TRACTORS - EQUIPMENT MECHANICS										
1	Course Title: TRACTORS - EQUIPMENT MECHANICS									
2	Course Code:	BSM6011								
3	Type of Course:	Optional								
4	Level of Course:	Third Cycle								
5	Year of Study:	1								
6	Semester:	1								
7	ECTS Credits Allocated:	6.00								
8	Theoretical (hour/week):	3.00								
9	Practice (hour/week):	0.00								
10	Laboratory (hour/week):	0								
11	Prerequisites:	None								
12	Language:	Turkish								
13	Mode of Delivery:	Face to face								
14	Course Coordinator:	Prof. Dr. Nazmi İzli								
15	Course Lecturers:	Yok								
16	Contact information of the Course Coordinator:	Telefon: 0 224 2941601 Adres: Bursa Uludağ Üniversitesi, Ziraat Fakültesi, Biyosistem Mühendisliği Bölümü, Görükle Kampüsü, 16059, Nilüfer/BURSA								
17	Website:									
18	Objective of the Course:	Principles of selection and application of farm tractors and engines. Operation and principles of internal combustion engines including carburetion, fuel injection, ignition, and lubrication. Power transmission application and efficiency are considered. Lecture, two hours per week;laboratory, two hours per week.								
19	Contribution of the Course to Professional Development:	Students who take the course will have the engineering knowledge to evaluate the characteristics of the tractor.								
20	Learning Outcomes:									
		1	To learn about the engine, the clutch organs, gear box, differential, axes of the tractor and working principles an the parts of the final reduction.							
		2	To learn about steering systems, hydrolic lifting systems, power take off systems in terms of their working principles and parts.							
		3	Able to tractor and tipping points of the analysis of static and dynamic forces that are able to determine							
		4	Tractor PTO should be aware that variations							
		5	Good knowledge of tractor hydraulic lift system, able to make calculations related to the subject							
		6	They should know the tractor maintenance and apply it							
		7	Tractor should be able to diagnose faults and repair workshop facilities should be able to some of the failures							
		8	Tools and equipment to tie the tractor. Be able to use the tractor in the field							
		9								
		10								
21	Course Content:									
Course Content:										

Theoretical Strength Towing Tractor, Tractor  Practicals/Labs  0 0.00  Self study and preparation Homeworks  0 0.00  Project Selection, preliminary preparations for the experiment the tail shaft power  Field Studies  8 4.00  Midtern example and the location of the center of dravity  Others  0 0.00  Others  0 0.00  Others  14 3.00  42.00  80.00  80.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  Total Work Load  Total work load 30 hr  ECTS Credit of the Course	Week	Theoretical		Practice						
Tractor, the main structural elements (engine)  Tractor, the main structural elements (clutch)  Tractor, the main structural elements (gearbax) (gearbax) (gearbax)  Tractor structural elements (Differantial and last reductions)  Tractor steering system  Hydraulic systems and controls  Hydraulic systems and controls  PTO, front loader, driver's cabin  Mechanics of Tractor, Tractor Determination of Center of Gravity of Place, a tractor in Dormant Forces  Mechanics of Tractor, tractor in a horizontal, inclined tractor in, Lateral slope tractor, a tractor in the still to determine stability.  Activites  Number  Duration (hour)  Total  Load  Theoreticals/Labs  O 0.000  O,000  O,000  O,000  O,000  O,000  Micter Stability Properties Principles of testing of Homeworks  Frield Studies  Number  Duration (hour)  Total  Load  Tractor the still shaft nower  Field Studies  Number  Number  Number  Duration (hour)  Total  Load  Total Williams  O 0.000  O,000  O,000  O,000  O,000  Nicter Stability Principles of testing of Homeworks  Number  Number  Number  Number  Number  Duration (hour)  Total  Number  Number  Duration (hour)  Total  Number  Number  Number  Number  Duration (hour)  Total  Load  10  O 0.000  Nicter Stability Principles of testing of Homeworks  Number  Numb			y and							
