



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: ME 481	Course Title: Automotive Technology	Academic Year/Level: 4th year / 8th semester
Specialization: Mechanical	No. of Instructional Units 3 credits	Lecture 2 hrs.
		Practical 2 hrs.

2- Course Aim

- Identify the different systems of the motor car.
- Understand the theory and operation of each system

3- Intended Learning Outcomes

a- Knowledge and Understanding	Through knowledge and understanding, students will be able to: K6) Quality assurance systems, codes of practice and standards, health and safety requirements and environmental issues. K7) Business and management
b- Intellectual Skills	Through intellectual skills, students will be able to: I12) Create systematic and methodic approaches when dealing with new and advancing technology.
c- Professional Skills	Through professional and practical skills, students will be able to:
d- General Skills	Through general and transferable skills, students will be able to:

4- Course Content

Week No.1	Introduction, history of automotive industry, automotive tools & measuring instruments
Week No.2	Motronic System
Week No.3	engine sensors and actuators
Week No.4	automotive clutch
Week No.5	manual transmissions
Week No.6	automatic transmission
Week No.7	Steering system / 7th week evaluation

Week No.8	Wheel angles
Week No.9	suspension system
Week No.10	Brake system (disc brake)
Week No.11	Brake system (drum brake)
Week No.12	Tires / 12th week evaluation
Week No.13	vehicle heating and air conditioning systems.
Week No.14	electrical vehicles
Week No.15	Rivision
Week No.16	Final Examination

5- Teaching and Learning Methods

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

6-Teaching and Learning Methods for Students with Special Needs

- Lectures
 - Tutorials
 - Reports & sheets
 - Laboratories
 - Seminars
- Academic Support:**
- The general academic advisor appoints an academic supervisor for handicapped students.
 - Continuous follow ups are made for handicapped students after each assessment to evaluate their academic level of achievement

7- Student Assessment

a-Procedures used	1-Written Examinations to assess The Intended Learning Outcomes. 2-Class Activities (Reports, Discussions, -----) to assess The Intellectual and general Skills.
b- Schedule:	Assessment 1 7 th Week Assessment Assessment 2 12 th Week Assessment Assessment 3 Continuous Assessments Assessment 4 16 th Week Final Written Exam

c- Weighing of Assessment	7 th Week Evaluation	30 %
	12 th Week Evaluation	20 %
	Final-term Examination	40 %
	Oral Examination	00 %
	Practical Examination	00 %
	Semester Work	10 %
	Total	100%

8- List of References:

a- Course Notes	N/A
b- Required Books (Textbooks)	<ul style="list-style-type: none"> • Heisler, Heinz. "Vehicle And Engine Technology", Butterworth-Heini. – Latest Edition.
c- Recommended Books	<ul style="list-style-type: none"> • Martin W. Stockel, "Auto Mechanics Fundamentals" • Julian Happian Smith, "An Introduction to Modern Vehicle Design". • William k. Toboldt & Larry Johnson "Automotive Encyclopedia"
d- Periodicals, Web Sites, etc.	N/A

Course coordinator:

Program Manager: