

**Faculty of Engineering & Technology**

**Plant Engineering and Maintenance**

**Information :**

**Course Code :** MPR 561

**Level :** Undergraduate

**Course Hours :** 2.00- Hours

**Department :** Specialization of Mechatronics Engineering

**Instructor Information :**

Title	Name	Office hours
Associate Professor	Hassan Mohamed Shams Eldin Elsayed Eleashy	4
Assistant Lecturer	Rana Mohamed Abdel Rahman Saleh	2

**Area Of Study :**

- Introduce students to fundamentals and concepts of Modern Plant Engineering and Maintenance.
- Enrich the students' knowledge about different maintenance management systems.
- Train students to search for Modern Maintenance topics through Self-Learning.

**Description :**

Plant engineering, Utilities, Energy and power systems, Material handling and storage, Environmental control, Waste disposal, Pollution control, Industrial maintenance, Corrective and predictive maintenance, Spare parts inventory control.

**Course outcomes :**

**a. Knowledge and Understanding: :**

1 -	Identify different elements of modern Plant Engineering and Maintenance Management and Control.
2 -	Describe the relation between Maintenance and other Plant Engineering activities.
3 -	Explain the different Maintenance Management Systems encounter in modern industry.

**b. Intellectual Skills: :**

1 -	Distinguish between different Maintenance Management Systems.
2 -	Examine the suitability of Modern Maintenance Systems for different fields of industrial applications.
3 -	Select the proper Computer Maintenance Management System (CMMS) for a given industrial application.

**c. Professional and Practical Skills: :**

1 -	Analyze characteristics of the different Modern Maintenance Management Systems.
2 -	Prepare and Present technical reports on Modern Maintenance.

**d. General and Transferable Skills: :**

1 -	Work in stressful environment and within constraints through assignments and term papers.
2 -	Communicate effectively through technical reports and representations.
3 -	Search for information and engage in life-long self-learning discipline through self-study tasks.

### **Course Topic And Contents :**

<b>Topic</b>	<b>No. of hours</b>	<b>Lecture</b>	<b>Tutorial / Practical</b>
Introduction to Plant Engineering and Maintenance.	3	2	1
Types of Maintenance and Strategies.	6	4	2
Maintenance Organizations.	9	6	3
Quality and Safety in Maintenance.	9	6	3
Maintenance Materials Control.	6	4	2
Maintenance Costing.	6	4	2
Computerized Maintenance Management Systems (CMMS).	6	4	2

### **Teaching And Learning Methodologies :**

Interactive Lecturing

Problem solving

Discussion

Term Paper

Research

### **Course Assessment :**

<b>Methods of assessment</b>	<b>Relative weight %</b>	<b>Week No</b>	<b>Assess What</b>
Assignment	5.00		
Final Exam	40.00		
First Midterm Exam	15.00		
Quizzes	10.00		
Report	10.00		
Research	5.00		
Second Midterm Exam	15.00		

### **Course Notes :**

Lecture notes on the course Moodle page, FUE website.