ADVANCED STEEL DESIGN I

1	Course Title:	ADVANCED STEEL DESIGN I	
2	Course Code:	INS5047	
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:		
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. HAKAN TACETTİN TÜRKER	
15	Course Lecturers:	Hakan T Türker	
16	Contact information of the Course Coordinator:	hakantturker@uludag.eu.tr	
17	Website:		
18	Objective of the Course:	To teach designing of steel structural members and connections	
19	Contribution of the Course to Professional Development:	In this course, students learn how to dimension steel structural members, calculate joints in steel structures, and stability analysis of steel structures.	
20	Learning Outcomes:		
		1	Students learn to designing steel structure members.
		2	Students learn to designing steel structure connections.
		3	Students learn stability analysis in steel structures.
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21	Course Content:		

Course Content:

Week	Theoretical	Practice
1	Construction and assemblage of steel structures	
2	General principles on composite members and axial force effect	
3	Shear and bending effect on composite members	
4	Combined effects on composite members and load transfer	
5	Moment resisting connections	

6	Restriction of compression members	
7	Splices of structural steel elements	
8	Splices of structural steel elements	
9	Design for servicebility limit states	
10	Stability connections for columns	
11	Stability connections for beams	
12	Stability connections for beams	
13	Stability connections for beams	
14	Shear and bending effects on castellated beams	

22	Textbooks, References and/or Other Materials:	Regulation on Design, Calculation and Construction Principles of Steel Structures, 2018. American Institute of Steel Construction, Specification for structural steel buildings AISC 360-16, Chicago, 2016 William T. Segui, Steel Design, 6th Ed., Cengage Learning, 2017 Jack C. McCormac, Stephen F. Csernak, Structural Steel Design Fifth Edition, Prentice Hall, 2012.
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	40.00
Quiz	0	0.00
Total	2	100.00
Contribution of Term (Year) Learning Activities to		40.00
Contribution of Final Exam to Success Grade		60.00
Total		100.00
Measurement and Evaluation Techniques Used in the		Exam

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	4.00	56.00
	Homeworks	0	0.00	0.00
	Projects	0	0.00	0.00
	Field Studies	0	0.00	0.00
	Midterm exams	1	30.00	30.00
	Others	0	0.00	0.00
	Final Exams	1	52.00	52.00
	Total Work Load			180.00
	Total work load/ 30 hr			6.00
	ECTS Credit of the Course			6.00

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	4	5	4	5	4	0	0	0	0	0	0	0	0	0	0	0
ÖK2	4	5	4	4	4	0	0	0	0	0	0	0	0	0	0	0
ÖK3	5	4	5	4	5	0	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