

## AGRICULTURAL SCIENCES

### Exploring Agri-Science \*Science elective credit

8165

Credit 1

Agri-science establishes a foundation for understanding the complex world of Agriculture and environmental sciences. This course is designed to give students an opportunity to learn about occupational areas in the fields of agriculture, agri-business and natural resources. **Units covered:** agriculture industry, international agriculture, outdoor recreation (hunting, and ATV safety), FFA, parliamentary procedure, supervised agricultural experience programs, forestry, wildlife management, large animal science, pet care, plant and soil science and food processing.

**Lab activities include:** animal care demonstrations, forestry skills, plant and soil experiments, teamwork training, greenhouse activities, food science (ice cream, cheese making), and other technology activities.



**Gateway Course for Agriculture, Food and Natural Resources Career Cluster and Transportation, Distribution & Logistics Career Cluster.**

Prerequisite(s): Freshmen or Sophomore standing

### Animal Science \*Science elective credit

8146

Credit 1

Preparing for a future emphasizing animals? This course focuses on the study of animal physiology and anatomy and provides students with an overview of the animal agriculture industry. **Units include:** genetics, digestion, nutrition, reproduction, biotechnology, animal welfare, and a focused exploration on the dairy, beef, swine, sheep, poultry and equine industries.

**Labs include:** dissections, nutrient balancing, digestion, reproduction, animal demonstrations, on-site animal care and more!

Prerequisite(s): Sophomore or Junior standing

### Companion Animals

8167

Credit ½

Do you have pets? This course is designed to emphasize, the care and characteristics of horses and small animals (example - dogs, cats, rabbits, guinea pigs, ferrets, chinchillas, amphibians, birds and reptiles). Students will be provided with basic knowledge of small animals and equine science. Understanding the general functions of systems and their maintenance is important to everyone to insure healthy pets and selection of products.

Prerequisites: Junior or Senior standing **and** a passing grade in Animal Science or Biology

**Veterinary Science**  
**\*Science elective credit**

**8145**

**Credit 1**

Are you thinking about becoming a small or large animal veterinarian? Or do you love animals and enjoy working with them? In this course students will build on the skills and knowledge gained in Animal Science, Companion Animals and Biology. This course takes an in-depth look at the profession of veterinary science plus a look into all of the animal systems (tissues, bones, reproduction, digestion, terminology, respiration). There is an emphasis on hands-on learning with labs including: large and small animal care demonstrations, guest speakers, dissections; suturing; vaccinations; animal restraint and more! Required for the course will be a Vet-Ride-Along for all students, scheduled individual or in small groups.

Prerequisite(s): Junior or Senior standing **and** a passing grade in Animal Science or Biology or Companion Animals.

**Horticulture**

**8161**

**Credit ½**

Do you like playing in the dirt? Watching things grow? Labs everyday? Horticulture studies include careers, plant identification, plant care and reproduction of plants. Vegetable crops, fruit crops, gardening, flower production and arrangement, greenhouse management and holiday/specialty design are other topics considered. Hands-on projects in class include plant propagation, media type comparisons, terrariums, crafts and floral design just to name a few.

Prerequisite(s): Sophomore, Junior or Senior

**Greenhouse Management and Landscaping 8166**

**Credit ½**

Do you enjoy mowing lawns? This course deals with proper landscaping techniques and hands-on activities associated with running a greenhouse. Students will learn the basics of greenhouse operation and landscaping care/installation. Topics to be covered are: design and construction of a greenhouse, greenhouse environments, plant propagation, producing sale plants, plant marketing, record keeping, hydroponics, pest control, tree and shrub ID, flower bed plantings, house landscape projects.

Prerequisite(s): Horticulture – must earn a B or better

**Conservation and Forestry**

**8160**

**Credit ½**

Do you have an interest in the great outdoors? Do you enjoy wildlife and want to learn more? In this course, students will begin by exploring the forestry industry and conservation practices of the 21<sup>st</sup> century and finish by exploring wildlife of Wisconsin.

