of natural resources; soils, the water cycle, air quality, outdoor recreation, forestry, rangelands, wetlands, animal wildlife, and safety.

## **T6023I Sustainable Energy (5229)**

**Open to grades 11-12**

**2 semesters, 1 credit per semester**

**Meets requirements of: THD, AHD, Core 40, NCAA**

**Prerequisite(s): Principles of Agriculture**

**Note: Fulfills Core 40 Science Credit**

Sustainable Energy is a two-semester course that broadens a student's understanding of environmentally friendly energies. In this course students will use a combination of classroom, laboratory, and field experiences to analyze, critique, and design alternative energy systems. Class content and activities center on renewability and sustainability for our planet. Topics covered in this course include the following types of alternative energies: solar, wind, geothermal, biomass and emerging technologies

## **T5002I Agribusiness Management (5002)**

**Open to grades 12**

**Recommendation (s): Introduction to Agriculture, Food, and Natural Resources**

**2 semesters, 1 credit per semester**

**Meets requirements of: THD, AHD, Core 40**

**Note: Qualifies for Quantitative Reasoning**

**Dual Credit Might be Available**

Agribusiness Management provides the foundation concepts in agricultural business and completes the agricultural pathway for many students. It is a two-semester course that introduces students to the principles of business organization and management from a local and global perspective, with the utilization of technology. Concepts covered in the course include; accounting and record keeping, business planning and management, food and fiber, forms of business finance, management, sales and marketing, careers, leadership development. Students will demonstrate principles and techniques for planning, development, application and management of agribusiness systems through a supervised agriculture experience.