Tractor, the main structural elements (clutch)  Tractor, the main structural elements (gearbaxs)  Tractor, the main structural elements (pliferantial and last reductions)  Tractor steering system  Tractor steering system  Hydraulic systems and controls  Hydraulic systems and controls  Hydraulic systems and controls  Tractor for fractor, Tractor Determination of Center of Gravity of Place, a tractor in Dormant Forces  Mechanics of Tractor, Tractor Determination of Center of Gravity of Place, a tractor in Dormant Forces  Mechanics of Tractor, tractor in a horizontal, inclined tractor in, Lateral slope tractor, a tractor in the still to determine stability.  Activites  Number  Duration (hour)  Total  Load  Theore Systems Authority of Place, a tractor in a horizontal, inclined tractor in, Lateral slope tractor, a tractor in the still to determine stability.  Activites  Number  Duration (hour)  Total  Homeworks  Duration (hour)  Total  Homeworks  Duration (hour)  Total  Homeworks  Duration (hour)  Total  Homeworks  Duration (hour)  Total  Number  Duration (hour)  Total  Number  Duration (hour)  Total  Number  Duration (hour)  Total  Homeworks  Duration (hour)  Total  Homeworks  Duration (hour)  Total  Number		( <u>-</u>								
Tractor, the main structural elements (gearbaxs)  5 Tractor, the main structural elements (Differantial and last reductions)  6 Tractors drive units  7 Tractor steering system  8 Hydraulic systems and controls  9 Hydraulic systems and controls  10 PTO, front loader, driver's cabin of Center of Gravity of Place, a tractor in Dormant Forces  12 Mechanics of Tractor, Tractor Determination of Center of Gravity of Place, a tractor in Dormant Forces  12 Mechanics of Tractor, tractor in a horizontal, inclined tractor in, Lateral slope tractor, a tractor in the still to determine stability.  Activites  Number Duration (hour) Total Load  Theore and Cail Strength Towing Tractor, Tractor  Practicals/Labs  0 0.0.00 0.00  Set and Tractor properties Principles of testing of Homeworks  Project system and properties and the location of the Course Middle Mydrologist programment. In tail shaft power.  Field Studies  8 4.00 32.00  Middle Registron preliminary preparations for the Course Middle Mydrologist properties and the location of the Course Maker of Gravity.  Total Work Load  Total With Call Tractors and Tractor Prover Units. An Propoking States and Tractors and Tractors and Tractor Prover Units. An Propoking States and Tractors and	2	ractor, the main structural elements	(engine)							
(gearbaxs)  Tractor, the main structural elements (Differantial and last reductions)  Tractor strive units  Tractor steering system  ### Hydraulic systems and controls  #### Hydraulic systems  ### Hydraulic systems  ### Hydraulic systems  ### Hyd	3	Tractor, the main structural elements	(clutch)							
Differential and last reductions    Tractor stering system	4									
Tractor steering system    Number   Duration (hour)	5									
### Hydraulic systems and controls  ####  Hydraulic systems and controls  ##### Hydraulic systems and controls  ###################################	6	Tractors drive units								
9 Hydraulic systems and controls 10 PTO, front loader, driver's cabin 11 Mechanics of Tractor, Tractor Determination of Center of Gravity of Place, a tractor in Dormant Forces 12 Mechanics of Tractor, tractor in a horizontal, inclined tractor in, Lateral slope tractor, a tractor in the still to determine stability.  Activities Number Duration (hour) Total Load  Theore Entironmental Porce Determination, Strength Towing Tractor, Tractor  Practicals/Labs 0 0 0.00 0.00  Self study and properations. Principles of testing of Homeworks 0 0.00 0.00 0.00  Project Selection, preliminary preparations for the 0 0.00 0.00  Midtern Ryaginaria properties and the location of the center of ordavity 0 0.00 0.00  Others 0 0.00 0.00 0.00  Total Work Load 1 20.00 20.00  Total Work Load 1 4 20.00 20.00  Total Work Load 1 5 Assessment  ECTS Credit of the Course 1 Assessment  Fakultesi Yayiniari Yayin No.1471, Ders King 8536  23 Assesment  TERM LEARNING ACTIVITIES NUMBE R Midtern Exam 0 0.00  Quiz 0 0.00  Final Exam 1 100.00  Total Home work-project 0 0.00  Final Exam 1 100.00  Total Home work-project 0 0.00  Final Exam 1 100.00	7	Tractor steering system								
10 PTO, front loader, driver's cabin  11 Mechanics of Tractor, Tractor Determination of Center of Gravity of Place, a tractor in Dormant Forces  12 Mechanics of Tractor, tractor in a horizontal, inclined tractor in, Lateral slope tractor, a tractor in the still to determine stability.  Activities  Number  Duration (hour) Total Load  Theore and Gait Strength Towing Tractor, Tractor  Practicals/Labs  O 0,00 0,00  Self-studgand preparations. Principles of testing of Homeworks  Project Selection, preliminary preparations for the Gait Studies  Midtern Resemble and the fail shaft power  Field Studies  Midtern Resemble and the fail shaft power  Total Work Load  Total Work Load  Total Work Load  Project Selection of the Course  Wild Studies A 4.00  O 0.00	8	Hydraulic systems and controls								
