

## **AGRICULTURE (AGR)**

### **AGR 101 Agriculture Economics**

IAI AG 901

4 hours

Prerequisite: None

4 hours weekly (4-0)

An introduction to the principles of economics with a focus on the agricultural industry. The course is designed to learn or reinforce basic economic principles and apply them to agriculture. These principles include supply and demand, trade, elasticity, government policies, market efficiencies and inefficiencies, the costs of production, international trade and an introduction to macroeconomic policies.

### **AGR 102 Introduction to Crop Science**

IAI AG 903

4 hours

Prerequisite: None

5 hours weekly (3-2)

This course will study the science and practices of the production of important agricultural crops in Illinois, the Midwest and the United States. In addition, the environmental factors effecting crop growth such as climate, light, air, soil composition and soil fertility will be studied. The classification and identification will be investigated as well.

### **AGR 103 Introduction to Horticulture**

IAI AG 905

3 hours

Prerequisite: None

4 hours weekly (2-2)

An introduction to the principles and practices in the development, production, and use of horticultural crops. The course will cover the chemical, biological and environmental conditions for plant growth, as well as seed propagation and asexual reproduction. In addition, insects/diseases and their control in the greenhouse will be covered too.

### **AGR 104 Introduction to Soil Science**

IAI AG 904

4 hours

Prerequisites: None

5 hours weekly (3-2)

An introduction to the chemical, physical, and biological properties of soils; the origin, classification, and distribution of soils and their influence on people and food production; the management and conservation of soils; and the environmental impact of soil use.

### **AGR 111 Introduction to Agriculture Education**

IAI AG 911

3 hours

Prerequisite: None

3 hours weekly (3-0)

An introduction to the philosophy of education, in general, and career and technical education, specifically; the history of and current issues in agriculture education and the FFA; the nature of the educative process; the characteristics, duties, and responsibilities of successful teachers; the components of a successful agriculture program; the role of professional organizations in agriculture education; state teacher certification requirements; edTPA, Illinois agriculture education organizations and initiatives, and student differences for individualized instruction. Includes directed

observation of agriculture teachers in school classrooms.

### **AGR 112 Computers in Agriculture**

IAI AG 913

3 hours

Prerequisites: None

4 hours weekly (2-2)

Designed for students in agriculture with a focus on computer hardware, file manipulation, printers and the use of word processing, electronic presentations and communications, graphics, spreadsheet, database management with the MS Office Suite. Also includes solution of agriculture data-related problems and use of prepared software used in the agriculture industry.

### **AGR 121 Introduction to Animal Science**

IAI AG 902

4 hours

Prerequisite: None

5 hours weekly (3-2)

A comprehensive view of the livestock industry as a science. Study is based upon biological principles with application to modern livestock management practices for beef, dairy cattle, swine, sheep, goats, poultry and horses. Includes animal breeds, breeding and selection; anatomy, physiology, nutrition, growth; environment, animal behavior, animal health; and current trends in the animal industry. Laboratory to supplement lectures and discussions.

### **AGR 122 Introduction to Agriculture Mechanics**

IAI AG 906

3 hours

Prerequisite: None

4 hours weekly (2-2)

An introduction to agricultural power and machinery, agricultural electrification and applications, construction planning and tools, surveying and soil/water conservation as well as metal fabrication. A major emphasis of this introductory course will be applied applications of proper tool usage and procedures for basic agricultural mechanic skills.

### **AGR 141 Agricultural Sales**

3 hours

Prerequisite: None

3 hours weekly (3-0)

This course provides an understanding of the basic principles underlying the sales process in agricultural supply and service firms. The student will become familiar with the role of the sales professional, the psychology of selling and the sales process.

### **AGR 151 Intro to Agribusiness Management**

4 hours

Prerequisite: None

5 hours weekly (3-2)

The functions of management applied to the problems of agricultural supply and production businesses will be studied. Topics to be covered include resource analysis, budgeting, planning applied to agriculture production and agribusinesses, merchandise and inventory management and labor management. The major focus of this class will be on planning and budgeting.

### **AGR 161 Agribusiness Applications**

2 hours

Prerequisites: None

2 hours weekly (2-0)

Applications of mathematics and calculations as it applies to the operation of grain and livestock farms, agriculture business and horticulture.

**AGR 181 Precision Agriculture**

IAI AG 907

3 hours

Prerequisites: None

4 hours weekly (2-2)

A comprehensive introduction to the tools and features of ArcGIS Desktop. Students will learn how to find, use, make and share maps. They will also learn how to build geodatabases, query data, and analyze geospatial data.