Module (Course Syllabus) Catalogue 2024-2025

College/ Institute	**Erbil Technology College**							
Department	**Automotive Technique**							
Module Name	**Automotive Computer Control I**							
Module Code	**ACC601**							
Degree	**Technical Diploma**				**Bachelor**	✓		
	High Diploma		**Master**		**PhD**			
Semester	**6**							
Qualification								
Scientific Title								
ECTS (Credits)	**5**							
Module type	**Prerequisite**		**Core**	✓	**.Assist**			
Weekly hours	**4**							
Weekly hours (Theory)	**hr class (2)**							
Weekly hours (Practical)	**hr Workshop (2)**							
Number of Weeks	**12**							
Lecturer (Theory)	**Sazan Ali Kamal Mohammed**							
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Lecturer (Practical)	**Ibrahim**							

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Websites	

Course Book

Course Description	The purpose of this course is to promote learning about the vehicle Electric and electronic control system field and technology which involves growing sectors with the increasing demand of vehicles, understanding the vehicle computer system component implications in the following course concept areas: Fundamentals, engines wiring, Ignition systems, Fuel system, transmission control system, ECU. Maintenance.
Course objectives	Upon completion of this course, the student will be able to: 1. Understand the variation of vehicle technology 2. Vehicle electric system and components. 3. Automotive Control system 4. Automotive Electric Engine Mechanic 5. Automotive Electrician 6. Vehicle electric wiring 7. Technical electrical fault 8. Digital dignosting 9. OBD gauge 10. Fault diagnostic using OBD Diagnose, Adjust, and repair Engine error systems.
Students obligation	The student must attend the hall for 2 hours and 2 hours in the shop abidance the lecturer's instruction wherein early attendance and bringing requisite tools and keeping the hall clean and protecting furniture.
Required Learning Materials	To avoid students being bored in the hall lecturer uses several tools, whiteboard, data show, and other demonstration tools to interest students.

	Task	Weight) Marks(	Due Week	Relevant Learning Outcome
	Paper Review			
	Homework	%5	2	

Evaluation	Assignments	Class Activity	%2		
		Report	%5	1	
		Seminar			
		Essay			
		Project	%5	1	
	Quiz		%8	4	
	..Lab		%10	6	
	Midterm Exam		%25		
	Final Exam				
	Total				

Specific learning :outcome	Upon the completion of this course, students will be able to complete the following: 1. Diagnosis and repair using OBD 2. Research and validate appropriate service information about vehicle electrical controlling systems 3. Automotive wiring Maintenance Skill 4. Automotive Engine Elctric 5. Automotive Transmission electric system Skill 6. Will demonstrate an understanding of ABS systems. 7. Research and validate appropriate service information about vehicle electrical controlling systems.
Course :References	1.COMPUTERIZED ENGINE CONTROLS 2.Automotive Electricity And Electronics 3.Automotive Computer Controlled Systems 4.Internet

Course topics (Theory)	**Week**	**Learning Outcome**
Introduction to Automotive Electrical and Electronic Systems	1	1
Basic Theories.	2	1

Electrical and Electronic Components, Sensors	3	2
Wiring and Circuit Diagrams	4	2
Automotive Batteries	5	3
Introduction to the Body Computer	6	3
Computer Inputs, Vehicle Communication Networks	7	2
Advanced Lighting Circuits, Instrumentation, and Warning Lamps	8	2
The Computer ECM	9	5
Self-diagnosis and fault codes	11-10	1
Actuators	12	5
Diagnostic techniques	14-13	4

Practical Topics	Week	Learning Outcome
Automotive review: introduce electric and electronic parts	1	1
Engine electric components and parts: SIE and IC	2	1
Engine combustion electric system	3	2
DC Circuits and Electrical Power	4	2
Vehicle electric wiring system	5	2
Engine Ignition system: Fuel injection system	7	2
Engine starting system	8	4
Automotive Computer ECM	9	3
Self-diagnosis and fault codes gaged- OBD	10	3
Automotive Diagnostic techniques	11-14	3

Questions Example Design

: Compositional

1. List Electrical devices that are often installed on the engine.

2. Talk about **ECU,** and why it is used in engine performance control.

2. True or false type of exams:

1. A floating bulb measures the fuel level.
2. The engine alternator produces AC power.

***3.* : Multiple choices**

1. All of the statements concerning circuit components

A. A switch can control the on/off operation.

B. A switch can direct the flow of current through ..various circuits

A. A only.

B. B only.

C. Both A & B.

D. Neither A nor B.

(**T**).

(**F**).

Extra notes:

Students must be ready for quizzes at any time.

External Evaluator

I have read the terms of this article and acknowledge that it meets the required purpose.

Pshtiwan Mohammad Sharif

External Lecturer

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