**Arcola High School**

**Department of Agricultural Education**

**Agricultural Mechanics**

**2011-2012**

**Teacher: Mrs. Vander Kuur**

**Office hours: M-F 7:30-8:15 & 3:00-3:30**

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**Website:** [**http://mrsvanderkuur.weebly.com/**](http://mrsvanderkuur.weebly.com/)

**Course Description**: This year-long course is designed to give students an overview of mechanics that are used in an agricultural setting. Time will be given to study small engines, electricity and welding. The small engines component will teach students to select, operate service, maintain, repair, and overhaul small engines. It will develop knowledge and skills in preventative maintenance, principles of operation, systems of the engines, use of test equipment and tune-ups. The electricity component will include instruction and practice in inspecting, maintaining, repairing and diagramming circuits and equipment. In addition, students will learn how electric motors and controls are used in agriculture to regulate temperature, ventilation, lighting and more. The welding section will cover arc, oxy-acetylene, MIG, and plasma-arc cutting. Students will maintain their Supervised Agricultural Experience Program and be encouraged to be a member of the FFA Organization.

**Course Objectives:**

* Relate readings to prior knowledge and experiences to make connections to real settings.
* Produce, edit, revise, format written work with the correct citations when necessary for real situations.
* Apply listening skills in practical settings while working in groups and when delivering presentations to their peers.
* Demonstrate individual responsibility through various situations.
* Apply formulas in a wide variety of theoretical and practical real world measurements.
* Interpret instructions using both written and visual keys.
* Demonstrate correct use of tools found in the classroom and shop.

**Course Grading:**

**High school is the preparation for higher education and work experience and therefore, you should help yourself prepare by completing your homework to the best of your ability and on time.**

**Course Materials:**

* Necessary writing utensils
* Closed Toed Shoes AT ALL TIMES (either wear or bring with)
* Long sleeved shirt, shop jacket or coveralls (either wear or bring with)
* Lined paper
* Calculator
* Recommended 3-ring binder

**Standards for Written Work:** I firmly believe that all students should turn in work that has been read thoroughly by not only by themselves, but also checked in spell check. While this course is an “agriculture” course, it is imperative that you, the student, work on perfecting your writing for future professional needs. Also, I will ***NOT*** grade any written work that has been plagiarized. These written assignments will be given an immediate zero and it will be reported to the principal.

**Due Dates for Assignments:** Due dates will be written on the “homework” board and will remain there until the due date has passed. It is your responsibility to keep track of due dates within a date book, assignment notebook, etc.

**Late Work:** Late work will not be accepted unless permission has been given by the teacher or you have an excused absence the day the assignment is due. If you have an excused absence on the day that an assignment is given, please look for your missed work on the bulletin board just outside the classroom door. It is your responsibility to check this board and complete assignments by the due date.

**Extra Credit:** There will be many opportunities for you to participate in Extra Credit. However, there are three opportunities all students:

Box of Kleenex – 5 points (one time only)

Word of the Week – 2 points each week

Test recheck – ½ credit back

**Classroom Expectations:**

* **RESPECT: I will treat you with respect and will expect you to treat others in the same manner.**
* **RESPONSIBILITY: It is your responsibility to be aware of any due dates, changes, upcoming events and anything else discussed in class. Anything covered during this course is fair game to be included on a test. If you have questions or comments about the content, it is your responsibility to contact me prior to the test for clarification. It is also your responsibility to behave safely and appropriately when working in the shop, laboratories or classroom.**
* **READY: Come prepared to class. This means, you are not only expected to bring all class materials, but also your attention.**

**Participation:** Students are expected to engage in classroom activities and discussions. This course will be full of hands-on experiences in which can be tied to real-life circumstances.

**Exceptions:** I understand that family and school activities can interfere with school work and class attendance. If you ever need to talk to me about an assignment, course content or anything not mentioned, please do not hesitate to talk to me before or after school/class. We will then talk to come to a conclusion that will meet both of our needs.

**Schedule (subject to change):**

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| **Week** | **Topics Covered** |
| **8/22 – 8/26** | **Introductions, Paperwork, Supervised Agricultural Experience Overview** |
| **8/29 – 9/2** | **Safety and Shop Hazards** |
| **9/6 – 9/9** | **History and Impact of Technology** |
| **9/12 – 9/16** | **Careers/Colleges in Ag. Mechanics** |
| **9/19 – 9/23** | **Identification of Tools** |
| **9/26 – 9/30** | **Simple Machines** |
| **10/3 – 10/6** | **Reading and Following Instructions/ Research** |
| **10/11 – 10/14** | **Introduction to Electricity** |
| **10/17 – 10/21** | **Wiring Circuits** |
| **10/24 – 10/26** | **Operation of Engines** |
| **10/31 – 11/4** | **Engine Lab**  |
| **11/7 – 11/9** | **Engine Lab** |
| **11/14 – 11/18** | **Engine Lab** |
| **11/21 – 11/22** | **Record Book** |
| **11/23 – 11/27** | **Thanksgiving Break** |
| **11/28 – 12/2** | **Automotive Care** |
| **12/5 – 12/9** | **Automotive Care** |
| **12/12 – 12/16** | **(time set aside if Engine lab needs to continue)** |
| **12/19 – 12/21** | **Exams** |
| **12/22 – 1/2** | **Christmas Break** |
| **1/3 – 1/6** | **Record books, Updates** |
| **1/9 – 1/13** | **Metal and Metal Properties** |
| **1/16 – 1/20** | **Metal and Metal Properties Cont.** |
| **1/23 – 1/27** | **FGW (Fuel Gas Welding)** |
| **1/30 – 2/3** | **SMAW (Shielded Metal Arc Welding)** |
| **2/6 – 2/10** | **Welding Lab** |
| **2/13 – 2/17** | **Welding Lab** |
| **2/21 – 2/24** | **FFA WEEK** |
| **2/27 – 3/2** | **Project Planning** |
| **3/6 – 3/9** | **Agricultural Sales** |
| **3/12 – 3/16** | **Fundraising - Carpentry** |
| **3/19 – 3/23** | **Fundraising - Carpentry** |
| **3/26 – 3/30** | **Alternative Fuels** |
| **4/2 – 4/6** | **Record Books, Updates** |
| **4/9 – 4/13** | **Spring Break** |
| **4/16 – 4/20** | **Alternative Fuels Cont.** |
| **4/23 – 4/27** | **Work and Power Formulas** |
| **4/30 – 5/4** | **Yard Tools/ Mechanics in Landscaping** |
| **5/7 – 5/11** | **Surveying** |
| **5/14 – 5/18** | **Record Books, Updates** |
| **5/21 – 5/23** | **Exams** |

**Below is an area for you to keep track of your grades so that you can see where you are at grade-wise over the entire school year. If more pages are needed, please ask and I will print out extras.**

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