

# ILLINOIS VALLEY COMMUNITY COLLEGE



## COURSE OUTLINE

**DIVISION:** Career and Technical Programs

**COURSE:** HVC 1230; Sheet Metal Fabrication

**Date:** Spring 2009

**Credit Hours:** 3

**Prerequisite(s):** None

**Delivery Method:**

<input checked="" type="checkbox"/> <b>Lecture</b>	<b>2 Contact Hours</b> (1 contact = 1 credit hour)
<input type="checkbox"/> <b>Seminar</b>	<b>0 Contact Hours</b> (1 contact = 1 credit hour)
<input checked="" type="checkbox"/> <b>Lab</b>	<b>2 Contact Hours</b> (2 contact = 1 credit hour)
<input type="checkbox"/> <b>Clinical</b>	<b>0 Contact Hours</b> (3 contact = 1 credit hour)
<input type="checkbox"/> <b>Online</b>	
<input type="checkbox"/> <b>Blended</b>	

**Offered:**  **Fall**     **Spring**     **Summer**

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

### **CATALOG DESCRIPTION:**

Students will gain knowledge and obtain practical hands-on skills in using sheet metal equipment to make a variety of ducts, fittings, and grills for the fabrication of air and gas handling duct work.

## GENERAL EDUCATION GOALS ADDRESSED

*[See the last page of this form for more information.]*

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

[Choose those goals that apply to this course.]

- To apply analytical and problem solving skills to personal, social and professional issues and situations.
- To communicate orally and in writing, socially and interpersonally.
- To develop an awareness of the contributions made to civilization by the diverse cultures of the world.
- To understand and use contemporary technology effectively and to understand its impact on the individual and society.
- To work and study effectively both individually and in collaboration with others.
- To understand what it means to act ethically and responsibly as an individual in one's career and as a member of society.
- To develop and maintain a healthy lifestyle physically, mentally, and spiritually.
- To appreciate the ongoing values of learning, self-improvement, and career planning.

### EXPECTED LEARNING OUTCOMES AND RELATED COMPETENCIES:

*[Outcomes related to course specific goals.]*

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

Outcome 1: demonstrate the various hand tools, purposes, and proper uses of those tools.

Assessment: Students will demonstrate the knowledge and ability thru lab projects that require them to build with the use of those to

Outcome 2: demonstrate the various power tools, purposes, and proper use of those tools.

Assessment: Students will demonstrate the knowledge and ability through lab projects that require them to build with the use of those tools.

Outcome 3: define the various terms used in sheet metal fabrication.

Assessment: Students will demonstrate the knowledge of "terms of the trade" by completing written quizzes.

Outcome 4: demonstrate the ability to use the various methods of pattern layout and cutting of metal.

Assessment: Students will demonstrate the knowledge of methods of pattern layout and cutting of metal by completing projects that require the uses of layout and cutting of metal.

Outcome 5: demonstrate an understanding of the various fittings used in the sheet metal trade; both fabricated and purchased.

Assessment: Students will demonstrate knowledge of fittings by completing quizzes.

Outcome 6: demonstrate the various assembly methods used in the sheet metal trade.

Assessment: Students will demonstrate knowledge of assembly by completing projects that require the uses of the various assembly methods.

Outcome 7: work safely in a sheet metal shop and on the job site.

Assessment: Students will be able to identify safety hazards and implement corrections during lab projects and on written quizzes.

**COURSE TOPICS AND CONTENT REQUIREMENTS:**

Hand Tools

- B. Power Tools
- C. Terms of the Trade
- D. Patterns and Layout
- E. Fabricated and Purchased Fittings
- F. Assembly of Ducts and Fittings

**INSTRUCTIONAL METHODS:**

Lecture, Class discussion, Class Demonstrations, Lab Assignments

**INSTRUCTIONAL MATERIALS:**

**STUDENT REQUIREMENTS AND METHODS OF EVALUATION:**

Daily class & lab attendance

Quizzes

Hands-on Lab Projects

Comprehensive Projects (2)

A= 100-90

B= 89-80

C= 79-70

D= 69-60

F= 50- 0

**TEXTBOOK:**

Sheet Metal, Meyer, American Technical Publishers, Inc., 1995

**OTHER REFERENCES**

# Course Competency/Assessment Methods Matrix

HVC 1230; Sheet Metal Fabrication		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	
	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							
Assessment Measures – Are direct or indirect as indicated. List competencies/outcomes below.																																	
<u>Outcome 1</u> : demonstrate the various hand tools, purposes, and proper uses of those tools.																																	
<u>Outcome 2</u> : demonstrate the various power tools, purposes, and proper use of those tools.																																	
<u>Outcome 3</u> : define the various terms used in sheet metal fabrication.																																	
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