Grand Rapids Community College

Course Cover Sheet

M-CAM Training Area:
☐CNC/Machining ☐Multi-Skilled/Mechatronics ☐Production Operation ☒Welding/Fabrications

Program(s): Welding Technology

Course: MN 134

Course Description: Basic Oxyacetylene Welding | 2 credit, 2 contact hour course

Date Created: Previously Existed

Faculty Developer(s)/Instructional Designers(s): John Doneth

Employer/Industry Partner: American Welding Society, Lincoln Electric, Steelcase, Shape Corp, Praxair

College Contact: David Lovell

Phone: 616-234-3168

Email: davidlovell@grcc.edu

Additional Information/Comments:

The one-year Welding Technology Certificate Program at GRCC was adjusted through M-CAM to align with the AWS SENSE level 1 industry-recognized credential per feedback from GRCC's welding advisory committee members, who communicated that the AWS certificate was the industry standard. Employers contributing to this change were Steelcase, Shape Corp, Praxair, and others.

This workforce solution was funded by a grant awarded by the U.S. Department of Labor's Employment and Training Administration. The solution was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warrantees, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership.

Catalog Search

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MN 134 - Basic Oxyacetylene Welding

Credits: 2

Contact Hours: 2

Prerequisites: None

Corequisites: None

College Level Prerequisites: None

Description: To acquaint the student with the fundamentals of oxyacetylene welding cutting and brazing. Provide the student with basic skills in oxy-fuel operations and the standards for safe welding practices.

Department Consent: No Consent

General Education Distribution Category Met: None

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(616) 234-4722

143 Bostwick Avenue NE
Grand Rapids MI 49503-3295

MN 134 Basic Oxyacetylene Welding Syllabus

General Information

Instructor Name

Contact Information and Availability

Preferred method of contact:
Office Location:
Office Hours:
Phone:
E-mail Address:

Course Information

Basic Oxyacetylene Welding MN 134
Course description: To acquaint the student with the fundamentals of oxyacetylene welding cutting and brazing. Provide the student with basic skills in oxy-fuel operations and the standards for safe welding practices.

- Student will demonstrate safe work habits and proper use of tools and equipment to industry standards
- Student will assemble an oxy-acetylene unit using the proper tools and equipment to industry standards
- Student will identify the three flames used in oxy-acetylene welding, cutting, and brazing
- Student will demonstrate proper cylinder handling procedures
- Student will identify all the safety features of an oxy-acetylene unit
- Student will select proper tools and demonstrate proper equipment setup to complete welding lab projects

Student Learning Outcomes

1. Student will demonstrate safe work habits and proper use of tools and equipemnet to industry standards.
2. Student will assemble an oxy-acetylene unit using the proper tools and equipment to industry standards.
3. Student will identify the three flames used in oxy-acetylene welding, cutting, and brazing. 4. Student will demonstrate proper cylinder handling procedures.
5. Student will identify all the safety features of an oxy-acetylene unit.

6. Student will select proper tools and demonstrate proper equipement setup to complete welding lab projects.

Required Materials

Text Book:
Welding Principles and Applications, Eighth Edition by Larry Jeffus.
ISBN-10: 1-305-49469-5
ISBN-13: 978-1-305-49469-5

Course-Specific Requirements

This course is a lecture and lab class. Students must supply their own personal work clothes and safety equipment, such as foot wear, and safety glasses. These items must be adequate for shop work. Flip flops, sandals or any open shoes are not allowed in the lab. Any student not dressed for work will not be allowed to work in the welding lab. ***Shorts will not be allowed in the lab.***

Section Policies

Attendance Policy

There is not extra time available to make up laboratory projects. Students must be here each week to ensure successful completion. Students missing more than two classes will lose attendance points and students missing three or more classes may receive a failing grade.

Grading Procedure

Laboratory assignments count for 50% of the student's grade.
Tests, quizzes and homework are 40% of a student's grade.
Attendance is 10% of the student's grade.

Grading Policy

A 100-95	B 86-84	C 75-72	D 65-62
A- 94-90	B- 83-80	C- 71-69	D- 61-59
B+ 89-87	C+ 79-76	D+ 68-66	E 58

Late Assignment Policy

Late assignments will be marked down ten percent per week.

