Mechanical Design Capstone Project
Outline of Instruction

Course Information
Organization: Monroe County Community College, Applied Science and Engineering Technology
Developers: Dean R. Kerste
Development Date: 1/1/2008
Course Number: MDTC 242
Instructional Level: Associate Degree
Potential Hours of Instruction: 90
Total Credits: 4

Description
This course is a capstone experience for the final semester of the associate degree in Mechanical Design Technology. Students will demonstrate the collected knowledge, skills, and techniques acquired in previous courses by creating and presenting a representative design project to a panel of their peers, instructors, and representatives from industry. Emphasis is placed on the use of design principles and computer technology in planning, managing, and completing a design project. Team design projects will be integrated into the course.

Major Units
1. Graphical Communication in Engineering
2. Working in a Team Environment
3. Creativity and the Design Process
4. Solid Modeling
5. Assembly Modeling
6. Design Analysis

Textbooks

Learner Supplies
USB Flash Drive.

Prerequisites
MDTC 224
MDTC 226

Exit Learning Outcomes
General Education Outcomes
A. Demonstrate an understanding of the process of scientific inquiry
B. Apply mathematical approaches to the interpretation of numerical information
C. Apply mathematical approaches to the analysis of numerical information
D. Use computer technology to communicate information

External Standards

Course Outcomes
1. Identify the problem.
2. Integrate problem solving and related technologies into the process.
3. Use industry standard research and design techniques.
4. Demonstrate proper documentation procedures.
5. Use industry standards and codes.
6. Prepare documentation relating to the design problem: conceptualization sketches, calculations, working drawings.