

**NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY
MEC 112 - PROCESSES OF INDUSTRY (3 CR.)**

Course Description

Analyzes the processes of manufacturing products from materials for industry/engineering. Includes machining, casting, forming, molding, hot/cold working, chipless machining, and welding. Addresses quality assurance and inspection procedures. Lecture 3 hours per week.

General Course Purpose

To introduce the student to the fundamental mechanical processes used in manufacturing and the materials used in those processes. To provide a basic understanding of the methods used in transforming engineering designs and drawings to deliverable goods and equipment.

Course Prerequisites/Corequisites

None

Course Objectives

Upon completion of the course the student will be able to:

- Demonstrate knowledge of the fundamental manufacturing processes, fabrication characteristics of engineering materials and process planning
- Apply the engineering materials and manufacturing process requirements in engineering design documents
- Interpret engineering materials and manufacturing process requirements on technical documents from the engineering designer's point of view

Major Topics To Be Included

- Materials structure, properties and fabricating characteristics
- Metal casting
- Welding
- Plastics
- Metal forming
- Adhesive bonding
- Automation and robotics
- Quality assurance and inspection