

SYLLABUS  
PART I  
EDISON COMMUNITY COLLEGE  
EGR 231S MACHINE RELIABILITY  
2 CREDIT HOURS

**COURSE DESCRIPTION**

Introduces equipment reliability using Periodic, Preventative and Predictive Maintenance. Topics include: why PM programs fail, creating PM procedures, predictive maintenance basics, advanced analysis methods to identify symptoms prior to a problem occurring, and implementation and/or modification of a working PM program. The course introduces concepts of functionality, trending and engineering limits, as well as the need for detection, analysis, and correction in forming a continuous cycle of equipment health monitoring.

**COURSE GOALS**

The student will:

Bloom's Level		Program Outcomes
1	1. Define types of PM.	4
1	2. Describe the relationship between "cleaning" and reliability.	4
4	3. Select appropriate PM candidates.	4
3	4. Develop PM procedures.	4
3	5. Determine parameters to monitor.	4
3	6. Determine appropriate tests and test equipment.	4
3	7. Classify appropriate "on line" and/or "off line" PM.	4
3	8. Determine resources for PM.	4
1	9. Describe required technical training.	4

**CORE VALUES**

The Core Values are a set of principles that guide in creating educational programs and environments at Edison. They include communication, ethics, critical thinking, human diversity, inquiry/respect for learning, and interpersonal skills/teamwork. The goals, objectives, and activities in this course will introduce/reinforce these Core Values whenever appropriate.

**TOPIC OUTLINE**

1. Relationship of Reliability, PM and Functionality
2. Determining What and How Often to PM
3. Labeling and Visibility
4. Writing a PM Procedure
5. Rotating Equipment
6. Stationary Equipment
7. Electrical Equipment
8. Total Productive Maintenance (TPM)
9. Zero Breakdowns