ILLINOIS VALLEY COMMUNITY COLLEGE

COURSE OUTLINE

DIVISION: Workforce Development

COURSE: CNC 1204 CNC Turning Center Operations I

Date: Spring 2023

Credit Hours: 3

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

Prerequisite(s): CNC 1202 with a grade of C or better

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

Corequisite(s): None

Pre- or Corequisite(s): None

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):
In this course students learn basic CNC Turning Center Operations (Lathe). The student will learn basic CNC Lathe components and operations, understand and write part programs, and learn Lathe operator skills. Proper loading of programs into the machine control, verifying accuracy and program editing, and the basis of speeds and feeds will also be taught.

ACCREDITATION STATEMENTS AND COURSE NOTES:
None

COURSE TOPICS AND CONTENT REQUIREMENTS:
1. Safety
2. Video instruction
3. Computer simulation
4. Sequence of operations
5. Loading and molding work pieces
6. Program loading
7. Reading and interpreting action codes
8. Verifying program accuracy

INSTRUCTIONAL METHODS:
1. Lecture
2. Video Demonstration
3. Practical applications
4. Individualized instrumentation
5. Hands-on lab work
6. Master Task on-line lectures/test

EVALUATION OF STUDENT ACHIEVEMENT:
1. Problem solving
2. Skill proficiency
3. Technical knowledge

INSTRUCTIONAL MATERIALS:
Textbooks
McGraw-Hill Machining and CNC Technology

Resources
Haas CNC reference guide
Haas mill programing workbook
Power point slides
Example Programs

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. The student will be able to write a part program.
2. The student will be able to install and set tooling in the Lathe Turret.
3. The student will demonstrate proper workplace loading procedures.
4. Proper loading of programs into the machine control will be demonstrated by the student.
5. Reading and interpretation of action codes will be performed by the student.
6. The student will verify and edit programs.
7. The student will recognize tool wear and replace tools.
8. The student will demonstrate adjustment to speed and feed.