

**Ag Mechanics III / Independent Ag Mechanics / College Welding
Syllabus
2023-2024**

Instructor
Mr. VanDeWalle
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Course Description

This class is intended for students who are considering a career in welding or similar field. Students are expected to enroll in the South East Nebraska Career Academy Program (SENCAP) to receive Southeast Community College (SCC) college credit. Successful completion of both semesters earns 8 credit hours.

Welding methods include short-circuit transfer wire welding, spray transfer wire welding, aluminum welding, stick welding, and oxygen-acetylene welding. Students that successfully complete the requirements will have the opportunity to be tested to be a American Welding Society (AWS) qualified welder. If time allows, the later part of this class would involve designing, building and completing more advanced metals project. This class also includes components related to Supervised Agriculture Experience and leadership.

Grading

** each assessment will be entered on a percentage basis*

Summative Assessments – 100%

** there are no graded formative assessments*

Includes:

Written Tests - at the conclusion of chapters or units, mid-term and term final.

Weld assignments – joints and processes assigned by the college.

Weldment Tests - various weld joints on the same task, complete at the end of the lab rotation

Welding Projects - a rubric will be used

Average of Career Academy Portfolio

Two grades will be displayed in Power School; one for the portfolio and one for the theory and lab. The portfolio is on SCC's Canvas with assignments due each week. Grading is performed by the SENCAP Coordinator and reported to Mr. VanDeWalle. The theory and lab assignments are graded by Mr. VanDeWalle, entered into SCC's Canvas grade book, and the average of all their assigned grades are entered into Power School.

Course Outline

Units, topics, and number of days are subject to change based on student prior knowledge and interests. Number of days is approximate. Some of the labs run simultaneously.

Unit / Topic	Days
Portfolio – Weekly Assignments on SCC’s Canvas	36
Gas Metal Arc Welding (wire) Theory – Modes of Transfer, Equipment, Variables, Stick Out, Angles, Weld Defects, Blue Print Reading	15
Gas Metal Arc Welding Lab – Wire Welding, Short Circuit Transfer (SCC Required Welds) & Spray Transfer (AWS D1.1 Practice and Test)	19
Shielded Metal Arc Welding (stick) Theory – Equipment & Settings, Electrode Differences & Use, Variables	15
Shielded Metal Arc Welding (stick) Lab – Stick Welding (SCC Required Welds)	19
Aluminum Welding (wire) Lab	14
TIG Welding Lab	14
Welding Lab – Individual or Assigned Projects	12
Supervised Agriculture Experience – entering personal records, completing applications, and/or completing other career preparation assignments	36

Binder Use

Each student will be provided a 3 ring, 1 inch binder for this class. Binders will be stored on the bookshelf near the door, but can be taken home to complete assignments or to study for tests. Papers will be kept in the binder throughout the course.

Classroom Expectations

Respect – other students, teachers, equipment, and school property. Be kind.

Ready – be ready, mentally and physically, for class every day. Be prepared.

Responsible - take an active role in your education and success in this class. Do your job.