National Center for Supply Chain Automation

MASTER SYLLABUS

Introduction to Mechanics and Mechanical Applications

Semester Credit Hours: 3.0

Prerequisites: None

## COURSE DESCRIPTION

Introduction to fundamental mechanics to include; Safety, Measurement, Tools, Physical Properties, Blue Prints, Structures, Mechanical drives, Fabrication, Maintenance and Troubleshooting.

## STUDENT LEARNING OUTCOMES

Upon successful completion of the course, students should be able to perform the following:

* List safety procedures for mechanical applications;
* List the different types of measuring devices;
* Apply measurement applications;
* List and describe the operation of common hand and power tools;
* Describe the physical properties of mechanical devices;
* Describe the different types of structures;
* Identify and use the proper lifting and rigging applications;
* Identify the common types of drive devices;
* Service mechanical drive systems;
* Demonstrate basic fabrication skills;
* Describe the basic maintenance types and applications;
* Select the proper procedures for troubleshooting failed components;
* Identify and use critical thinking to acquire information.

**COURSE OUTLINE**

* Safety
* Measurement
* Tools and Applications
* Physical Properties
* Structures
* Lifting and Rigging
* Mechanical Drives
* Fabrication
* Maintenance
* Troubleshooting and Failure Analysis
* Critical Thinking