**Labs include:** Forestry skills, Tree and shrub identification, habitat analysis and improvement, wildlife identification, chainsaw maintenance and use, energy production and alternative energy, land measurement, soil fertility and taxidermy.

Prerequisite(s): Sophomore, Junior or Senior standing

<b>Agri-Business Management</b>	<b>8154</b>	<b>Credit 1</b>
<b>Agriculture/Technical Ed Internship</b>	<b>8503</b>	<b>Credit 2</b>

This course works directly with the agriculture and technical internship program. It provides students with information of the fundamentals of getting a job, keeping a job and business management. Units explored: controlling credit and debt, taxes, job applications, resumes, record keeping, budgeting, career preparation, college application and more. An emphasis on career and further education preparation is a major aspect of the course.

Students in this class may apply to enter the Agriculture and Technical Education Internship program in a position related to the agriculture and/or technology industry. This program allows students the opportunity to develop skills through on-the-job training while earning 2 credits. Agriculture and Technical positions include but are not limited to the following: production agriculture, agriculture service, agriculture sales and marketing, veterinary science (small and large), construction, mechanics, electrical, plumbing, and more!

Prerequisite(s): Senior standing **and** a C or above in 1 or more offered agriculture and/or technical education courses.

<b>Power Machines</b>	<b>8153</b>	<b>Credit 1</b>
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Maintenance and repair of gasoline and diesel engines is the primary focus of this course. The first units will cover the diagnostics and repair of two and four stroke engines used primarily in lawn, garden, and snow removal. Tool sharpening and repair, use of power and hand tools, maintenance of equipment, electrical work and masonry finish out the first semester. In the second semester students will be working in a team to rebuild multi-cylinder engines in order to illustrate the fundamentals of engine design and operation.

Prerequisite(s): Junior or Senior standing **and** a grade of a B or better in small engines

<b>Basic Home and Auto Maintenance</b>	<b>8388</b>	<b>Credit ½</b>
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Do you feel like a mechanical moron? Do you want to learn the basics? This is the class for YOU!

Home skill units include: dry-wall repair, wiring electrical outlets, refurnishing furniture, painting techniques, measuring and sawing wood, repairing plumbing, and basic household appliance repair.

Automotive skills include: oil changes, belt and hose inspection and repair, battery cleaning and testing, brake inspections, tire changing and rotations, and how to purchase a used car.

Prerequisite (s): Junior or Senior standing

**Welding I****8156****Credit ½**

Correct and safe use of shielded metal arc welders, wire feed welders, oxyacetylene welders, plasma arc cutters and oxy-fuel cutting equipment is the focus of welding I. Students will learn the fundamental theories of welding and cutting while demonstrating various weld skills. This course is beneficial to careers in welding, pipefitting, mechanics, construction and plumbing.

Prerequisite(s): Junior or Senior standing (Sophomore standing if space allows)

**Welding II  
Dual Credit Option****8157****Credit ½**

This course builds on the skills learned in Welding I and concentrates on more advanced welding techniques and theory. GTAW welding of aluminum and stainless steel will be taught as well as metallurgy and position welding with SMAW, wire feed and oxyacetylene. Students will also gain skills in metal working on the lathe and milling machines, through a steel hammer project. Students have the option of gaining 2-credits through Madison College (MATC) in shielded metal arc welding.

Prerequisite(s): Junior or Senior standing **and** a Grade of B or better in Welding I or consent of instructor

**This is a dual-credit Madison College (MATC) course. Students who successfully complete the course may earn both DAHS and Madison College (MATC) credits.**

**Small Engines****8385****Credit ½**

Rebuilding small gas engines is the focus of this course. Students will learn to trouble-shoot, repair, and overhaul small engines as well as studying theories of operation.

Prerequisite(s): Sophomore, Junior or Senior standing