

Schoolcraft College

Course Cover Sheet



M-CAM Training Area:

CNC/Machining Multi-Skilled Mechatronics Production Operation Welding/Fabrications

Program(s): 1) Mechatronics Certificate
2) Mechatronics AAS
3) Welding Pre-Apprenticeship Certificate
4) Welding Joining Technology AAS

Course: OSH 112 - Occupational Safety and Health for Construction

Course Description: This course serves as a safety and health training program designed for construction personnel. The course will cover employee rights, employer responsibilities, and how to file a complaint as well as how to identify, abate, avoid and prevent critical construction related hazards. Federal Occupational Safety and Health Administration (OSHA) and Michigan Occupational Safety and Health Administration (MIOSHA) standards that relate to hazard identification and control will be covered. This course is “OSHA-authorized.” Therefore, students who successfully complete the course are eligible for the OSHA 30 hour card in Construction.

Date Created: June 3, 2015

Faculty Developer(s)/Instructional Designers(s): Coley McLean, Amy Jones, Anne Huber

Employer/Industry Partner: Ironworkers Union Local 25

College Contact: Amy Jones
Phone: 734-462-4595
Email: ajones@schoolcraft.edu

Additional Information/Comments:

As part of our TAACCCT grant and in guidance with the Ironworkers Union Local 25, the Occupational Safety and Health for Construction OSHA 112 Class was created. The students earn the OSHA 30 credential to assure that they are aware of hazards in the workplace and know their rights to a safe work environment.

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, warranties, 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.

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OSH 112 Occupational Safety and Health for Construction

Syllabus

Instructor and Class Information

Instructor Name	Coley McLean
Email	cmclean@schoolcraft.edu
Phone	734-462-7104
	Text @welding to number 23559
Office Location	AS362
Instructor Office Hours	
Section Number	123402
Meeting Times	Monday 1:30pm-4:30pm
Meeting Location	AS 820 and AS363

Course Information

Course Description

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Types of Instruction

Instruction Type	Credits/Hours
Credit Hours [transcripted]	2
Lecture Hours	2
Lab Hours	0.5
Clinical Hours	0

Pre/Corequisites

Prerequisite None.

Textbooks

No text book required. Contact the Schoolcraft Bookstore for the appropriate textbook availability at <http://www.schoolcraftbooks.com/>.

Learner Supplies

Safety Glasses.

A Notebook for Taking Notes.

Core Abilities

1. Act responsibly

Course Competencies

1. Explain the history of OSHA and the impact it has had on industry.
2. Investigate OSHA Focus Four Hazards.
3. Investigate stairway and ladder requirements.
4. Determine required job training including use of proper personal protection, lifesaving equipment and power tools.
5. Investigate health hazards and material handling in construction.
6. Investigate scaffolds used on a construction site.
7. Determine safety equipment used in welding and cutting on a construction site.
8. Summarize the importance of safety when working with excavations.
9. Demonstrate the use of powered industrial vehicles for materials handling.
10. Explain hazards related to cranes, derricks, hoists, concrete and masonry.
11. Explain requirements for steel erection on a construction site.

Academic Integrity

In accordance with the Schoolcraft College Student Code of Conduct, students are prohibited from engaging or participating in acts of dishonesty, including but not limited to cheating, plagiarism or other forms of academic dishonesty. The complete Student Code of Conduct is available in the catalog and at: <http://www.schoolcraft.edu/academics/policies/conduct>.

Any academic dishonesty associated with this course may result in the grade of zero for the assignment or exam and may lead to further disciplinary action.

Cheating

Includes but is not limited to: assistance with tests, quizzes, exams; unauthorized sources when writing papers, preparing reports, solving problems or completing other assignments; taking/receiving academic material (including tests) belonging to a faculty or staff member without permission.

Plagiarism

Includes but is not limited to: the use of published or unpublished work of someone else without full citation. Plagiarism also includes selling/purchasing papers or other academic material. In other words, it is stealing (whether knowingly or unknowingly) another's work and passing it off as your own.

Forms of plagiarism include direct quotations, paraphrasing (restatement of text without changing the meaning and without giving attribution) and aggregation of materials (compilation and rearrangement of materials gathered from several sources).

Additional Services

The Learning Assistance Center (LAC) may have tutors for this course.

