

## **COURSE SYLLABUS**

<b>LAST REVIEW</b>	Fall 2022
<b>COURSE TITLE</b>	Industry Print Reading
<b>COURSE NUMBER</b>	MACH 0104
<b>DIVISION</b>	Career and Technical Education
<b>DEPARTMENT</b>	MACH
<b>CIP CODE</b>	48.0501
<b>CREDIT HOURS</b>	3
<b>CONTACT HOURS/WEEK</b>	Class: 1                      Lab: 4
<b>PREREQUISITES</b>	None

### **COURSE DESCRIPTION**

This course will give the learner the knowledge to be proficient in the understanding and interpretation to translate and communicate information from drawings that will be needed to inspect, assemble and produce parts. Special emphasis will be implemented on providing realistic print reading examples and problems based on engineering and manufacturing fundamentals.

### **PROGRAM ALIGNMENT**

This course is part of a program aligned through the Kansas Board of Regents and Technical Education Authority. For more information, please visit:

[https://kansasregents.org/workforce\\_development/program-alignment](https://kansasregents.org/workforce_development/program-alignment)

### **PROGRAM LEARNING OUTCOMES**

1. Students will be able to read and interpret drawings and translate them into physical parts made from a variety of materials using manually operated machine tools
2. Students will be able to set up and safely operate manually operated machine tools.
3. Students will be able to inspect machined parts to verify dimensions fall within specified tolerances using a variety on precision measuring tools.
4. Students will be able to plot tool paths for CNC lathe and CNC mill parts in G-code from technical drawings.
5. Student will be able to accurately calculate proper machining feeds, speeds, and formulas.

## **TEXTBOOKS**

<http://kckccbookstore.com/>

## **METHODS OF INSTRUCTION**

A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

## **COURSE OUTLINE – NEED OUTLINE**

### **COURSE LEARNING OUTCOMES AND COMPETENCIES**

Upon successful completion of this course, the student will:

- A. Recognize the evolution of blue print reading.
  - 1. Describe the history of blue prints.
  
- B. Identify types of blueprints.
  - 2. Identify types of prints.
  - 3. Describe blue print uses.
  - 4. Describe what prints contain.
  - 5. Give examples for uses of prints.
  - 6. Describe new drafting systems.
  
- C. Understand concepts of line identification.
  - 7. Identify lines by name and application.
  - 8. Create line, point, and surfaces in relation to other views.
  
- D. Express views.
  - 9. Identify orthographic projection.
  - 10. Identify isometric drawings.
  - 11. Identify types of views.
  
- E. Interpret views.
  - 12. Identify and describe the importance of auxiliary views.
  - 13. Perform simple pictorial sketches.
  
- F. Interpret terms used related to blue prints.
  - 14. Describe blue print size numbering systems.
  - 15. Create title block and describe contents.

- 16. Describe tolerance limits.
- 17. Describe stack tolerance.

G. Understand dimensioning procedures.

- 18. Describe datums and baselines.
- 19. Describe tabular dimensioning.

H. Identify surface finishes

- 20. Identify surface finishes with the use of finish comparator.

I. Identifies materials.

- 21. Create examples of supplementary information.
- 22. Identify materials by the use of section lines.

J. Recognize special blue prints.

- 23. Identify thread classifications.
- 24. Identify gear and spline dimensioning.
- 25. Identify special symbols used on prints.
- 26. Identify the contents related to welding prints.
- 27. Identify the contents related to electrical prints.
- 28. Identify the contents related to hydraulic pneumatic prints.
- 29. Locate information using ladder logic techniques.

H. Relate to CAD Drawings

- 30. Identify materials on blue prints.
- 31. Describe symbols used in GMDT.
- 32. Create drawings with the aid of CAD program.

## **ASSESSMENT OF COURSE LEARNING OUTCOMES AND COMPETENCIES**

Student progress is evaluated through both formative and summative assessment methods. Specific details may be found in the instructor's course information document.

## **COLLEGE POLICIES AND PROCEDURES**

*Student Handbook*

<https://www.kckcc.edu/files/docs/student-resources/student-handbook-and-code-of-conduct.pdf>

*College Catalog*

<https://www.kckcc.edu/academics/catalog/index.html>

*College Policies and Statements*

<https://www.kckcc.edu/about/policies-statements/index.html>

*Accessibility and Accommodations*

<https://www.kckcc.edu/academics/resources/student-accessibility-support-services/index.html>.