ILLINOIS VALLEY COMMUNITY COLLEGE

COURSE OUTLINE

DIVISION: Workforce Development

COURSE: WLD 2209 Introduction to Fabrication

Date: Spring 2020

Credit Hours: 3

Prerequisite(s): Lower level WLD course, WLD 2208

Delivery Method:

☒ **Lecture**	**1 Contact Hours**	**(1 contact = 1 credit hour)**
☐ **Seminar**	**0 Contact Hours**	**(1 contact = 1 credit hour)**
☒ **Lab**	**2 Contact Hours**	**(2-3 contact = 1 credit hour)**
☐ **Clinical**	**0 Contact Hours**	**(3 contact = 1 credit hour)**
☐ **Online**		
☐ **Blended**		

Offered: ☒ **Fall** ☒ **Spring** ☐ **Summer**

IAI Equivalent –***Only for Transfer Courses***-go to *http://www.itransfer.org*:

CATALOG DESCRIPTION:
Theory and practice on the introduction to metal fabrication. Shop safety, Layout, basic Printreading, cutting, drilling, tapping, and grinding skills will be taught. Students will develop better welding skills through the theory and practice of fit up and fabrication. Basic math and formulas will be utilized.

GENERAL EDUCATION GOALS ADDRESSED

[See last page for Course Competency/Assessment Methods Matrix.]

Upon completion of the course, the student will be able:

[Choose up to three goals that will be formally assessed in this course.]

☒ To apply analytical and problem solving skills to personal, social, and professional issues and situations.
☐ To communicate successfully, both orally and in writing, to a variety of audiences.
☐ To construct a critical awareness of and appreciation for diversity.
☒ To understand and use technology effectively and to understand its impact on the individual and society.
☐ To develop interpersonal capacity.
☒ To recognize what it means to act ethically and responsibly as an individual and as a member of society.
☐ To recognize what it means to develop and maintain a healthy lifestyle in terms of mind, body, and spirit.
☐ To connect learning to life.

EXPECTED LEARNING OUTCOMES AND RELATED COMPETENCIES:

[Outcomes related to course specific goals. See last page for more information.]

Upon completion of the course, the student will be able to:

1. Practice and explain proper shop safety
2. Demonstrate basic layout skills
3. Perform basic Printreading skills
4. Demonstrate the ability to use different basic metalworking machinery, shears, drills, grinders
5. Demonstrate the ability to bend flat stock into a variety of angles and curves utilizing basic metal forming equipment
6. Demonstrate basic knowledge of a properly prepped and fitted joint.
7. Demonstrate the basic use of math and mathematical formulas as they relate to metal work.

MAPPING LEARNING OUTCOMES TO GENERAL EDUCATION GOALS

[For each of the goals selected above, indicate which outcomes align with the goal.]

Goals	Outcomes
First Goal	
To apply analytical and problem solving skills to personal, social and professional issues and situations.	1,2,3,4,5,6,7
Second Goal	
To understand and use technology effectively and to understand its impact	1,2,3,4,5,6,7

on the individual and society.	
Third Goal	
To recognize what it means to act ethically and responsibly as an individual and as a member of society.	1,3,6

COURSE TOPICS AND CONTENT REQUIREMENTS:
Shop safety
Machine usage and safety
Measurement and instrumentation
Layout methods
Cutting, shearing, bending
Drilling and Tapping
Joining methods
Fabrication techniques

INSTRUCTIONAL METHODS:
Classroom lecture.
Hands on laboratory exercises
Demonstration
Exams and quizzes

INSTRUCTIONAL MATERIALS:
Metal Fabrication: A practical Guide. 4th edition.
Videos
Instructional handouts

STUDENT REQUIREMENTS AND METHODS OF EVALUATION:
Students are required to purchase the assigned textbook. Students will be required to maintain a high level of attendance to lectures. Students will be evaluated on attendance, assignments, discussion participation, quizzes and exams. The following grading scale will be used to compute the grade.

A= 90-100
B= 80-89
C= 70-79
D= 60-69
F= 0-59

OTHER REFERENCES
Lincoln Electric Welding Technology Center
Hobart Institute of Welding Technology

Course Competency/Assessment Methods Matrix

(Dept/# Course Name)	Assessment Options																																
For each competency/outcome place an "X" below the method of assessment to be used.	**Assessment of Student Learning**	Article Review	Case Studies	Group Projects	Lab Work	Oral Presentations	Pre-Post Tests	Quizzes	Written Exams	Artifact Self Reflection of Growth	Capstone Projects	Comprehensive Written Exit Exam	Course Embedded Questions	Multi-Media Projects	Observation	Writing Samples	Portfolio Evaluation	Real World Projects	Reflective Journals	Applied Application (skills) Test	Oral Exit Interviews	Accreditation Reviews/Reports	Advisory Council Feedback	Employer Surveys	Graduate Surveys	Internship/Practicum /Site Supervisor Evaluation	Licensing Exam	In Class Feedback	Simulation	Interview	Written Report	Assignment
Assessment Measures – Are direct or indirect as indicated. List competencies/outcomes below.	**Direct/ Indirect**	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	I	I	I	I	D	D							
Practice and explain proper shop safety					X		X	X	X				X		X					X							X					X
Demonstrate basic layout skills					X		X	X	X				X		X					X							X					X
Perform basic Printreading skills					X		X	X	X				X		X					X							X					X
Demonstrate the ability to use different basic metalworking machinery, shears, drills, grinders					X		X	X	X				X		X					X							X					X
Demonstrate the ability to bend flat stock into a variety of angles and curves utilizing basic metal forming equipment					X		X	X	X				X		X					X							X					X

Demonstrate basic knowledge of a properly prepped and fitted joint					X		X	X	X				X		X					X											
Demonstrate the basic use of math and mathematical formulas as they relate to metal work.					X		X	X	X				X		X					X											