

# Agricultural Science Education

## **Principles in Agri. Food & Natural Resources:**

*1 Credit—Grade 9*

To be prepared for careers in agriculture, food, and natural resources, students must attain academic skills and knowledge in agriculture. This course allows students to develop knowledge and skills regarding career opportunities, personal development, globalization, industry standards, details, practices, and expectations. To prepare for success, students need to have opportunities to learn, reinforce, experience, apply and transfer their knowledge and skills in a variety of settings. All students interested in an Agriculture program of study must start with this class, then they can specialize in animals, plants or mechanics.

## **\*Wildlife Recreation:**

*½ Credit—Grade 10-11*

to prepare students to attain academic skills and knowledge, acquire technical knowledge and skills related to natural resources, and develop knowledge and skills regarding career opportunities, entry requirements and industry expectations. This course examines the management of game and non-game wildlife species, fish, and aqua crops and their ecological needs as related to current agricultural practices.

## **\*Equine Science:**

*½ Credit—Grade 10-11*

To prepare students with knowledge and skills in the area of horse management practices as they relate to human interrelationship, recreation, and to the industry standards of current agriculture practices.

## **\*Small Animal Management**

*½ Credit—Grade 10-11*

The student will acquire knowledge and skills related to small companion animal care and management, career opportunities and industry related fields regarding small mammals, amphibians, avian, dogs and cats.

**Advanced Animal Science:**

*1 Credit—Grade 12*

*4th year of Science*

*Prerequisite: Principles of Ag, Livestock Production*

This course is designed to prepare students for success of knowledge and skill in the area of interrelationships of human, scientific, and technological dimensions of livestock production. Instructions designed to allow for the application of scientific and technological aspects of animal science through field and laboratory experiences.

**Ag Power:**

*1 Credit—Grade 10*

To be prepared for careers in agriculture power, structural and technical systems, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to agricultural power, structural, technical systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, industry certifications, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and technical skills in a variety of settings. This course is designed to develop an understanding of power and control systems as related to energy sources, small and large power systems, and agricultural machinery.

**Ag Mechanics Metal Tech:**

*1 Credit—Grade 11*

To be prepared for careers in agriculture power, structural and technical systems, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to agricultural power, structural, technical systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, industry certifications, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and technical skills in a variety of settings. This course is designed to develop an understanding of agricultural mechanics as it relates to safety and skills in tool operation, electrical wiring, plumbing, carpentry, fencing, concrete, and metal working techniques.

**Ag Facilities Design and Fabrication:**

*2 Credits—Grade 11-12*

*2 periods*

To be prepared for careers in agriculture power, structural and technical systems, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to agricultural power, structural, technical systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, industry certifications, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and

technical skills in a variety of settings. This course is designed to develop and understanding of agricultural power systems, metal fabrication techniques. agricultural structures, electrical controls, and land and water management systems.

### **Horticulture Science**

*½ Credit—Grade 10-11*

To prepare students with knowledge and skills in the area of horticultural management practices as they relate to food and ornamental plant production.

### **Landscape:**

*½ Credit—Grade 10-11*

*Prerequisite: Horticulture*

The student will acquire knowledge and skill In the related fields of horticulture as it relates to landscaping design work, career opportunities and industry standards.

### **Principles and Elements of Floral Design**

*1 Credit —Grade 11-12*

*( counts as a Fine Arts Credit)*

To prepare students with knowledge and skills in the area to identify and demonstrate the principles and techniques related to floral design as well as develop an understanding of the floral enterprise and management systems. The students will be required to take a Floral Design Certification Exam upon completion.

### **Career Prep:**

*1 Credit—Grade 11-12*

*Ag Co-Op Training*

Students will learn concepts and competencies that allow them to enter the job market to function in new merging technological occupations in preparation for higher education.

# **Scope and Sequence of Ag Science Classes**

(hyperlinks to websites)

**Mathematical Applications in Agriculture, Food, and Natural Resources (One Credit).**

<http://tea.tamu.edu/LinkClick.aspx?fileticket=Q2gNSLqUziU%3d&tabid=629&mid=1153>

**Principles and Elements of Floral Design (One Credit)**

<http://tea.tamu.edu/LinkClick.aspx?fileticket=2RNx5cMQkeI%3d&tabid=629&mid=1153>

**Horticulture Science (One-Half to One Credit).**

[http://tea.tamu.edu/LinkClick.aspx?fileticket=gcqBBm\\_Tr5s%3d&tabid=629&mid=1153](http://tea.tamu.edu/LinkClick.aspx?fileticket=gcqBBm_Tr5s%3d&tabid=629&mid=1153)

**Landscape Design and Turf Grass Management (One-Half to One Credit).**

<http://tea.tamu.edu/LinkClick.aspx?fileticket=UXG1-7pWWhg%3d&tabid=629&mid=1153>

**Principles of Agriculture, Food, and Natural Resources (One-half to One Credit)**

<http://tea.tamu.edu/LinkClick.aspx?fileticket=coFJzqcX82A%3d&tabid=629&mid=1153>

**Small Animal Management (One-Half to One Credit).**

<http://tea.tamu.edu/LinkClick.aspx?fileticket=0Cblb4nyrl8%3d&tabid=629&mid=1153>

**Wildlife, Fisheries, and Ecology Management (One-Half to One Credit).**

<http://tea.tamu.edu/LinkClick.aspx?fileticket=a8mMoC4kS00%3d&tabid=629&mid=1153>

**Agricultural Facilities Design and Fabrication (One to Two Credits).**

[http://tea.tamu.edu/LinkClick.aspx?fileticket=QJQC\\_pulSIA%3d&tabid=629&mid=1153](http://tea.tamu.edu/LinkClick.aspx?fileticket=QJQC_pulSIA%3d&tabid=629&mid=1153)

**Advanced Animal Science (One Credit)**

<http://tea.tamu.edu/LinkClick.aspx?fileticket=Ee93SNoeULM%3d&tabid=629&mid=1153>

**Agricultural Mechanics and Metal Technologies (One-Half to One Credit).**

<http://tea.tamu.edu/LinkClick.aspx?fileticket=cYfdHHullto%3d&tabid=629&mid=1153>

**Equine Science (One-Half to One Credit).**

<http://tea.tamu.edu/LinkClick.aspx?fileticket=dEakJM9rnKQ%3d&tabid=629&mid=1153>

**Agricultural Power Systems (One to Two Credits).**

<http://tea.tamu.edu/LinkClick.aspx?fileticket=vwAELhzM3gM%3d&tabid=629&mid=1153>