College Policies

GRCC Email and Course Communications

Students are responsible for all communications sent via Blackboard and to their GRCC email account. GRCC student email can be accessed through Student Email (http://email.grcc.edu) and Blackboard at Blackboard

(http://bb.grcc.edu).
Grand Rapids Community College (GRCC) provides an email service for all students to use. Upon enrollment, GRCC students are required to use this college issued account for all GRCC email correspondences (sending and receiving). This email account will be used for official notification by the college related to matters such as, but not limited to, financial aid, registration, and payments. The college will not respond to emails that are sent from current students' personal email accounts. Contact the help desk if you cannot access your email.

Disability Support Services

Students with disabilities who wish to request accommodations must be registered with the Disability Support Services Office (DSS) in Room 368 of the Student Center. You may contact DSS at (616) 234-4140 for more information. Once you are registered with the DSS Office, you will receive an *Accommodations Agreement* to present to me to verify your registration. Please see me as soon as possible so we may have a private conversation to discuss accommodations.

Student Code of Conduct

All GRCC students are held accountable to the Student Code of Conduct, which outlines expectations pertaining to academic honesty (including cheating and plagiarism), classroom conduct, and general conduct. The Code can be found in full at Student Code of Conduct.

Any student who is found cheating on any written work or welding project will be removed from the class and receive a failing grade.

Title IX Reporting Policy

If you or another student are the victim of any form of sexual misconduct (including dating/domestic violence, stalking, sexual harassment), or any form of gender discrimination, GRCC can assist you. You can report a violation of our sexual misconduct policy (www.grcc.edu/sexualmisconduct) directly to our Title IX Coordinator at (616) 234-3169. You may also report the issue to a faculty member, who is required to notify the Coordinator, or you may make an appointment to speak confidentially to our Counseling and Career Center by calling (616) 234-3900.

Campus Police/Emergency Resources

You may review emergency services and resources at the GRCC Campus Police website (www.grcc.edu/campuspolice). Campus Police can be reached using the 'Code 2' button on any campus phone or by dialing x4911 on campus or (616) 234-4911 off campus. Dial 911 for off campus emergencies.

GRCC is Tobacco and E-cigarette Free.

We are a tobacco free campus. For complete details on this GRCC policy or for resources about quitting go to: www.grcc.edu/beingtobaccofree

Cell Phones and other devices in the classroom

Use of telephones, pagers, players or other electronic devices *that disrupt* the learning process or teaching environment and safety of the class is prohibited in the classroom and lab.

Changes to the Syllabus

The instructor reserves the right to change the contents of this syllabus due to unforeseen circumstances. Students will be given notice of relevant changes in class, through a Blackboard Announcement, or through GRCC e-mail.

MN 134 BASIC WELDING—7 week course

READING ASSIGNMENTS

WE WILL BE COVERING THE FOLLOWING CHAPTERS, IN THE ORDER GIVEN, DURING THE SEMESTER.

1. Introduction

2. CHAPTER 2	SAFETY
2. CHAPTER 31--8th ed pgs 747-764 and pgs 777-782	OXY-ACETYLENE SET-UP
2. CHAPTER 30--7th edition	OXY-ACETYLENE SET-UP
3. CHAPTER 22 pgs 542-549--8th ed	JOINT DESIGN
3. CHAPTER 25 pgs 602-609--8th ed	WELDING FLAWS
3. CHAPTER 20 pgs 502-507--7th ed	JOINT DESIGN
3. CHAPTER 23 pgs 567-573--7th ed	WELDING FLAWS
4. CHAPTER 31--8th ed pg 764-777	OXY-ACETYLENE
4. CHAPTER 31--7th ed	OXY-ACETYLENE GASES
5. CHAPTER 33	SOLDERING, BRAZING & BRAZE WELDING
6. CHAPTER 7	FLAME CUTTING
7. OXY-Acetylene	**TEST—Class is complete**

Subject Matter Expert (SME) Course Review Summary

College: Grand Rapids Community College.

M-CAM Training Area: ☐CNC/Machining ☐Multi-Skilled/Mechatronics ☐Production Operation ☑Welding/Fabrication

Degree Program Name: Welding Technology

Title of Course: MN 134 Basic Oxyacetylene Welding.

Subject Matter Expert (SME) Reviewer Information

Name: Jonathan Althausen

Title: Technical Representative

Phone: 724-705-3613

Email: jalthausen@lincolnelectric.com

Organization/Affiliation: Lincoln Electric

Attach Resume or provide credentials (showing years of experience and work experience that is relevant to course content):

Synopsis of Findings:

Everything looks great, the class looks sufficient for industry standards.