Livonia LAC: (734) 462-4436; Bradner Library, Room 119

Radcliff LAC: (734) 462-4400, ext. 6021; Radcliff Center, RC 120

There are general (open) computer labs for student use both at Livonia and Radcliff. In Livonia, MC 010 (lower level of the McDowell Center) is open daily and on weekends with hours posted in the lab. At Radcliff, RC 140 will have weekly hours posted outside the room. Call (734) 462-4400, ext. 5529 for hours at both campuses. Lab technicians are available in MC 010 to help you with hardware or system problems in the labs. They are not tutors for various software packages. Food and drink are not allowed in any computer labs. Additional policies may be posted in the computer labs.

Class Cancellation

Classes canceled will be listed on the Schoolcraft web page. Students can visit <http://www.schoolcraft.edu/cancellationsandclosings> for more information.

For College closings due to weather or other emergencies, listen to major area radio or TV stations for updates.

SAlerts RAVE Emergency Alert System

All Schoolcraft College students enrolled in credit classes will automatically be enrolled in the SAlerts RAVE Emergency Messaging System. The SAlerts system sends messages about closings and emergencies or dangerous situations involving an immediate threat to the health or safety of students.

Visit <http://www.schoolcraft.edu/scalerts> for more information.

Faculty and Off-Site Supervisor Responsibilities

1. Courses will be taught in accordance with the description published in the catalog and common syllabus.
2. A Course Syllabus will be distributed at the first session of each class.
3. Faculty will make themselves available for student consultations and will respond to emails, phone calls and student contacts in a timely manner.
4. Attendance will be taken and reported to the Records Office for State and Federal Report purposes.
5. Timely feedback will be provided to students regarding their progress.
6. Exams and other major assessments not returned to students will be kept on file for a minimum of three months after the semester end.

Important Dates

Exams: Will be completed during class time (OSHA, GHS, Forklift, Scaffold, Ladder, Signals)

No Class Meetings: Memorial Day 05-30-16 and July 4th 07-04-16

Important dates for registration, semester start and end, withdrawal /refund from classes and holidays for each semester may be found by selecting the "Important Dates" link at <http://www.schoolcraft.edu/importantdates>.

Methods of Instruction

Any combination or all of the following may be used in this course.

Delivery of Course Content:

Lecture, Electronic Presentation, Demonstrations, Video/Audio Presentations, Case Studies, Field Trips, Website(s), Course Books, Articles, Other Resources

Course competencies and outcomes remain the same regardless of course length or modality.

Assessment:

Practical Application, Quizzes and Tests, Papers and Presentations, Discussion, Other Projects

Communication:

Lecture, Collaborative Discussion, Group Projects, Electronic Communication, Course Website

Missed or Late Assignments

Students are expected to plan their schedule so that they can be present for scheduled class sessions and manage their time so that assignments and assessments can be completed on or before the date they are due. Make-up of a missed exam or acceptance of a late assignment is at the discretion of the instructor.

Non-Discrimination Policy

It is the policy of Schoolcraft College that no person shall, on the basis of race, religion, color, gender, age, marital status, disability, sexual orientation, and/or national origin be excluded from participating in, be denied benefits of, or be subjected to discrimination during any program or activity or in employment.

Student Responsibilities

As a Schoolcraft College student (whether online, on campus, or at an off campus educational site), you are expected to:

1. Check your Schoolcraft email, Blackboard (if applicable) and the College website for:

- Announcements
- Class Cancellations
- Assignments
- Other pertinent information

Refer to the Schoolcraft Email User Guide, found on the Schoolcraft website for assistance in setting up your Schoolcraft email.

2. Seek technical assistance, should the need arise, regarding elements needed to complete your coursework including but not limited to SEmail, Blackboard, publisher resources, etc.

3. Use appropriate communications and proper Netiquette between you and the instructor, supervisor, and/or classmates.
4. Complete all course requirements, assignments, reflections, etc. This includes but is not limited to: being responsible for reading the textbook/course materials and not relying on the instructor presenting every detail.
5. Follow the College's policies regarding student conduct, academic integrity, and academic dishonesty.
6. Budget your time to keep up with the course work. At least two hours of study time outside of class for each hour the class meets is recommended.
7. Check the Schoolcraft College Registration Information web page for important institutional dates (e.g. registration, withdrawal, etc.).
8. Demonstrate respect and courtesy to others whether in the classroom, online, or off-site.
9. Identify yourself and the class you are referring to when contacting your instructor or supervisor via email, by phone, or in person. In addition, show the attempted work when seeking help in completing an assignment.
10. Inform your instructor or supervisor of any situations or health conditions that might create an emergency within the learning environment.
11. Discuss, in advance, any needs you may have for test taking or other accommodations. The instructor must have received notification from Disability Support Services.
12. Adhere to the instructor's classroom policies regarding the usage of any digital device (e.g. cell phone, tablet, etc.) during class.
13. Refrain from all unauthorized recording of any instructor, classmate, etc. without prior permission.

