
COURSE SYLLABUS

DIVISION: Workforce Services

Revised: January 2015

CURRICULUM IN WHICH COURSE IS TAUGHT: Technical Studies, Integrated Systems Technology

COURSE NUMBER AND TITLE: MEC 254, Applications in Mechanical Systems II

CREDIT HOURS: 3

HOURS WEEK LECTURER: 2

HOURS WEEK LAB: 2

LECTURE/LAB COMBINATION: 5

The OEE classes are self-paced study classes in which a student has 16 weeks to complete once enrolled. Students will complete all lab and bookwork before doing the end of chapter tests. All end of chapter tests and final exams are closed book. Upon completion of the lab, all tools, components, and supplies shall be returned to their proper location.

i. CATALOG DESCRIPTION

Covers advanced maintenance techniques and processes for industrial mechanics and technicians who are installing and maintaining industrial mechanical and power transmission components.

II. RELATIONSHIP OF THE COURSE TO CURRICULA OBJECTIVES IN WHICH IT IS TAUGHT.

This course offers the basics of power transmission systems and how it relates to industrial manufacturing machinery.

III. REQUIRED BACKGROUND

This course is intended for those individuals that have had MEC 154 or equivalent

IV. COURSE CONTENT:

- Plain Bearings
- Ball Bearings
- Roller Bearings
- Antifriction Bearing Selection and Maintenance
- Gaskets and Seals
- Advanced Gear Drives
- Gear Drive Selection and Maintenance
- Brakes and Clutches
- Brakes and Clutch Selection and Maintenance
- Linear Ball Bearings
- Ball Screw Drives Mechanical safety rules

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V. LEARNER OUTCOMES

VI. EVALUATION

Become familiar with safety rules.	Module Quiz
Become familiar with mechanical terminology.	
Will become familiar with the use of tape measures, dial calipers, micrometers and dial indicators.	Assignments
Learn how to install and level an electric motor.	Hands-on Lab
Will be able to perform a basic shaft alignment.	Hands-on Lab
Will be able to assemble mechanical transmission systems utilizing belts and pulleys, chains and sprockets and gears.	Final Exam Final Hands-on Lab

The course supports the following objectives:

DCC Educational Objectives

1. Communication
2. Critical Thinking
3. Understanding Culture and Society
4. Information Literacy