



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Automotive Electric							
Course Code		OTT107		Couse Level		Short Cycle (Associate's Degree)			
ECTS Credit	3	Workload	75 (Hours)	Theory	3	Practice	1	Laboratory	0
Objectives of the Course		Learns the basic principles of automotive electricity, electrical systems on engines and vehicles, and methods of fault detection, detection and elimination of scientific substructures							
Course Content		This derste learns the basic electrical principles as well as the control, maintenance and repair of automobile acoustics, starter system, charging system and electrical circuit installations.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Demonstration					
Name of Lecturer(s)		Ins. Erdoğan PİRELİ							

### Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

### Recommended or Required Reading

1	Auto Electrical Technology / _Ihan TANRIKULU / Yüce Publications-248 pages-September 1999
2	Oto Elektrik Elektronigi / Doç.Dr..M.Sahir SALMAN / Milli Egitim Printing House-May 2000
3	Automotive Equipments / Cafer KAPLAN / Rıdvan ARSLAN / Ali SÜRMEN / Alfa Publications-January 2009

Week	Weekly Detailed Course Contents	
1	Theoretical	Electrical Principles, Magnetism
2	Theoretical	Electricity Measurement Units
3	Theoretical	Ohm Law
4	Theoretical	Kirchhoff's Laws (Series, Parallel and Mixed Circuit Theory)
5	Theoretical	Akünün Tasler ve İş Prensibi, Battery Types, Power Structure Electrolyte, Battery Tag, Factors Affecting Battery Capacity,
6	Theoretical	Battery Electrolyte Preparation
7	Theoretical	Battery controls and charging
8	Theoretical	Starter Types and Constructions, Controls of Starter System Maintenance and Defects,
9	Intermediate Exam	Midterm
10	Theoretical	Types of Cable Used in Starter Circuit and Starter Circuit
11	Theoretical	Charging system, mission, structure and types
12	Theoretical	Working Principle, Control and Maintenance of Alternators
13	Theoretical	Regulator (Charger) Mission, Types and Structural Features Control of the Charging System
14	Theoretical	Lighting, Fog Headlamps
15	Theoretical	Front and Rear Park Circuit, Signal Circuit, Reverse Gear Circuit, Horn Circuit, Brake Warning Lamp Circui
16	Final Exam	Yarıyıl Sonu Sınavı

### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	1	28
Lecture - Practice	14	1	1	28
Laboratory	1	0	2	2
Reading	1	0	2	2
Quiz	1	0	1	1
Midterm Examination	1	4	3	7



Final Examination	1	4	3	7
Total Workload (Hours)				75
[Total Workload (Hours) / 25*] = ECTS				3
*25 hour workload is accepted as 1 ECTS				

### Learning Outcomes

1	It will be able to repair and repair battery systems.
2	It will be able to repair and repair the charging systems.
3	It will be able to perform maintenance and repair of starter systems.
4	It will be able to perform maintenance and repair of the ignition systems.
5	To be able to comprehend basic electrical information, electrical concepts, units, calculations, circuits and electrical measurements.

### Programme Outcomes (Automotive Technology)

1	To be able to interpret and evaluate data, identify problems, analyze them, and develop evidence-based solutions by using basic knowledge and skills in the field.
2	Must be able to choose and effectively use the modern techniques, tools and information technologies necessary for field related applications.
3	Must be able to gain practical skills by examining relevant processes in industry and service sector on site.
4	They must be able to produce solutions, take responsibility for teams or do individual work when they encounter situations unforeseen in the field related applications.
5	Awareness of the need for lifelong learning; it must be able to follow the developments in science and technology and to constantly renew itself.
6	Must be able to use computer software and hardware at the basic level required by the field
7	Must have job security, worker health, environmental protection knowledge and quality awareness.
8	He must possess a level of foreign language knowledge that is capable of following the innovations in his area of expertise and communication techniques.
9	Must be able to acquire basic theoretical and practical knowledge about the field in mathematics, science and basic engineering.
10	It should have the ability to plan the processes / processes of the Automotive Program to meet the expectations of the sector.
11	To be able to design the systems and components related to the field by using technical drawing, computer aided drawing, designing using simulation programs and using various softwares, to be able to make basic sizing calculations, to be able to master professional plans and projects.

### Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4	L5
P1	5	5	5	5	5
P2	4	4	4	4	2
P3	4	4	4	4	2
P4	2	2	2	2	1
P5	1	1	1	1	2
P6	1	1	1	1	3
P7	4	4	4	4	2
P8					3
P9					2
P10	5	5	5	5	3
P11	4	3	4	4	2

