

COURSE SYLLABUS

LAST REVIEW	Fall 2022
COURSE TITLE	GMAW
COURSE NUMBER	AMFT 0130
DIVISION	Career and Technical Education
DEPARTMENT	AMFT
CIP CODE	15.0406
CREDIT HOURS	3
CONTACT HOURS/WEEK	Class: 1 Lab: 4
PREREQUISITES	AMFT 0100
COREQUISITES	None
COURSE PLACEMENT	None

COURSE DESCRIPTION

Through classroom and/or shop/lab learning and assessment activities, students in this course will: explain gas metal arc welding process (GMAW); demonstrate the safe and correct set up of the GMAW workstation.; correlate GMAW electrode classifications with base metals and joint criteria; demonstrate proper electrode selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes in the flat position; build pads of weld beads with selected electrodes in the horizontal position; produce basic GMAW welds on selected weld joints; and conduct visual inspection of GMAW welds.

PROGRAM ALIGNMENT

This course is part of a program aligned through the Kansas Board of Regents and Technical Education Authority. For more information, please visit:

https://kansasregents.org/workforce_development/program-alignment

Program Learning Outcomes

1. The student will be able to assess hazards, mitigate risk, and develop procedures and protocol to create a safe working environment.
2. Student will be able to collaborate with team members in developing a plan to maximize efficiency in a production facility.
3. The student will be able to evaluate implicit tasks and identify necessary resources to install and maintain industrial equipment.
4. Student will be able to troubleshoot and repair industrial equipment in the high stress environment of modern manufacturing.

TEXTBOOKS

<http://kckccbookstore.com/>

METHODS OF INSTRUCTION

A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE

- I. GMAW Processes and equipment
- II. GMAW welding in the flat position
- III. GMAW welding in the horizontal position
- IV. Weld inspection

COURSE LEARNING OUTCOMES

Upon successful completion of this course, the student will:

- A. The student will be able to explain gas metal arc welding process (GMAW).
- B. The student will be able to demonstrate the safe and correct set up of the GMAW workstation.
- C. The student will be able to correlate GMAW electrode classifications with base metals and joint criteria
- D. The student will be able to demonstrate proper electrode selection and use based on metal types and thicknesses
- E. The student will be able to build pads of weld beads with selected electrodes in the flat position
- F. The student will be able to build pads of weld beads with selected electrodes in the horizontal position
- G. The student will be able to produce basic GMAW welds on selected weld joints
- H. The student will be able to conduct visual inspection of GMAW welds

ASSESSMENT OF COURSE LEARNING OUTCOMES

Student progress is evaluated through both formative and summative assessment methods. Specific details may be found in the instructor's course information document.

COLLEGE POLICIES AND PROCEDURES

Student Handbook

<https://www.kckcc.edu/files/docs/student-resources/student-handbook-and-code-of-conduct.pdf>

College Catalog

<https://www.kckcc.edu/academics/catalog/index.html>

College Policies and Statements

<https://www.kckcc.edu/about/policies-statements/index.html>

Accessibility and Accommodations

<https://www.kckcc.edu/academics/resources/student-accessibility-support-services/index.html>.