

*MTAG MODULARIZED  
CURRICULUM*

*COMPUTER APPLICATIONS*

# TECH PREP/MTAG CURRICULUM

## Computer Applications

### Lesson Plan

Time Allotment: 12 hours  
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#### MODULE DESCRIPTION

This module provides students an overview of where and how computers are used in manufacturing environments.

#### MODULE OBJECTIVE

After completing this module, students should be able to explain the function of software commonly used in manufacturing and demonstrate their ability to use that software to design a manufacturing process.

#### MTAG COMPETENCIES INTRODUCED

- H1.1 List possible computer applications in manufacturing processes.
- H2.1 List computer software programs used in manufacturing.
- H5.1 Utilize an industry-accepted word processing software package.
- H5.2 Utilize an industry-accepted spreadsheet package.

#### SCANS COMPETENCIES INTRODUCED

- C8: Uses computers to acquire, organize, analyze info and communicate information.

#### PERFORMANCE CRITERIA

- Given a manufacturing scenario, students will be able to identify the different tasks for which computers can be applied and different programs that could be used to accomplish each task.
- Students will be able to identify 10 ways in which computers are used in manufacturing.
- Students will be able to identify 7 software programs commonly used in manufacturing environments.
- Given a standard word processing software package, the student will be able to create, edit, spell check, grammar check, and format a technical document.
- Given a standard spreadsheet package, basic cost categories, and the required costing data, the student will be able to construct a cost comparison spreadsheet by correctly entering the data using column totals and installing formulas so that the data is

presented with 100% accuracy when compared to a benchmark model created using the same data.

## **SEQUENCING**

Introduction  
Elements of the module  
Student Experience with Computers  
Manufacturing Overview  
Classifying Applications  
Computers in Engineering  
Computers in Fabrication, Assembly, and Quality Control  
Applying Word Processing Software  
Applying Spreadsheet Software  
Applying 3D Modeling Software  
Skill Check Project: Utilizing Computer Applications in Manufacturing  
Final Skill Check  
Module Evaluation

## **EQUIPMENT AND SUPPLIES NEEDED**

Classroom with tables and chairs  
Whiteboard/chalkboard  
Overhead projector  
Computer Lab for Word Processing, Spreadsheet, and 3D Modeling Exercises  
Computer attached to an overhead projector (recommended)

## **INDEX OF INSTRUCTIONAL MATERIALS**

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## **RECOMMENDED STUDENT PREREQUISITES**

### **Introduction to Manufacturing**