Success in Your Course and Program of Study

Schoolcraft College is dedicated to your success in achieving your goals.

The grade that you earn in this course may impact your ability to progress in future courses or in your program. Students who do not fulfill the minimum requirements set by this course and receive a grade lower than the minimum to progress, or those who do not officially withdraw from this course by the withdrawal deadline and receive a final grade of 0.0, may have their ability to obtain financial aid impacted. This may include future denial of financial aid or the requirement to return funds that have been disbursed.

Grading Rationale

There will be a minimum of six exams including Global Harmonization certification, Scaffold, Forklift/High-low certification, Ladder, Signals, and the exam for the OSHA Construction Credential. Exams will be announced in advance and will be 60% of the total grade.

Lab work will be 40% of the total grade. Students must participate for a minimum of 30 hours in order to obtain an OSHA credential.

Required assignments will be documented and kept on file for assessment of core abilities and/or program outcomes.

Determination of Final Grade

EXAMPLE:

<u>Assessment Method</u>	<u>Points Possible</u>	<u>Points Earned</u>	<u>X % Weight</u>	<u>= Grade</u>
Lab Work	100	92	40	36.8
Exams	700	490	60	294.0
Totals	800	582	100	72.75

Your grade: 72.75%, rounded to 73% final grade is 2.0

Grading Scale

Descriptions	Grade Scores	Grade Points		Descriptions	Grade Scores	Grade Points
	100-93	4.0			77	2.4
	92	3.9			76	2.3
	91	3.8			75	2.2
	90	3.7			74	2.1
	89	3.6		Average	73-70	2.0
Excellent	88	3.5			69	1.9
	87	3.4			68	1.8
	86	3.3			67	1.7
	85	3.2			66	1.6
	84	3.1		Below Average	65	1.5
Very Good	83	3.0			64	1.4
	82	2.9			63	1.3
	81	2.8			62	1.2
	80	2.7			61	1.1
	79	2.6		Poor	60	1.0
Good	78	2.5		Unacceptable	59 & Below	0.0

Schedule

NOTE TO STUDENTS: The basic topics in this course must be covered but may be accomplished using a modified version of the schedule listed below

Session	Topics	Target Competencies	Assignments/ Assessments	Due Date
1-2	Introduction to OSHA	Explain the history of OSHA and the impact it has had on industry.	Test	TBD on BB
3	Focus Four	Investigate OSHA Focus Four Hazards.	Discussion	
4	Personal Protective Equipment (PPE) and lifesaving Health hazards and material handling	Determine required job training including use of proper personal protection, lifesaving equipment and power tools. Investigate health hazards and material handling in construction.	Discussion and Lab	
5	Field Trip	Investigate OSHA Focus Four Hazards		
6	Stairways and ladders	Investigate stairways and ladder requirements.	Test	TBD on BB
7	Cranes, derricks, hoists and masonry	Explain hazards related to cranes, derricks, hoists, concrete and masonry.	Discussion	
8	Steel erection Signals	Explain requirements for steel erecting on a construction site.	Test	TBD on BB
9	Excavations and powered industrial vehicles	Summarize the importance of safety when working with excavations.	Discussion	
10	Powered industrial vehicles lab	Demonstrate the use of powered industrial vehicles for materials handling.	Test	TBD on BB
11	Hazard communication Welding, cutting and brazing	Investigate health hazards and material handling in construction Determine safety equipment used in welding and cutting on a construction site.	Test	TBD on BB
12	Scaffolds	Investigate scaffolds used on a construction site.	Test	08-01-16

Updated by Curriculum Committee

May 2015



Subject Matter Expert (SME) Course Review Summary

College: Schoolcraft College

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

Degree Program Name: Welding: Pre-Apprenticeship Certificate AND Welding: Joining Technology AAS

Title of Course: OSH 112 Occupational Safety and Health for Construction*

Subject Matter Expert (SME) Reviewer Information

Name: William Andrew McGibbon

Title: Journeyman Pipefitter

Phone: 734-368-6315

Email: pipefittinpro@yahoo.com

Organization/Affiliation:

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

See attached Resume

Synopsis of Findings:

Electives covered in this course were geared to cover the needs for journeymen iron workers. Special attention was paid to the subjects of Rigging, Signals, Scaffold Safety, Welding and Steel Erection.

