



MONROE COUNTY  
COMMUNITY COLLEGE

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# Course Outcome Summary

**Required Program Core Course**

**MATL 101 Industrial Materials**

## Course Information

Division	ASET
Contact Hours	60
Theory	30
Lab Hours	30
Total Credits	3

**Prerequisites:** MATH 090 or qualifying score on accepted placement tests.

## Course Description:

This course presents an introduction to materials used in industry, including iron, steel and nonferrous metals, from the standpoint of their properties and applications. Major topics will include material classification, determination of mechanical and physical properties, metallurgy and heat treatment. Laboratory experience will be gained in mechanical testing, microscopy, heat treatment and materials identification.

**This course is a required core course for students pursuing an AAS in Welding Technology.**

## Program Outcomes Addressed by this Course:

Upon successful completion of this course, students should be able to meet the program outcomes listed below:

- A. Identify weld defects, explain methods to repair defects, and demonstrate proper defect repair.**
- B. Read prints and interpret weld symbols.**
- C. Explain knowledge of basic material and welding metallurgy.**

## Course Outcomes



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In order to evidence success in this course, the students will be able to:

1. Comprehend the relationship of atoms to crystallographic structures and lattices including:  
Applies to Program Outcome  
C. Explain knowledge of basic material and welding metallurgy.
2. Comprehend basic metallurgical principles of ferrous and nonferrous metallurgy:  
Applies to Program Outcome  
C. Explain knowledge of basic material and welding metallurgy.
3. Recognize the metallurgical basis for weld defects:  
Applies to Program Outcomes  
A. Identify weld defects, explain methods to repair defects, and demonstrate proper defect repair.  
C. Explain knowledge of basic material and welding metallurgy.
4. Select metals for common industrial welding applications.  
Applies to Program Outcomes  
B. Read prints and interpret welding symbols.  
C. Explain knowledge of basic material and welding metallurgy.

Updated 02/15/2020

M. Jager