Reviewers Signature _____

Date: 2/3/17

Michigan Coalition for Advanced Manufacturing
Subject Matter Expert Course Review

1. Course Overview and Objectives	Exceptional	Satisfactory	Ineffective
The goals and purpose of the course is clearly stated.	X		
Prerequisites and/or any required competencies are clearly stated.	X		
Learning objectives are specific and well-defined.	X		
Learning objectives describe outcomes that are measurable.	X		
Outcomes align to occupational focus (industry skills and standards).	X		
Comments or recommendations:			

2. Material and Resources	Exceptional	Satisfactory	Ineffective
The instructional materials contribute to the achievement of the course learning objectives.	X		
The materials and resources meet/reflect current industry practices and standards.	X		
The instructional materials provide options for a variety of learning styles.	X		
Resources and materials are cited appropriately. If applicable, license information is provided.	X		
Comments or recommendations:			

3. Learning Activities	Exceptional	Satisfactory	Ineffective
Provide opportunities for interaction and active learning.	X		
Help understand fundamental concepts, and build skills useful outside of the learning object.	X		
Activities are linked to current industry practices and standards.	X		
Comments or recommendations:			

Michigan Coalition for Advanced Manufacturing
Subject Matter Expert Course Review

4. Assessment Tools/Criteria for Evaluation	Exceptional	Satisfactory	Ineffective
The course evaluation criteria/course grading policy is stated clearly on syllabus.	X		
Measure stated learning objectives and link to industry standards.	X		
Align with course activities and resources.	X		
Include specific criteria for evaluation of student work and participation.	X		
Comments and recommendations:			

5. Equipment/Technology	Exceptional	Satisfactory	Ineffective
Meets industry standards and needs.	X		
Supports the course learning objectives.	X		
Provides students with easy access to the technologies required in the course/module.	X		
Comments and recommendations:			

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4150 Piute Dr SW
Grandville, MI 49418
(724) 705-3613
althausenj@gmail.com

Jonathan M. Althausen

OBJECTIVE

To obtain an opportunity in Sales Engineering that utilizes a determined individual with strong interpersonal and problem solving skills

EDUCATION

Grove City College — Grove City, PA — 2007-2011

B.S. Electrical Engineering

- 4 year ABET Accredited Electrical Engineering School
- QPA- 3.4/4.0 Major GPA 3.4/4.0 ~ *Cum Laude, Honors*
- Dean's List: Fall: 2009, 2010 Spring: 2008, 2009, 2010, 2011

WORK EXPERIENCE

The Lincoln Electric Company — Cleveland, OH — June 2011 - Present

Technical Sales Representative

- Graduated first place of technical sales training program with the Lincoln Electric Company
  - Competed against other engineers in a rigorous eight month program
  - Evaluation based on written exams, welding skills, presentations, leadership, and teamwork
- Given responsibility to handle a $6 million dollar sales territory based out of the Pittsburgh District Office
- Given responsibility to handle a $10 million dollar sales territory based out of the Grand Rapids Office
- Interacted with large end users such as Caterpillar, General Electric, and SMS Millcraft
- Gained technical expertise on product line and industry to educate and support distributor salesmen
- Provided lectures on advanced welding technology to vocational high schools and community colleges
- Facilitated cost savings and productivity increases for customers using innovative methods and technology
- Managed and completed sales of large capital equipment up to $230,000
- Provided cost saving reductions for end users totaling $720,000

INTERNSHIPS

Bechtel Plant Machinery Inc. — Monroeville, PA — May 2010 - August 2010

Electrical Engineering Intern

- Reviewed fuse evaluations to ensure the proper fuse was installed in rod position indication equipment.
- Analyzed fuse data sheets and utilized circuit analysis to aid in the selection process.
- Composed a failure analysis of power conversion equipment. Trended data using Excel spreadsheets.
- Helped create a template for a failure database and populated the database with failed components.
- Wrote an article for the company newsletter, a newsletter that is distributed to over 800 employees.

LEADERSHIP

Skills USA — Michigan State Chair — October 2013 - Present

- Oversee the state of Michigan welding competition for high school students
- 80 student compete for a chance to represent the state of Michigan at the national competition
- Oversee 25 volunteers, manage non-profit budget and projects

American Welding Society-West Michigan — Board Member — November 2013 - Present

- Coordinated and facilitated technical meeting gathers
- Drive the future and goals for the organization
- Volunteer and aid in non-profit fundraisers for scholarships

TECHNICAL SKILLS

Languages: C++, Matlab, Assembly

Software: Microsoft Office, SAP, CRM, Visual Studio, PSPICE, Mathematica

Welding: Gas Metal Arc, Shielded Metal Arc, Gas Tungsten Arc, Submerged Arc, Flux Cored Arc, and Robotic