

ILLINOIS VALLEY COMMUNITY COLLEGE



COURSE OUTLINE

DIVISION: Workforce Development

COURSE: MET-1203; Manufacturing Materials & Processes II

Date: Spring 2014

Credit Hours: 3

Prerequisite(s): MET 1202

Delivery Method: Lecture 1.5 Contact Hours (1 contact = 1 credit hour)
 Seminar 0 Contact Hours (1 contact = 1 credit hour)
 Lab 3 Contact Hours (2 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:

This course is a continuation of MET 1202. In this course, students are exposed to other manufacturing processes not covered in MET 1202, such as: welding, nontraditional machining and latest trends in manufacturing. Students will also have opportunity to do advanced machining and measuring on lathes, mills, and drills. This course may be repeated for credit. Lecture, one and one half per week; lab, three hours per week.

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:

1. Perform complicated layout tasks on steel/plastic from various prints and sketches.
2. Care for and use advanced precision measuring tools such as inside micrometers, digital calipers, hole gages, indicators, sine bars, and height gages.
3. Understand the care and advanced operation of basic machine tools such as drill presses, lathes, milling machines and grinders.
4. Use the above mentioned machines and accurately build complex parts and simple jigs/fixtures off prints.

COURSE TOPICS AND CONTENT REQUIREMENTS:

- 1.0 Shop Safety
- 2.0 Advanced Measuring Operations
- 3.0 Advanced Machining Operations
- 4.0 Jigs and Fixtures

INSTRUCTIONAL METHODS:

Lecture
Demonstration
Hands On Lab

INSTRUCTIONAL MATERIALS:

Machining Fundamentals, ninth edition, ISBN 978-1-61960-209-0, Copyright 2014

STUDENT REQUIREMENTS AND METHODS OF EVALUATION:

Quizzes

Tests

Comprehensive Final

Lab projects

OTHER REFERENCES

Course Competency/Assessment Methods Matrix

MET-1203; Manufacturing Materials & Processes II	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	I	I	I	I	D	D								
Assessment Measures – Are direct or indirect as indicated. List competencies/outcomes below.																																	
1.0 Shop Safety								X	X			X																					
2.0 Advanced Measuring Operations				X				X	X			X																					
3.0 Advanced Machining Operations			X	X	X			X	X			X																					
4.0 Jigs and Fixtures			X	X				X	X			X																					