



Arab Academy for Science, Technology & Maritime Transport  
College of Engineering & Technology  
Mechanical Engineering (Mechatronics) Program

**University/Academy:** Arab Academy for Science, Technology & Maritime Transport  
**Faculty/Institute:** College of Engineering & Technology  
**Program:** B.Sc. Mechanical Engineering

**Form no. (12)**  
**Course Specification**

**1- Course Data**

Course Code: <b>ME 542</b>	Course Title: <b>Maintenance Planing</b>	Academic Year/Level: <b>5th year / 9th semester</b>
Specialization: <b>Mechanical</b>	No. of Instructional Units <b>3 credits</b>	Lecture <b>2 hrs.</b>
		Practical <b>2 hrs.</b>

**2- Course Aim**

- Student should understand maintenance concept and types. The importance of maintenance planning & control to judge choose, and adapt maintenance system which provides optimum solution to maintenance problems with the minimum expenditure.

**3- Intended Learning Outcomes**

<b>a- Knowledge and Understanding</b>	<b>Through knowledge and understanding, students will be able to:</b> K6) Quality assurance systems, codes of practice and standards, health and safety requirements and environmental issues. K7) Business and management principles relevant to engineering. K12) Contemporary Engineering Topics
<b>b- Intellectual Skills</b>	<b>Through intellectual skills, students will be able to:</b> I9) Judge engineering decisions considering balanced costs, benefits, safety, quality, reliability, and environmental impact I14ME) Create solutions to mechatronics systems especially to manufacturing, maintenance and interfacing Problems in a creative way, taking account of industrial and commercial constraints
<b>c- Professional Skills</b>	<b>Through professional and practical skills, students will be able to:</b> P8) Apply safe systems at work and observe the appropriate steps to manage risks. P9) Demonstrate basic organizational and project management skills. P10) Apply quality assurance procedures and follow codes and standards. P14 ME) Manage field problem, identification, formulation and solution
<b>d- General Skills</b>	<b>Through general and transferable skills, students will be able to:</b> G3) Communicate effectively G8) Acquire entrepreneurial skills

**4- Course Content**

<b>Week No.1</b>	Introduction – Management Functions
<b>Week No.2</b>	Maintenance and Repair.
<b>Week No.3</b>	Maintenance Types
<b>Week No.4</b>	Condition control
<b>Week No.5</b>	Condition monitoring
<b>Week No.6</b>	Maintenance Planning and Control
<b>Week No.7</b>	Maintenance Planning and Control / 7th week evaluation
<b>Week No.8</b>	Planning Administrative System
<b>Week No.9</b>	Cost Control Systems
<b>Week No.10</b>	Coding Systems and economic aspects
<b>Week No.11</b>	Spare Parts Control systems
<b>Week No.12</b>	Computer Planning Systems / 12th week evaluation
<b>Week No.13</b>	Case Studies.
<b>Week No.14</b>	Case Studies
<b>Week No.15</b>	Case Studies
<b>Week No.16</b>	Final examination

**5- Teaching and Learning Methods**

- Lectures
- Tutorials
- Reports & sheets
- Laboratories
- Seminars

**6-Teaching and Learning Methods for Students with Special Needs**

<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Tutorials</li> <li>• Reports &amp; sheets</li> <li>• Laboratories</li> <li>• Seminars</li> </ul> <p><b>Academic Support:</b></p> <ul style="list-style-type: none"> <li>• The general academic advisor appoints an academic supervisor for handicapped students.</li> <li>• Continuous follow ups are made for handicapped students after each assessment to evaluate their academic level of achievement</li> </ul>
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**7- Student Assessment**

<b>a-Procedures used</b>	1-Written Examinations to assess The Intended Learning Outcomes.	
	2-Class Activities (Reports, Discussions, -----) to assess The Intellectual and general Skills.	
<b>b- Schedule:</b>	Assessment 1	7 <sup>th</sup> Week Assessment
	Assessment 2	12 <sup>th</sup> Week Assessment
	Assessment 3	Continuous Assessments
	Assessment 4	16 <sup>th</sup> Week Final Written Exam
<b>c- Weighing of Assessment</b>	7 <sup>th</sup> Week Evaluation	30 %
	12 <sup>th</sup> Week Evaluation	20 %
	Final-term Examination	40 %
	Oral Examination	00 %
	Practical Examination	00 %
	Semester Work	10 %
	Total	100%

**8- List of References:**

<b>a- Course Notes</b>	N/A
<b>b- Required Books (Textbooks)</b>	• Maintenance Planning Prepared by Eng. Nabil El Khouly
<b>c- Recommended Books</b>	• Patlon Joseph D. Preventive Maintenance, Latest Edition. Prentice – Hall • - IMO Reference Books
<b>d- Periodicals, Web Sites, etc.</b>	N/A

Course coordinator:

Program Manager: