



<b>WEL 225</b>	<b>Introduction to Gas Metal Arc Welding</b>	<b>3 credits</b>
<b>Spring 2015</b>	<b>T, TH</b>	<b>Jan. 12 - Mar. 6</b>
		<b>10:30 a.m.-12:30 p.m. &amp; 1:30-3:30 p.m.</b>

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### **Catalog Description**

#### *Introduction to Gas Metal Arc Welding (3.0) Credits*

This course provides a technical understanding of the gas metal arc welding process, power sources and adjustment, metal transfer, shielding gases and weld safety. It also develops skills necessary to produce high quality welds of 1/16" to 3/8" mild steel in all positions. Students will develop skills necessary to produce and bend-test single vee groove welds on 3/8" carbon steel in all positions according to American Welding Society code of requirements. (1, 4)

### **Purpose of the Course/Course Rationale**

The (GMAW) Gas Metal Arc Welding process is one of the most widely used processes in the world today. It can be a semi-automatic or a fully automatic process that is easy to learn and produces the highest deposition rates of any of the process. The GMAW process can be used on very thin material from 24 gage up to 1" and thicker heavy plate steel. It also can be used on a wide variety of metals and is used extensively in manufacturing and all types of industries. The highest majority of manufacturing welding jobs available primarily use this process because of the quality of weld produced, as well as the speed of the process and the ability to be learned quickly.

### **Materials**

Textbook: Welding by David J. Hoffman, Kevin R. Dahle and David J. Fisher.

DVDs and Power Point presentations will be provided.

Student must provide: safety glasses, gauntlet style welding gloves, welding helmet, welding coat and welding pliers.

### **Learner Outcomes:**

After completing this course the student will be able to:

- Apply safety precautions and procedures when using the Gas Metal Arc Welding

- process. (IS-D)
- Demonstrate the ability to select the correct wire classification, welding polarity, shielding gas and machine settings to produce a quality weld using a (GMAW) welder. (IS-A)
  - Apply trouble shooting skills to correct problems with the weld bead or problems with the welding machine. (CT-A)
  - Demonstrate the ability to set-up and operate the welder to produce welds on all five types of welds fit-ups in all four welding positions. (IS-A)

### **Grading Criteria**

Quizzes	20% of total grade
Exams	30% of total grade
Lab Performance	50% of total grade

### **Grade Scale**

100-90	A
89-80	B
79-70	C
69-60	D
59 and below	F

### **Late Assignments**

All late assignments including labs must be made up within two days of the student's return. The student is responsible to check to see what they need to makeup.

### **Makeup Tests**

These must be made up within two days of the student's return. The student is responsible to check and see what tests might need to be made up.

### **Class Expectations**

- ☐ As you are training to be professionals, your conduct is very important. People's perception of you can mean everything in a competitive job market. Exercising respect, courtesy, manors and professionalism will be expected in this program. In other words, treat one another the same way that you would like to be treated.
- ☐ I will strive to treat students with civility and respect. Civility in the classroom is expected of all members of the class. Anyone who disrupts class to the extent that other's educational opportunities are diminished may be asked to leave the classroom.
- ☐ Participation:  
This is a course or career that you have chosen, so it is up to you to get everything from this program that you possibly can. If you don't participate, you are letting yourself down. Set your standards high and remember, this is for you.
- ☐ Attendance is extremely important because you can easily get behind making it hard to catch back up. It is also a measure of how reliable you would be on a job and one of the biggest reasons for being terminated from a job.

- ☐ If for some reason you happen to be gone, or unable to attend class, please contact me at telephone number 641-782-1312 and please leave a message or e-mail me at [wetzel@swccciowa.edu](mailto:wetzel@swccciowa.edu). Check with the instructor for makeup work and tests. Make-up work and tests must be completed within two days of your return.
- ☐ Students assignments and exams will be posted bi-weekly.
- ☐ Plagiarism will not be allowed. Make sure that you give the proper credit or acknowledgement of materials that is not your own.

## **Class Schedule**

Class schedules are subject to change, any changes made will be announced in advance.

