COURSE OUTLINE

DIVISION: Career and Technical Programs

COURSE: HVC 1230; Sheet Metal Fabrication

Date: Spring 2009

Credit Hours: 3

Prerequisite(s): None

Delivery Method:

- Lecture 2 Contact Hours (1 contact = 1 credit hour)
- Lab 2 Contact Hours (2 contact = 1 credit hour)

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 tools.

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:
   A. 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:

OTHER REFERENCES
# Course Competency/Assessment Methods Matrix

## HVC 1230; Sheet Metal Fabrication

For each competency/outcome place an “X” below the method of assessment to be used.

<table>
<thead>
<tr>
<th>Assessment of Student Learning</th>
<th>Assessment Measures – Are direct or indirect as indicated. List competencies/outcomes below.</th>
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<tbody>
<tr>
<td>Direct/Indirect</td>
<td>Outcome 1: demonstrate the various hand tools, purposes, and proper uses of those tools.</td>
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<td>Outcome 2: demonstrate the various power tools, purposes, and proper use of those tools.</td>
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<td>Outcome 3: define the various terms used in sheet metal fabrication.</td>
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<td>Outcome 4: demonstrate the ability to use the various methods of pattern layout and cutting of metal.</td>
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