STATICS

1	Course Title:	STATICS
2	Course Code:	MAK1002
3	Type of Course:	Compulsory
4	Level of Course:	First Cycle
5	Year of Study:	1
6	Semester:	2
7	ECTS Credits Allocated:	3.00
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:	Dr. Ögr. Üyesi KENAN TÜFEKÇİ
15	Course Lecturers:	Dr. Öğr. Üyesi Behiye KORKMAZ Dr. Öğr. Üyesi Betül Gülçimen ÇAKAN
16	Contact information of the Course Coordinator:	kenantufekci@uludag.edu.tr 0224-2942794 Uludağ Üniversitesi Müh. Mim. Fak. Makine Müh. Bölümü TR-16059, Bursa, Türkiye.
17	Website:	
18	Objective of the Course:	Teaching fundamentals of mechanics of rigid bodies and finding the forces acting on objects before design according to equilibrium positions.
19	Contribution of the Course to Professional Development:	This course provides the basis for not only mechanical engineering but all mechanics-based engineering programs. All mechanical calculations in engineering start with static analysis.
20	Learning Outcomes:	
		1	Teaching of vertical components of vectors, scalar and vector multiplication of two vectors, moment to teach the concepts.
		2	Teaching of Equilibrium of a material point in space.
		3	Teaching of structural analyses.
		4	Teaching of frame analyses.
		5	Calculating of Center of gravity.
		6	Calculating of Moment of inertia.
		7	Calculating of Friction Loads.
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		9	
		10	
21	Course Content:	

Course Content:		
Week	Theoretical	Practice

1	1.Lesson: Basic definitions 2.Lesson: The basic principles based on the mechanics 3.Lesson: The basic principles based on the mechanics(cont.)	
2	1.Lesson: Statics analysis of material point 2.Lesson: Forces action to a material point 3.Lesson: Vertical components of a vector, unit vectors	
3	1.Lesson: Scaler multiplication of two vectors, vectorial sum, moment 2.Lesson: Scaler multiplication of two vectors, vectorial sum, moment.(cont.) 3.Lesson:Movement of a force and couple system, Equivalent Forces	
4	1.Lesson: Moment of a force according to a point 2.Lesson: Equilibrium of a material point in planes. 3.Lesson: Free-Body Diagram	
5	1.Lesson: Equilibrium of a material point in space. 2.Lesson: Equilibrium of a material point in space. (cont.) 3.Lesson: Rigid Bodies, Equivalent Force Systems	
6	1.Lesson: Statics of Rigid Bodies 2.Lesson: Equilibriumof Forces Plane System 3.Lesson: Equilibriumof Forces Plane System (cont.)	
7	1.Lesson: Equilibrium of Forces in Space System 2.Lesson: Equilibrium of Forces in Space System (cont.) 3.Lesson: Equilibrium of Forces in Space System (cont.)	
8	Repeating courses and solution examples.	
9	1.Lesson: Introduction to Structural Systems 2.Lesson: Method of joints for structural analyses 3.Lesson: Method of joints for structural analyses (cont.)	
10	1.Lesson: Method of section for structural analyses 2.Lesson: Method of section for structural analyses(cont.) 3.Lesson: Method of section for structural analyses (cont.)	
11	1.Lesson: Frame Systems 2.Lesson: Frame Systems (cont.) 3.Lesson: Frame Systems (cont.)	

12	1.Lesson: Center of gravity and Distributed Loads 2.Lesson: Center of gravity (cont.) 3.Lesson: Center of gravity (cont.)	
13	1.Lesson: Moment of inertia 2.Lesson: Moment of inertia (cont.) 3.Lesson: Moment of inertia (cont.)	
14	1.Lesson: Friction 2.Lesson: Friction (cont.) 3.Lesson: Friction (cont.)	

22	Textbooks, References and/or Other Materials:	1. Shelley, J.F., Engineering Mechanics, Statics, McGraw-Hill, 1980 2. Hibbeler, R.C., Statics, Second Edition, Macmillan Publishing Co., Inc., New York, 1978. 3.Ferdinand P. Beer, Russell Johnston, Mühendisler için Mekanik-Statik, Birsen Yayınevi, 2011.
23	Assesment	

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	1	40.00
Quiz	0	0.00
Home work-project	0	0.00
Final Exam	1	60.00
Total	2	100.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		Mid-term And Final Exam, The relative evaluation method is applied.

24	**ECTS / WORK LOAD TABLE**

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
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	2.00	2.00
Others	2	8.00	16.00
Final Exams	1	2.00	2.00
Total Work Load			92.00
Total work load/ 30 hr			3.00
ECTS Credit of the Course			3.00

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	5	5	5	0	3	5	0	0	0	0	0	0	0	0	0	0
ÖK2	5	5	5	0	3	5	0	0	0	0	0	0	0	0	0	0
ÖK3	5	5	5	0	3	5	0	0	0	0	0	0	0	0	0	0
ÖK4	5	5	5	0	3	5	0	0	0	0	0	0	0	0	0	0
ÖK5	5	5	5	0	3	5	0	0	0	0	0	0	0	0	0	0
ÖK6	5	5	5	0	3	5	0	0	0	0	0	0	0	0	0	0
ÖK7	5	5	5	0	3	5	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			