Course Name	Number	Sec	Class Time	Instructor	Cred	Room	Notes
Advanced Welding Techniques	CRR 116	01 02 03	<b>M</b> 7:30-10:30 <b>F</b> 7:30-10:30 <b>F</b> 2:05-3:05	Wetzel Wetzel Rich	2	1TC138	
Maintenance Welding	WEL 124	01	<b>TTH</b> 8-10	Wetzel	3	1TC201	
Advanced Shielded Metal Arc Welding	WEL 224	01	<b>MW</b> 12-3 <b>F</b> 10:30-12:30	Wetzel	3	1TC201	Jan 12 – Mar 6
Intro to Gas Metal Arc Welding	WEL 225	01	<b>TTH</b> 10:30-12:30; 1:30-3:30	Wetzel	3	1TC201	Jan 12 – Mar 6
Advanced Gas Metal Arc Welding	WEL 227	01	<b>TTH</b> 10:30-12:30; 1:30-3:30	Wetzel	3	1TC201	Mar 9 – May 8
Intro to Gas Tungsten Arc Welding	WEL 229	01	<b>MW</b> 12-3 <b>F</b> 10:30-12:30	Wetzel	3	1TC201	Mar 9 – May 8
Sheet Metal Restoration	WEL 232	01	<b>MTTHF</b> 7:30-11	Rich	4	1TC201	Jan 12 – Mar 6
Welding Capstone	WEL 800	01	<b>MTTHF</b> 7:30-11	Rich	4	1TC201	Mar 9 – May 8
CNC Plasma Operations	MFG 336	01	<b>W</b> 7:30-11 <b>F</b> 1-2:30	Wetzel	3	1TC201	

## **Syllabus Standard Policy Statements**

### **Academic Integrity Policy**

Academic freedom is a fundamental right in any institution of higher learning. Honesty and integrity are necessary preconditions of this freedom. Academic integrity requires that all academic work be wholly the product of an identified individual or individuals. Joint efforts are legitimate only when the assistance of others is explicitly acknowledged. Ethical conduct is the obligation of every member of the college community, and breaches of academic integrity constitute serious offenses. Refer to this section of the Student Handbook for further details.

### **Plagiarism**

Plagiarism is the representation of the words or ideas of another as one's own in any academic exercise. To avoid plagiarism, every direct quotation must be identified by quotation marks or by appropriate indentation and must be properly cited in the text or

in a footnote or in a bibliography or works cited page. Acknowledgment is required when material from another source stored in print, electronic or other medium is paraphrased or summarized in whole or in part in one's own words. Refer to Student Handbook for examples of plagiarism.

### **Temporary Closing Policy**

Every effort will be made to keep the college open. However, should inclement weather or other emergencies necessitate closing the college or delaying the start of classes, the decision will be made between 5:00-5:30 a.m. and will be announced on the following:

**(This information is also posted on Southwestern's website [www.swccia.edu](http://www.swccia.edu))**

#### **Radio Stations**

KSIB-KITR	Creston	AM 1520 FM 101.3
KOAK/KCSI	Red Oak	AM 1080 FM 95.3
KMA	Shenandoah	AM 960 FM 99.1
WHO	Des Moines	AM 1040 FM 100.3 FM 107.5
KJAN	Atlantic	AM 1220
KSOM	Atlantic	FM 96.5 and 95.7
KSOI	Murray	FM 91.9

#### **Television Stations**

KCCI-TV8	Des Moines
WHO-TV13	Des Moines
WOI-TV5	Ames/Des Moines
KMTV-TV3	Omaha
WOWT-TV6	Omaha
KETV-TV7	Omaha

### **2-Hour Late Start Information**

When inclement weather causes the college to have a two-hour delay, the following procedures will be followed: If the two-hour delay occurs on a Monday, Wednesday or Friday, then classes will start at 9:40 a.m. (7:30 a.m. and 8:35 a.m. classes will not meet). Offices will open at 9:00 a.m. If the two-hour delay occurs on a Tuesday or Thursday, then classes will start at 9:00 a.m. (7:30 a.m. classes will not meet). Offices will open at 9:00 a.m. Career and Technical courses do not follow the same 1 hr./1 ½ hr. schedule. Please refer to your instructor for more details. Nursing 4 hr. class will start at designated late start time (9:40 a.m. or 9:00 a.m.). The college also utilizes text messaging through e2campus™ as another means to notify students, faculty and staff of important announcements. Please refer to the student handbook for information about this service.

### **Cell Phone Policy**

The college believes in providing an environment conducive to learning. For this reason, cellular phone use should be kept to a minimum on campus and conducted in appropriate locations only. Cell phone users should be respectful of others.

