ENGINE TEST AND TUNING

1	Course Title:	ENGINE TEST AND TUNING	
2	Course Code:	OTOZ202	
3	Type of Course:	Compulsory	
4	Level of Course:	Short Cycle	
5	Year of Study:	2	
6	Semester:	4	
7	ECTS Credits Allocated:	4.00	
8	Theoretical (hour/week):	2.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	2	
11	Prerequisites:	Course in basic engine technology to be taken	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Öğr. Gör. ÖMER ÖZKOCA	
15	Course Lecturers:	Meslek Yüksekokulları Yönetim Kurullarının görevlendirdiği öğretim elemanları.	
16	Contact information of the Course Coordinator:	Öğr.Gör.Ömer Özkoca ozkoca@uludag.edu.tr, Tel: 224 2942343, B.U.Ü. T.B.M.Y.O Otomotiv Teknolojisi Programı	
17	Website:		
18	Objective of the Course:	Vehicle motors testing, maintenance and repair will be able to set	
19	Contribution of the Course to Professional Development:	To provide students with knowledge and skills about engine test and tuning that they can use in their professional lives	
20	Learning Outcomes:		
		1	The motor and control systems will be able to physically.
		2	Diagnostic test device to scan the systems and the engine will know
		3	Parts of the ECU and the ECU's memory failures to delete? or to introduce the know
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21	Course Content:		
	Course Content:		
Week	Theoretical		Practice

1	Physical controls of the motor systems, cooling and lubrication systems	Physical controls of the motor systems, cooling and lubrication systems
2	Ignition system and controls	
3	Diagnostic equipment Diagnostic test device, cables and connections	Diagnostic equipment Diagnostic test device, cables and connections
4	Screening of the motor system malfunction The ECU (Electronic Control Unit)	
5	Deleting Parts of the ECU's memory failures ECU fault	
6	Compression test, cylinder leak tester	Compression test, cylinder leak tester
7	Exhaust emissions and controls, catalytic converters	
8	Midterm Exam	
9	Vehicle display systems and controls	Vehicle display systems and controls
10	Valve mechanism, variable valve timing	Valve mechanism, variable valve timing
11	The sensor controls the Solenoid valve controls with diagnostic testing device controls the line of lubrication checks Engine tests (power, torque, fuel consumption, air consumption, specific fuel consumption, volumetric efficiency, thermal efficiency)	The sensor controls the Solenoid valve controls with diagnostic testing device controls the line of lubrication checks Engine tests (power, torque, fuel consumption, air consumption, specific fuel consumption, volumetric efficiency, thermal efficiency)
12	Engine tests (power, torque, fuel consumption, air consumption, specific fuel consumption, volumetric efficiency, thermal efficiency)	
13	Engine tests (power, torque, fuel consumption, air consumption, specific fuel consumption, volumetric efficiency, thermal efficiency)	
14	Vehicle testing	Vehicle testing

22	Textbooks, References and/or Other Materials:	Lecture notes
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	30.00
Quiz	0	0.00
Home work-project	1	20.00
Final Exam	1	50.00
Total	3	100.00
Contribution of Term (Year) Learning Activities to Success Grade		50.00
Contribution of Final Exam to Success Grade		50.00
Total		100.00

Measurement and Evaluation Techniques Used in the Course	Measurement and evaluation is carried out according to the priciples of Bursa uludag University Associate and Undergraduate Education Regulation.

24 ECTS / WORK LOAD TABLE

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	14	2.00	28.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	16.00	16.00
Others	0	0.00	0.00
Final Exams	1	20.00	20.00
Total Work Load			120.00
Total work load/ 30 hr			4.00
ECTS Credit of the Course			4.00

25 CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS

	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	1	5	4	5	0	0	3	0	2	0	0	0	0	0	0	0
ÖK2	0	0	0	3	2	4	0	0	0	0	0	0	0	0	0	0
ÖK3	0	0	0	3	2	4	0	0	0	0	0	0	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	1 very low	2 low	3 Medium	4 High	5 Very High