

## COURSE SYLLABUS

<b>LAST REVIEW</b>	Fall 2022
<b>COURSE TITLE</b>	OSHA 10-30
<b>COURSE NUMBER</b>	MACH 0101
<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 locate and apply OSHA safety and health standards, policies and procedures. Introduce OSHA standards and regulations to supplemental an on-going safety and health program. Identify common violations of OSHA standards and propose abatement actions. Describe appropriate abatement procedures for selected safety and health hazards.

### 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**

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

Upon successful completion of this course, the student will:

- A. Understand the importance of OSHA.
  - 1. Define the importance of OSHA.
  - 2. Recognize the standards set by OSHA.
- B. Document information for OSHA requirements.
  - 3. Maintain records required by OSHA.
  - 4. Recognize penalties set by OSHA.
- C. Relate to background information related to OSHA.
  - 5. Identify and recognize inspection authorities.
  - 6. Recognize notice for inspections.
- D. Identify violation types.
  - 7. Recognize violations and realize fines that can be accessed.
  - 8. Follow abatement process.
- E. Identify OSHA standards.
  - 9. Locate CFR standards.
  - 10. Identify subparts of standards.
  - 11. Interpret standards in CFR 1910.
- F. Locate standards in CFR 1910
  - 12. Identify the numbering system implemented in CFR 1910.
- G. Identify exemplary safety and health programs.
  - 13. Identify with safety and health standards.
  - 14. Act in employee safety prevention programs.
- H. Recognize hazards in the work place.
  - 15. Participate in hazard prevention programs.
  - 16. Create alliances with other originations or departments.
- I. Define safe walking, working conditions.
  - 17. Define safe working, walking conditions.
  - 18. Maintain safe housekeeping procedures.

19. Determine safe floor loading conditions.
20. Recognize safe floor, platform openings conditions.
21. Access stairways for safety.
22. Access safe railing conditions.
23. Determine safe ladder conditions.
- J. Identify with electrical safety and conditions.
  24. Recognize general electrical requirements.
  25. Identify safe working spaces with electrical equipment.
  26. Identify safeguarding procedures in electrical equipment.
  27. Recognize safe wiring practices.
- K. Identify safe work practices.
  28. Identify training practices in energized equipment.
  29. Identify training practices in de energized equipment.
  30. Identify the importance of illumination of workspaces.
  31. Identify confined space illumination practices.
  32. Identify PPE.
  33. Determine interlocks and their importance.
- L. Select PPE.
  34. Describe general requirements for PPE.
  35. Determine hazard assessments for proper PPE.
  36. Determine the proper PPE for the conditions.
  37. Access proper ventilation standards for applications.
  38. Identify precautionary labeling and marking of storage containers or areas.
  39. Identify safe working conditions for welding.
- M. **Recognize welding requirements and hazards**
  40. Recognize toxic hazards.
  41. Identify potential air contaminants.
  43. Relate the terms TLV, TWA, PPM, and PEL Values.
  44. Identify silica, asbestos, lead. hazards.
- N. Recognize industrial hygiene hazards.
  45. Interpret and locate MSDS information.
  46. Identify hazard definitions.
- O. Recognize the importance of MSDS documentation.
  47. Identify target organ effects.
  48. Document necessary precautions related to MSDS.
- P. Identify hazards and corrective actions for hand tools.
  49. Recognize hazards associated with hand tools.
  50. Recognize guarding of equipment.
  51. Recognize hazards with electrical, pneumatic and jacks.
  52. Recognize fastening procedures.
- Q. Maintain records for recordkeeping.

**Commented [WR1]:** The course learning outcomes have not been reviewed for a very long time. Item M does not apply to my students and are not covered in the current OSHA program. I have highlighted the questionable item.

- 53. Identify forms and requirements set forth by OSHA.
- R. Recognize storage and handling of hazardous materials
  - 54. Identify storage procedures of compressed cylinders.
  - 55. Adhere to moving of cylinders of compressed gasses.
  - 56. Follow storage of flammable gases and liquids.
  - 57. Identify egress.
  - 58. Follow procedures to transport or move hazardous materials, liquids and or gasses.
  - 59. Identify highly hazardous chemicals and determine proper handling and storage methods.
- S. Identify confined spaces.
  - 60. Identify confined spaces.
  - 61. Determine permit requirements for confined spaces.
- T. Conduct energy control procedures.
  - 62. Describe definitions related to electrical requirements.
  - 63. Describe energy control procedures.
  - 64. Dawn PPE for electrical safety.
  - 65. Conduct inspection procedures.
  - 66. Conduct shut down procedures.
  - 67. Describe and perform lock-out procedures.
  - 68. Identify type of guarding methods.
  - 69. Identify container handling procedures.
  - 70. Identify types of woodworking guarding methods.
  - 71. Inspect machine control methods.
  - 72. Discuss guarding types.
  - 73. Discuss power press guarding.
- U. Properly identify material handling equipment.
  - 74. Identify material handling equipment.
  - 75. Identify storage procedures.
  - 76. Identify safety related to powered trucks.
  - 77. Conduct inspections of storage of batteries.
  - 78. Identify safety of cranes.
  - 79. Inspect slings and wire rope handling equipment.
- V. Inspect emergency evacuation routes and document findings.
  - 80. Identify basic coverage in exit plans.
  - 81. Identify the basic discharge routes.
  - 82. Describe action plans described in fire evacuation plans.

#### **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>