Reviewers Signature *William McGibbon*

Date: *1-31-17*

**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.	✓		
Prerequisites and/or any required competencies are clearly stated.	✓		
Learning objectives are specific and well-defined.	✓		
Learning objectives describe outcomes that are measurable.	✓		
Outcomes align to occupational focus (industry skills and standards).	✓		
Comments or recommendations:			
2. Material and Resources	Exceptional	Satisfactory	Ineffective
The instructional materials contribute to the achievement of the course learning objectives.	✓		
The materials and resources meet/reflect current industry practices and standards.	✓		
The instructional materials provide options for a variety of learning styles.	✓		
Resources and materials are cited appropriately. If applicable, license information is provided.	✓		
Comments or recommendations:			
3. Learning Activities	Exceptional	Satisfactory	Ineffective
Provide opportunities for interaction and active learning.	✓		
Help understand fundamental concepts, and build skills useful outside of the learning object.	✓		
Activities are linked to current industry practices and standards.	✓		
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.	✓		
Measure stated learning objectives and link to industry standards.	✓		
Align with course activities and resources.	✓		
Include specific criteria for evaluation of student work and participation.	✓		
Comments and recommendations:			
5. Equipment/Technology	Exceptional	Satisfactory	Ineffective
Meets industry standards and needs.	✓		
Supports the course learning objectives.	✓		
Provides students with easy access to the technologies required in the course/module.	✓		
Comments and recommendations:			

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, warranties, 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.

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William Andrew McGibbon (Andy)

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SUMMARY OF QUALIFICATIONS

- AWS QC 1 for 15 years
- UA Certified welder for 15 years
- State of Michigan Journeyman licensed plumber for 9 years

PROFESSIONAL EXPERIENCE

Ua Local 190

Journeyman Pipefitter

Responsible for assembling and installing pipe systems, pipe supports, and hydraulic and pneumatic equipment. Installs pipe for steam, hot water, heating, cooling, lubricating, and industrial production and processing systems.

John E. Green

Welding Inspector QA/QC

Verified weld mapping and tracking, coordinated NDE inspections, Performed weld inspections, field verified construction packages, witnessed hydro testing, performed and coordinated reinstatement inspection walk downs with third party QA and Marathon Operations personnel for the 2012 West plant turnaround.

W.J. O'Neil

Welding inspector QA/QC

Verified weld mapping and tracking, verified NDE requirements were completed, completed QVD's for grouting, rotating and static equipment, witnessed hydro tests, walked over 1,000 re-instatement packages and performed visual weld inspections for the new 2 drum coker at the Marathon Greenfield K141 site.

Washtenaw Community College

Instructor

Part time welding and fabrication instructor, lead students in many different classes in all aspects of the welding field, developed course curriculum for plasma shape cutting class, taught all welding classes GMAW, GTAW, SMAW, and fabrication classes. Instruct students in operation of Shears, saws, hand tools, punches, roll formers, and benders.

Norfolk Southern Railroad

Welding Inspector Specialist QC

Maintained welding records and certifications for 20 freight car repairmen, instructed new apprentices in proper welding techniques, witnessed weld tests, performed guided bend tests for qualification. Welded and repaired rail freight cars and locomotives.

VAR Controls

Welding shop supervisor QC

Directed day to day operations of a small welding shop, designed and built jigs to increase weld production, verified quality of finished products, designed and built prototype units for specialized customers.

United States Navy

Aviation Electronics Technician

Performed trouble shooting and repair on communications, navigation, weapons, and secure datalink systems on the SH60-B platform. Westpack deployment for operations in support of the Gulf War. Command advanced in rank for outstanding performance of duties. Led the line division at HSL-37 to first ever commendation for excellence.

EDUCATION

Journeyman pipefitter – Local 190 training center Ann Arbor, MI

Welding inspector specialist – Norfolk Southern Welding School Altoona, PA

Freight car mechanic – Norfolk Southern Training Center McDonough, GA

Avionics technician – United States Navy Electronics Training Command Millington, TN

Certified welder – Washtenaw Community College Ann Arbor, MI