11 Mechanics of Tractor, Tractor Determination of Center of Gravity of Place, a tractor in Dormant Forces  12 Mechanics of Tractor, tractor in a horizontal, inclined tractor in, Lateral slope tractor, a tractor in the still to determine stability.  Activities  Number  Duration (hour) Total Load  Theore and Gait Strength Towing Tractor, Tractor  Practicals/Labs  0 0.00 0.00  Self-stid Rand repetations. Principles of testing of Homeworks  0 0.00 0.00  Project Selection, preliminary preparations for the Experiment the fail shaft power  Field Studies  A 4.00 32.00  Midtern Rogality in properties and the location of the Senter of Gravity  O 0.00 0.00  Others  0 0.00 0.00  Others  1 20.00 0.00  Total Work Load  Total	9	Hydraulic systems and controls								
of Center of Gravity of Place, a tractor in Dormant Forces  12 Mechanics of Tractor, tractor in a horizontal, inclined tractor in, Lateral slope tractor, a tractor in the still to determine stability.  Activities Number Duration (hour) Total Load  Theore I and Gait Strength Towing Tractor, Tractor Practicals/Labs  Self-study and preparation Proce Determination, Strength 14 3.00 42.00  Practicals/Labs 0 0.00 0.00 0.00  Self-study and preparation Processing Principles of testing of Homeworks 0 0.00 0.00 0.00  Homeworks 0 0.00 0.00 0.00  Project Selection, preliminary preparations for the 0 0.00 0.00 0.00  Project Selection, preliminary preparations for the 0 0.00 0.00 0.00  Midter Regaling a properties and the location of the Course 0 0.00 0.00 0.00  Final Exams 1 0.00 0.00 0.00  Total Work Load 174.00  Total work Load 174.00  Total work Load 174.00 174.00  Total work Load 174.00 174.00  Total work Load 174.00 174.00 174.00  Total work Load 174.00 174.00 174.00  Total work Load 174.00 174.00 174.00 174.00  Quiz 0 0.00  Quiz 0 0.00  Final Exam 0 0.00  Quiz 1 00.00  Final Exam 1 100.00  Total Home work-project 0 0.00  Final Exam 1 100.00  Total Total 1 100.00	10	PTO, front loader, driver's cabin								
Inclined tractor in, Lateral slope tractor, a tractor in the still to determine stability.	11	of Center of Gravity of Place, a tracto								
Load	12	inclined tractor in, Lateral slope tracto	or, a							
Practicals/Labs	Activit	es		Number	Duration (hour)	Total Work Load (hour)				
Practicals/Labs	Theore	Environmental Force Determination,	<del>Strength</del>	14	3.00	42.00				
Homeworks			acioi	0	0.00	0.00				
Homeworks	<del>Self_stu</del>	dy and preperation. Dringings of toot	na of	10	80.00					
Field Studies	Homew	vorks		0	0.00	0.00				
Field Studies	Project	selection, preliminary preparations to	r tne	0	0.00					
O		tudies		8	4.00	32.00				
O	Midtern	Rotational properties and the location Learns of gravity	or the	0.00 0.00						
Total Work Load				0	0.00	0.00				
Total work 18ad/30 hr	Final E	kams		1	20.00	20.00				
ECTS Credit of the Course    Makoto Hoki. Tractors and Their Power Units. An A Book.ISBN 0 442 25897 6 (463s)    23   Assesment						174.00				
Makoto нокі. Tractors and Their Power Units. An A Book.ISBN 0 442 25897 6 (463s)    23   Assesment	Total w	ork load 30 hr		Fakultesi Yayınları Yayı  s].	n No:1471, Ders Kit	5.8036 (200				
TERM LEARNING ACTIVITIES         NUMBE R         WEIGHT           Midterm Exam         0         0.00           Quiz         0         0.00           Home work-project         0         0.00           Final Exam         1         100.00           Total         1         100.00	ECTS (	Credit of the Course		IMakoto Hoki. Tractors and Their Power Units. An AVI						
R         Midterm Exam         0         0.00           Quiz         0         0.00           Home work-project         0         0.00           Final Exam         1         100.00           Total         1         100.00	23	Assesment								
Quiz       0       0.00         Home work-project       0       0.00         Final Exam       1       100.00         Total       1       100.00			R	WEIGHT						
Home work-project         0         0.00           Final Exam         1         100.00           Total         1         100.00		n Exam								
Final Exam 1 100.00  Total 1 100.00										
Total 1 100.00		· ·								
		xam	•							
Contribution of Term (Year) Learning Activities to 0.00										
Success Grade			es to	0.00						

Contribution of Final Exam to Success Grade	100.00					
Total	100.00					
'	The effect of the final exam on the course-passing grade is 100%.					
24 ECTS / WORK LOAD TABLE						

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1 0	PQ11	PQ12	PQ1	PQ14	PQ15	PQ16
ÖK1	3	2	2	2	4	1	1	5	2	2	2	4	0	0	0	0
ÖK2	3	2	2	2	4	1	1	5	2	2	2	4	0	0	0	0
ÖK3	3	2	2	2	4	1	1	5	2	2	2	4	0	0	0	0
ÖK4	4	2	2	2	4	1	1	5	2	2	2	4	0	0	0	0
ÖK5	4	2	2	2	4	1	1	5	2	2	2	4	0	0	0	0
ÖK6	4	4	2	3	4	1	1	5	3	3	2	4	0	0	0	0
ÖK7	4	4	3	3	4	1	1	5	3	3	2	4	0	0	0	0
ÖK8	4	4	3	3	4	1	1	5	3	3	2	4	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contrib ution Level:	ution			2 low			3 Medium		4 High			5 Very High				