STEEL STRUCTURES

1	Course Title:	STEEL STRUCTURES
2	Course Code:	INS4033
3	Type of Course:	Compulsory
4	Level of Course:	First Cycle
5	Year of Study:	4
6	Semester:	7
7	ECTS Credits Allocated:	4.00
8	Theoretical (hour/week):	2.00
9	Practice (hour/week):	2.00
10	Laboratory (hour/week):	0
11	Prerequisites:	None
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. ADEM DOĞANGÜN
15	Course Lecturers:	Prof. Dr. Adem DOĞANGÜN
16	Contact information of the Course Coordinator:	adogangun@uludag.edu.tr
17	Website:	http://insaat.uludag.edu.tr/
18	Objective of the Course:	This course gives basic knowledge to the civil engineering students about the behaviour and calculation of steel structures under various loading conditions
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	
	1	Gain the ability use of structural mechanics knowledge for designing steel structural sections, connections and connecting members
	2	To be capable of design structures made of steel, its members and joints: bolted, welded connections and related design principles.
	3	Gain the ability to follow various codes and new technology.
	4	Be able to know practice problems and solutions encountered in application
	5	To be able to use various structural analysis programs for structural analysis of steel structure.
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21	Course Content:	

Course Content:

Week	Theoretical	Practice
1	Introduction, advantages and disadvantages of steel structures. Mechanical properties of steel and Loading in structures	

2	Connection members and connection tools, rivets and bolts, Design of bolted connections	Oral lecture, Problem Solving
3	Welding, Welding Types, Design of bolted connections	Oral lecture, Problem Solving
4	ASD design method	Oral lecture, Problem Solving
5	Buckling, Steel member subjected to buckling	Oral lecture, Problem Solving
6	Buckling, Steel members subjected to buckling.	Oral lecture, Problem Solving
7	Buckling, Steel members subjected to buckling	Oral lecture, Problem Solving
8	Steel beams and steel members subjected to bending	Oral lecture, Problem Solving
9	Lateral buckling of steel beams	Oral lecture, Problem Solving
10	Tensile Bars	Oral lecture, Problem Solving
11	Beam connections	Oral lecture, Problem Solving
12	Column- Beam connections	Oral lecture, Problem Solving
13	Special connections	Oral lecture, Problem Solving
14	Column base connection	Oral lecture, Problem Solving

22	Textbooks, References and/or Other Materials:	1. McCormac, J. , 1993; Structural Steel Design ASD Method, Harper Collins. 2. Spiegel, L. , Limbrunner, G. F. , 1986; Applied Structural Steel Design, 4 th Edition, Prentice Hall. 3. Gaylord, E. H. , Gaylord, C. N. , Stallmeyer, J. E. , 1992; Design of Steel Structures, 3rd Edition, McGraw-Hill. 4. Salmon, C. G. , Johnson, J. E. , 1990; Steel Structures Design and Behavior, 3rd Edition, Harper Collins. 5. TS 648 ; Çelik Yapıların Hesap ve Yapım Kuralları, Türk Standartları Enstitüsü; 1982. 6. TS 498 ; Yapı Elemanlarının Boyutlandırılmasında Esaslar, Türk Standartları Enstitüsü , 1987. 7. TS 3357 ; Çelik Yapılarda Kaynaklı Birleşimlerin Hesap

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	1.00	14.00
Homeworks	1	42.00	42.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	4.00	4.00
Others	0	0.00	0.00
Final Exams	1	4.00	4.00
Total Work Load			120.00
Total work load/ 30 hr	60.00		4.00
ECTS Credit of the Course			4.00

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	

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	4	3	4	2	2	3	0	0	0	0	0	0	0	0	0	0
ÖK2	4	3	4	5	4	5	0	0	0	0	0	0	0	0	0	0
ÖK3	2	2	0	4	3	0	0	3	4	0	3	0	0	0	0	0
ÖK4	0	4	5	3	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	3	4	5	5	5	4	5	4	4	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**			