



Precision Agriculture

-Curriculum Guide-

Pequea Valley Agricultural Education



Course Description: Precision agriculture merges the new technologies born of the information age with the current agricultural industry. Global Positioning Devices (GPS) are used extensively in modern agriculture. Agriculturalists in all areas of industry use GPS to plan, map fields, take soil samples, adjust application rates and track production yields. Individuals involved in modern agriculture must understand how to use and program these GPS systems to be successful. Students who complete the Precision Agricultural Mechanics course will have the skills to accurately use GPS in all areas of agriculture and manipulate the data that are gathered from the programs. The course will include hands-on experiences to learn the skills needed to be a certified crop advisor and will include partnerships with Hooper, Inc.

FFA Membership: You are an FFA member when you are enrolled in an agriculture class taught by Mr. Masser and/or Mrs. VanSant! You are welcome to attend FFA meetings when they are held on Wednesdays. Keep your ears open for opportunities that may interest you such as...

Career Development Events - See ffa.org for a complete listing of events!
Agriscience Research
Leadership (Conferences, Public Speaking, Parliamentary Procedure)

Events occur throughout the year. Much of the preparation for these events occurs outside regular class time, but your hard work could get you a trip to the Penn State campus in June, National FFA Convention in Indianapolis, IN, or BOTH! See Mr. Masser or Mrs. VanSant for details.

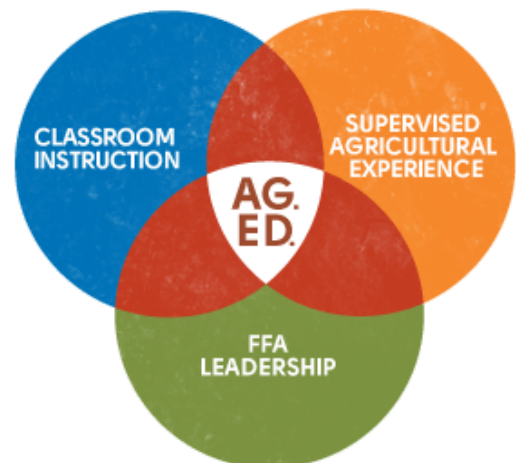
Supervised Agricultural Experience (SAE): Looking to earn an additional 1 elective credit for completing a project that interests you? The Agricultural Education department offers 1 elective credit to students who successfully complete an SAE project.

An SAE is ANY project that is student-driven, agriculturally-related, and supervised by an agriculture teacher. These projects could include:

Agriscience Fair Project
Work Experiences
Caring for Animals or Plants
Improvement Projects
Career Exploration Projects

Have a cool idea for an SAE?

Ask your teacher how you can get started. We have connections to local businesses that will hire you, provide you greenhouse space, space to house animals and more!



Course Outline

Week	Unit	Topic Areas
Week 1	Unit 1: Introduction to GPS	Topic 1: Future of Agriculture
Week 2		Topic 2: Drones in Agriculture Topic 3: GPS Basics Topic 4: GPS Components Topic 5: GPS Accuracy
Week 3	Unit 2: Functions of a GPS Receiver	Topic 1: Recording Waypoints
Week 4		Topic 2: Locating Waypoints
Week 5		Topic 3: Geocaching
Week 6		Topic 4: Differential GPS
Week 7		Topic 5: GPS Accuracy
Week 8	Unit 3: Introduction to GIS	Topic 1: Relationship to GPS
Week 9		Topic 2: GIS Capabilities and its Relationship to Agriculture
Mid-Term Exam		
Week 10	Unit 4: GPS Applications in Agriculture	Topic 1: Field Preparation
Week 11		Topic 2: Fertilizing
Week 12		Topic 3: Crop Protection
Week 13		Topic 4: Mapping
Week 14		Topic 5: Sampling
Week 15		Topic 6: Harvesting Topic 7: Planning and Analysis Topic 8: Autopilot Equipment and Robotics Topic 9: Telematics
Week 16	Unit 5: Field Applications	Topic 1: Garmin Handhelds
Week 17		Topic 2: Mesa Field Units
Week 18		
Week 19		
Week 20		
Mid-Term Exam		