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.
		8	
		9	
		10	

21	Course Content:	

Course Content:		
Week	Theoretical	Practice

Week	Lessons
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.)
6	1.Lesson: Statics of Rigid Bodies 2.Lesson: Equilibrium of Forces Plane System (cont.)
7	1.Lesson: ... System 2.Lesson: Equilibrium of Forces in Space System 3.Lesson: Equilibrium of Forces in Space System (cont.)
8	Repeating courses and solution examples.
9	2.Lesson: Method of joints for structural analyses 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.)

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

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

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