



LAWRENCE COUNTY CAREER AND TECHNICAL CENTER

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UbD Curriculum Unit Overview

Department: Vocational

Course Name: Machine Tool Technology

Unit Name: Safety

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[CNC Mill 1](#)

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[OSHA 10](#) (Added 8/21/24)

Course / Unit Basic Description

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Course Title: Machine Tool Technology

Grade Level(s): 10 - 12

Course Summary: (optional)

Unit Name: Introduction to Safety

Unit Number: Section 2
Unit 1

Time/Duration: 1 Week

Standards Addressed:
POS 100



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Orientation/Safety

- 101 Describe the Occupational Safety and Health Administration(OSHA) and its role in the machining industry
 - 102 Identify and explain safety equipment and procedures
 - 103 Identify and explain general safety precautions
 - 104 Identify and describe personal/lab safety requirements
 - 105 Explain Right to Know Law
 - 106 Explain location of SDS
 - 107 Explain potential hazardous trade materials
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Stage 1 Desired Results: Enduring Understandings & Essential Questions

What are the overarching takeaways and big ideas for students?

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Enduring Understandings/Big Ideas:

Students should not learn safety by accident

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Content Standard

Key ideas/details grades 11-12

- CC.3.5.11-12.B. Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
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- CC.3.5.11-12.C. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

Craft & Structure grades 11-12

- CC.3.5.11-12.D. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.
- CC.3.5.11-12.E. Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.



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- CC.3.5.11-12.F. Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.

Key ideas/details grades 9-10

- CC.3.5.9-10.A. Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
- CC.3.5.9-10.B. Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.
- CC.3.5.9-10.C. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.

Craft & Structure grades 9-10

- CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.
- CC.3.5.9-10.E. Analyze the structure of the relationships among concepts in a text, including relationships among key terms

Range and level of complex texts grades 9-10

- CC.3.5.9-10.J. By the end of grade 10, read and comprehend science/technical texts in the grades 9–10 text complexity band independently and proficiently

Transfer

Students will be able to independently use their learning to...

Recognize and avoid safety hazards in the workplace

Meaning

UNDERSTANDINGS

Students will understand that...

1. Safety includes not only workplace safety but also machine safety

Essential Questions:

1. Why is safety important to you?
2. If it saves time and therefore money, is cutting corners ok?
3. If a coworker is being unsafe should you ignore it because it's not you?

Stage 1: Essential Content, Concepts & Skills

What do we want students to know and be able to do?

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Acquisition

Students will know.....

1. Several reasons why safety is important
2. How to properly identify all forms of PPE
3. How to identify the location of first aid supplies
4. How to understand and read an MSDS sheet and understand how it correlates to shop safety
5. How to properly identify the location of the emergency shut off switch
6. How to find a proper evacuation route
7. Proper lockout/tagout procedures

Students will be skilled at (be able to do).....

1. The student will list several reasons why safety is important
2. The student will properly identify all forms of PPE
3. The student will properly identify the location of first aid supplies
4. The student will understand and read an MSDS sheet and understand how it correlates to shop safety
5. The student will properly identify the location of the emergency shut off switch
6. The student will demonstrate proper evacuation route
7. The student will demonstrate proper lockout/tagout procedures

Stage 2: Assessments/Evidence of Learning



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What are the formative (informal) and summative (formal) assessments used to measure learning and growth? How will you know that they did it?

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Evaluative Criteria	Assessment Evidence
- Instructor lead discussions on Section 2 Unit 1(Formative) - Quiz on PPE(Formative) - Orientation/Safety Test(Summative)	PERFORMANCE TASK(S)/Think: - Direct questioning as well as observations of section 2 unit 1 - PPE Quiz summary - Orientation/Safety Test summary - Written exams on orientation/safety are 100% pass, below 100% fail, Explain verbally using correct vocabulary and terminology all procedures involved with safety procedures and practices
<type here>	OTHER EVIDENCE: Safety test results NIMS MMS Test results

Stage 3: Learning Plan

What are the differentiated instructional strategies, activities, lesson plans that support the enduring understandings and essential questions for all students? This section provides a summary of the Key Learning Events and Instruction.

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Step 1 : Precision machining technology text book, read section 2 unit 1
Instructor lead Discussion on the unit
Answer review questions, highlight answers in study guide

Step 2 : Discuss MSDS Sheets
Discuss OSHA
Discuss the Right to Know Law

Step 3 : Discuss PPE
Quiz on PPE

Step 4 : Discuss emergency shut off switch
Discuss Lockout/Tagout Procedures
Discuss Fire evacuation route and procedure

Step 5 : Test on Orientation/safety



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Pass 100%
Students who do not receive a passing score must retake the test until a passing score is achieved

UBD UNDER CONSTRUCTION

Table of Contents - Course Name

Add Headings (Format > Paragraph styles) and they will appear in your table of contents.

UbD Curriculum Overview

Department

Course Name

Course Summary

Unit Name

Grade Level(s)

Time / Duration

Created (Date)

Revised (Date)

Standards Addressed

List all standards that will be addressed during the unit.



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Stage 1 - Desired Results: Enduring Understandings & Essential Questions

What are the overarching takeaways and big ideas for students?

Big Ideas	1.
Transfer	Students will be able to independently use their learning to... •
Meaning	Students will understand that... •
Essential Questions	1.

Stage 1 - Essential Content, Concepts, & Skills

What do we want students to know and be able to do?

Acquisition	
Knowledge	Students will know... •
Skills	Students will be skilled at (be able to do)... •

Stage 2 - Assessments / Evidence of Learning

What are the formative (informal) and summative (formal) assessments used to measure learning and growth? How will you know that they did it?

Evaluation Criteria (F/S)	Assessment Evidence
Formative Evaluation •	Performance Task(s) / Think: •
Summative Evaluation •	Other Evidence: •

Stage 3 - Learning Plan

What are the differentiated instructional strategies, activities, lesson plans that support the enduring understandings and essential questions for all students? This section provides a summary of the Key Learning Events and Instruction.

Summary of Key Learning Events and Instruction



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Resources

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