1. Students are to turn cell phones off or to silent mode upon entering any classroom, computer lab, library or auditorium.

2. If necessary, students may conduct short, quiet cellular phone conversations in the hallways, away from doorways or outside of the buildings.
3. Cellular phones with picture taking capabilities are not allowed in locker rooms or weight rooms.
4. Faculty members have the right to limit the use of cell phones with picture taking and text messaging capabilities in their classrooms.
5. Students who fail to comply with the above regulations will be referred to the Dean of Student Services and will be considered in violation of the student code of conduct.

### **Children on Campus Policy**

The college strives to maintain a quality learning environment and has established the following guidelines regarding children on campus.

1. Students will not be allowed to bring children with them in the instructional setting which includes, but is not limited to, the classroom, library, student center, etc.
2. When children are present on campus, they must be under the direct supervision of a parent, legal guardian, registered student or other authorized adult.
3. This policy does not intend to conflict with Southwestern's programs designed for the involvement of children. For example: 8th grade career day, youth-camps, business contests, vocational open house, etc.
4. Students who fail to comply with the above regulations will be referred to the Dean of Student Services and will be considered in violation of the student code of conduct.

### **Nondiscrimination Statement**

Southwestern Community College prohibits discrimination on the basis of race, color, national origin, sex, disability, age in employment, sexual orientation, gender identity, genetic information, creed, religion, veteran status, associational preference and actual or potential parental, family or marital status in its programs, activities or employment and personnel policies and practices. Southwestern also affirms its commitment to providing equal opportunities and equal access to its facilities. Inquiries regarding compliance with the nondiscrimination policy and the appropriate grievance procedure may be directed to: Educational Equity Coordinator, Southwestern Community College, 1501 W. Townline St., Creston, IA 50801, 641.782.1456 or 800.247.4023, ext. 456.

### **Accommodations**

Southwestern is committed to the regulations of the American with Disabilities Act in making reasonable accommodations for students, staff, or patrons of the College in accessing its facilities. Any student with a disability wanting to request accommodations should notify the College administration of his/her needs, and the College will do what is reasonable to effect changes and assist the individual in being successful in the College environment. Steps for obtaining such accommodations are listed in the Student handbook (Disability/Special needs at Southwestern). For further assistance regarding accommodations or to identify special needs, students should contact Deb Pantini, Director of Student Development, Administration Center, at 641.782.1458.

### **Emergency Notification Policy Statement**

SWCC has a campus-wide emergency notification system (e2Campus) to send instant text messages and/or e-mail messages to all students, faculty, and staff who have elected to receive them. This system will be utilized to immediately notify the campus community upon the confirmation of a significant emergency or dangerous situation involving an immediate threat to the health or safety of students or employees occurring on campus. This service also allows users to receive messages when classes are canceled and/or messages when the college is closed due to weather. With this system in place, SWCC can instantly and simultaneously distribute brief time-sensitive messages in emergency situations. Although there is not one system that is 100 percent guaranteed effective, this is an important method of communication. In order to alert students and employees that an emergency text has been sent, an Emergency Alert sound will be activated. This sound (as well as the tornado and fire alarm sounds) can be heard on the Emergency Notifications page on the SWCC Web site. If the **Emergency Alert sound** is activated on campus, students and staff should immediately check their text messages. Some carriers may charge for incoming text messages so keep this in mind should you decide to sign up. You may also sign up to receive the same messages via email with or without signing up your cell phone number. To sign up, students will need to log on to SWCC's Campus Connect system. New students will receive training on Campus Connect at Success Seminar, The College Experience course, and orientation.

### **Class Attendance Related to School-Sponsored Activities**

- Students involved in activities (excluding practices) must give written notice to the instructor at least three days in advance of the anticipated absence.
- Students must be given the opportunity to independently make up course work or work of equal value for the day(s) the event was scheduled or to take a scheduled exam at an alternative time.
- Make up work that meets the agreed upon deadline will be graded as regular work.
- School-sponsored absences shall not result in a reduction in attendance or participation grades.
- If the scheduled event is canceled, students are expected to be in class as normal or they will be counted absent.

### **Syllabus Disclaimer Statement**

This syllabus is representative of materials that will be covered in this class; it is not a contract between the student and the institution. It is subject to change without notice. Any potential exceptions to stated policies and requirements will be addressed by the instructor on an individual basis, and only for reasons that meet specific requirements.

(11/12/14)