Module (Course Syllabus) Catalogue

2023-2024

College/ Institute	Erbil Technology College	
Department	Automotive Technology Engineering	
Module Name	Electrical Vehicles	
Module Code	ADA304	
Degree	Technical Diploma ☑ Bachelor ☐ High Diploma ☐ Master ☐ PhD ☐	
Semester	3	
Qualification		
Scientific Title		
ECTS (Credits)	5	
Module type	Prerequisite ☐ Core ☑ Assist. ☐	
Weekly hours	4	
Weekly hours (Theory)	(2)hr Class	(67)Total hrs Workload
Weekly hours (Practical)	(2)hr Class	(113)Total hrs Workload
Number of Weeks	12	
Lecturer (Theory)	Sazan Ali Kamal Mohammed	
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Lecturer (Practical)	sazan,Payman	
E-Mail & Mobile NO.		
Websites		

Course Book

Course Description	the purpose of this course is to promote learning by examining underlying assumptions, seeking relevant information, and reaching final conclusions, thus understanding the implications of the diagnostic procedures in the following course concept areas: lighting, gauges, driver Information, horn, wiper, accessories, and body module				
Course objectives	Upon completion of this course the student will be able to: - Observe and perform safety procedures related to electronic systems. - Identify vehicle identification numbers, electronic service information, and service repair orders. - Methodically approach and diagnosis problems in electrical/electronic systems, in order to make a direct, thorough and economical diagnosis. - Do basic testing and service on body electrical/electronic systems and basic electrical systems. - Perform basic “in-car” diagnostics and repairs. - Understand the basic concepts and procedures to successfully repair late model electrical/electronic systems.				
Student's obligation	The student submits a weekly report about what have done in the Lab section. For examination, there are one semester exam and final exam for the practical and the theory parts. During the class hours there will be some quizzes.				
Required Learning Materials	lecture halls with data show equipment for lecture presentations, white board, overhead projector, posters				
Evaluation	**Task**		**Weight (Marks)**	**Due Week**	**Relevant Learning Outcome**
	Paper Review				
	Assignments	Homework	5%		
		Class Activity			
		Report	10%		
		Seminar	10%		
		Essay			

	Project	10%		
	Quiz	8%		
	Lab.	10%		
	Midterm Exam	15%		
	Final Exam			
	Total			

Specific learning outcome:	Upon the completion of this course students will be able to complete the following: 1.Diagnosis, test, and repair wiring concerns located within the lighting, gauges, and accessories circuits. 2.Develop an analytical and critical thought approach in electrical system diagnosis. 3.Analyze and diagnosis network and module communication. 4.Develop an understanding and demonstrate the proper use of electrical trouble shooting equipment. 5.Research and validate appropriate service and vehicle identification number information.
Course References:	**6. Hollembeak, B., 2011. Automotive Electricity and Electronics, NY, USA.** **7. Martin, T., 2015. Automotive diagnostic Scanners, Quarto Publishing Group, USA.** **8. Al Santini, 2013. Automotive Electricity and Electronics, NY, USA**

Course topics (Theory)	Week	Learning Outcome
Ignition Systems	1	
Ignition Systems	2	
Fuel and Emission Control Systems Electronics	3	
Fuel and Emission Control Systems Electronics	4	
Wiper and Horn Systems	5	
Power Accessories, Security Systems, and Entertainment Systems	6	

Power Accessories and Sound System Diagnosis and Repair	7	
Ignition System Diagnosis and Repair 1	8	
Ignition System Diagnosis and Repair 2	9	
Fuel and Emission Control Systems Electronics Service 1	10	
Fuel and Emission Control Systems Electronics Service 2	11	
Lighting System Diagnosis and Repair	12	

Practical Topics	**Week**	**Learning Outcome**
Ignition system	1	
Crankshaft position sensor	2	
Camshaft position sensor	3	
Temperature sensor	4	
Flasher relay	5	
Relay types	6	
Windshield system	7	
Wiper system	8	
Ignition system 2	9	
Windshield system 2	10	
Wiper system2	11	
Injector circuit	12	

Questions Example Design

Questions Example Design Compositional:

Why the internal resistance is used in manufacturing spark plugs?

Answer: The internal resistance will reduce the effect of radio waves during ignition operation.

2. True or false type of exams: Air bag system is belonging to passive operating system.

Answer: False. The Air bag system is belonging to Automatic system because it work immediately when there is an impact or force crush on the car

3. Multiple choices: Which test used for exploring the injector wires working 1. Id test B) Noid test C) load test Answer(B

Extra notes:

External Evaluator

I conform this course catalogue, its cover the subject and satisfied its principles.

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