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
Teaching Assistant	Christopher Nashaat Najib Benjamin	

Area Of Study :

Introduce fundamentals and concepts of Modern Plant Engineering and Maintenance.
Enrich the student's knowledge about different maintenance management systems.
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 safety, Maintenance planning, Planned 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 -	Analyse 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 constrains 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 :

Topic	No. of hours	Lecture	Tutorial / Practical
Introduction to Plant Engineering & maintenance	3	2	1
Types of Maintenance & Strategies	6	4	2
Maintenance Organization	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 :

Methods of assessment	Relative weight %	Week No	Assess What
Assignments, Participation, & Quizzes	10.00		
Final examination	40.00	16	
First Midterm Exam	15.00	5	
Second Midterm Exam	15.00	10	
Term Paper (Self-Study)	20.00	16	

Course Notes :

Lecture notes on the course Moodle page, FUE website.