ILLINOIS VALLEY COMMUNITY COLLEGE

COURSE OUTLINE

DIVISION: Workforce Development

COURSE: MET 1204 Tooling Processes I

Effective Date: Fall 2024

Credit Hours: 3

Complete all that apply or mark "None" where appropriate:

Prerequisite(s): None

Enrollment by assessment or other measure? ☐ Yes ☒ No
If yes, please describe:

Corequisite(s): None

Pre- or Corequisite(s): MET 1203

Consent of Instructor: ☐ Yes ☒ No

Delivery Method:		
☒ **Lecture**	**2 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)**

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

CATALOG DESCRIPTION and IAI NUMBER (if applicable):
This course covers the fundamentals of press tool design and die making principles. Students develop an understanding of basic die types such as piercing, blanking, and stamping. Emphasis is placed on the above die making principles, with students working in a hands-on environment to produce a series of elementary press tools for secondary die operations.

ACCREDITATION STATEMENTS AND COURSE NOTES:
None

COURSE TOPICS AND CONTENT REQUIREMENTS:
1.0 Safety
2.0 Die design, principles, terminology, and Classifications
3.0 Strips, Blanks, and Clearances
4.0 Die Blocks, Strippers, and Punches
5.0 Die Fasteners and Die Sets
6.0 Types of Presses
7.0 Tool steel identification and application

INSTRUCTIONAL METHODS:
Lecture
Hands on Lab
Demonstration
Instructional Video

EVALUATION OF STUDENT ACHIEVEMENT:
Quizzes
Tests
Project work
Attendance

INSTRUCTIONAL MATERIALS:
Textbooks
Industrial Press Inc., Die Design Fundamentals, Third Edition, by Boljanovic and Paquin

Resources
PowerPoint slides

LEARNING OUTCOMES AND GOALS:
Institutional Learning Outcomes
☐ 1) Communication – to communicate effectively.
☒ 2) Inquiry – to apply critical, logical, creative, aesthetic, or quantitative analytical reasoning to formulate a judgement or conclusion.
☐ 3) Social Consciousness – to understand what it means to be a socially conscious person, locally and globally.
☐ 4) Responsibility – to recognize how personal choices affect self and society.

Course Outcomes and Competencies
1. Care for and use advanced precision measuring tools.
2. Understand the care and advanced safe operation of lathes, milling machines, and surface grinders.
3. Use the above-mentioned tools and machines to build complex parts and simple tooling from prints.
4. Display proficient knowledge of tooling design and construction.