

AGRICULTURAL SCIENCE & BUSINESS CLUSTER

T50011 Intro to Agriculture Food & Natural Resources (5056)

Open to grades 9, 10, 11, 12

2 semesters, 1 credit per semester

Approximate cost per semester: TBD

Meets requirements: THD, AHD, Core 40

This course prepares students who are interested in the study of Agriculture.

Students complete projects and learning activities that focus on hands-on real-life situations in the study of animals, plants, soil, food, and horticultural sciences. Other studies include agricultural business management, landscape management, natural resources, careers and leadership in agriculture, and supervised agricultural experiences. An activity and project-based approach is used along with team-building to enhance the effectiveness of the student learning activities.

T50021 Agribusiness Management (5002)

Open to grades 11, 12

Recommendation(s): Introduction to Agriculture Food & Natural Resources

2 semesters, 1 credit per semester

Meets requirements: THD, AHD, Core 40

Approximate cost per semester: TBD

Note: Qualifies for Quantitative Reasoning

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 management, careers, and leadership development. Students will demonstrate principles and techniques for planning, development, application, and management

of agribusiness systems through a supervised agriculture experience.

T50031 Urban Greenhouse Production (5132)

Open to grades 9, 10, 11, 12

2 semester, 1 credit per semester (2 semesters required)

Meets requirements: THD, AHD, Core 40

Approximate cost per semester: TBD

Recommendation(s): Intro to Agriculture Food & Natural Resources

Dual Credit Available (3 credits)

Students explore the life cycle of plants. They learn how to care for plants, what requirements plants have for survival, the basics of landscape management, and the science behind nutrients found in plants and soil. Students have the opportunity to design an interior space using plants, design bouquets and other arrangements, as well as adopt a plant of their own to care for.

T50041 Environmental Conservation and Forestry (5180)

Open to grades 9, 10, 11, 12

2 semesters, 1 credit per semester (2 semesters required)

Approximate cost per semester: TBD

Recommendation(s): Introduction to Agriculture Food and Natural Resources
Dual Credit Available

Environmental Conservation and Forestry 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.

T50061 Animal Science (5008)

Open to grades 10, 11, 12

2 semesters, 1 credit per semester

Approximate cost per semester: TBD

Meets requirements: THD, AHD, Core 40

**Recommendation(s): Intro to Agriculture
Food & Natural Resources**

Dual Credit 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 that the students study 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.

T25501 Advanced Life Science: Animals (5070)

Open to grades 11, 12

2 semesters, 1 credit per semester

Approximate cost per semester: TBD

Meets requirements: THD, AHD, Core 40,

**NCAA Recommendation(s): Two years of
Core 40/AHD**

Science Note: Qualifies toward Core 40

Science credits.

**Note: Qualifies for Quantitative
Reasoning**

Dual Credit Available

This is an interdisciplinary science course that integrates biology, chemistry, and microbiology in an agricultural context. Students formulate, design, and carry out animal-based laboratory and field investigations as an essential course component. They 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 apply the principles of scientific inquiry to solve problems related to biology and chemistry in highly advanced agricultural applications of animal development.

T25502 Advanced Life Science: Foods (5072)

Open to grades 11, 12

**2 semesters, 1 credit per semester (may
include travel period)**

Approximate cost per semester: TBD

Meets requirements: THD, AHD, Core 40,

**NCAA Recommendation(s): Two years of
Core 40/AHD**

Science Note: Qualifies toward Core 40

Science credits.

**Note: Qualifies for Quantitative
Reasoning**

This two-semester course provides students with opportunities to participate in a variety of activities including laboratory work. This is a standards-based, interdisciplinary science course that integrates biology, chemistry, and microbiology in the context of foods and the global food industry. Students formulate, design, and carry out food-based laboratory and field investigations. Students understand how biology, chemistry and physics principles apply to the composition of foods, the nutrition of foods, food product development, food processing, food safety and sanitation, food packaging and storage. Students will be able to apply the principles of scientific inquiry to solve problems related to biology, physics and chemistry in the context of highly advanced industry applications of food.