

Ag Power

Jr. Sr. Level Course Work

This class is designed to allow students the ability to create, interact with, and explore different power systems; **Traditional, Experimental, and Green.** Team projects will be the normal medium for learning, and student project responsibility will be expected. As a student lead class, lessons will be based on materials created by the students.

Classroom Etiquette

(7 Habits of Effective Ag Students)

7. Positive Attitude

6. Creative

5. Prioritize

4. Question

3. Review

2. Organize

1. Punctual

Forms, Fees, Student surveys, & Projects will be a part of Ag

Mrs. Crouch

Graduated from the University of Illinois

Attended Illinois Central College

Hobbies include: Floral Design, Landscaping, Traditional Agriculture, and Animal Agriculture.

Available before and After school till 4:00 most days

If you need help – get ahold of her!

Cassie.crouch@mfschools.net

217-794-3463 ext. 1173

Available for additional learning opportunities:

SAE development: Power Systems, Electrical, other.

Tours: FFA will be taking business tours in our area, including Large Wind, large equipment, Biodiesel facilities, energy workshops. **JOIN TODAY!!!!**

1st Hour Class

Brings with it responsibilities:

Class starts: 8:05

Tardies are assigned.

Yes, my back door is open, do NOT run in at the bell – that is still tardy!

Attendance will be taken each day and your attendance in class in necessary!

Class ends at 8:45

Yes there is a 5 minute bell, but that really only tells this class to start picking up and putting away – if you have created enough time to stand around – I will find more for you to do.

Fall Semester:

OSHA Trainings – throughout the year will be assigned and graded – these are REQUIRED!

Team building: ID of Roles

Traditional Power Systems: Small engines

Explain operating two cycle/four cycle

Use of Micrometer, dial caliper, telescoping gauge, dial indicator, torque wrench, reject gauge, feeler gauge. ID Parts, select, install, assemble.

Read the manual – answer questions and

Troubleshoot. Oil selection, fuel section.

Work on demonstration of 4 stroke engines.

Labs to go with the materials of engines.

Electricity – Identification of components, design, installation, and troubleshooting of electrical circuits. Establishment of student reference sheet, and development of single, 2, 3, 4 way circuits.

Grades and Evaluations

Shop Work: 35%

OSHA: 25%

Evaluation Guides: 20%

Class Work 20%

A record you your daily work will account for your shop work, it will be expected to be on task, meaningful, and educationally challenging.

Spring Semester:

Alternative Power Systems:

Biodiesel development: and production, system analysis and viability in the global marketplace.

Ethanol production: how grain distillation happens, which grain anatomy is used, and how engines utilize a low % vs high % mix.

Wind Energy: Creation of wind turbines, calculation of efficiency, how topography plays a major part of design.

Coal Energy: where and how coal is mined, the dangers, the advantages, and the limitation established by the US Government to control emissions.

Solar Energy Science: Research why and how solar cells work, how sun energy can be harnessed and how energy can then be utilized in the power grid. Set up/maintenance maybe required.

Carbon Sequestration: Its going on in our backyard and do you know what is going on? Development of this new technology and how it can help with oil extraction from US/Illinois reserves.

Cellulostic Energy research: Design and understand different roughages and their potential energy reserves.

All high school rules will be observed and followed. Detentions will be served with Mrs. Crouch, and will involve shop work. This is our shop / lab-clean is safer, more efficient, and gives a more professional appearance to You!

OSHA Trainings:

These are mandatory units that we have to complete as a State Initiative. I will leave these as assignments when I am gone, as this will reduce the amount of shop time we waste – that requires your help. I need rely on your to get those assignments done – they will be modules done in the lab setting – and will have due dates.

This will help in record books, shop safety, and on a JOB APPLICATION