

DEPARTMENT OF MATERIALS SCIENCE AND TECHNOLOGY
COURSE SYLLABUS

Course Details				
Code		Academic Year		Semester
MEC109		2		3
Title		T	A	L
Statics		3	2	0
Language	German			
Level	Undergraduate	X	Graduate	Postgraduate
Department / Program	Materials Science and Technology			
Forms of Teaching and Learning	Face to face			
Course Type	Compulsory		Elective	X
Objectives	To provide students to gain basic knowledge in Statics.			
Content	In the scope of this lecture, the students learn the fundamental concepts and the formulas of the static systems. Specifically, they concentrate on the general equilibrium of support and frame structures. They calculate the reaction forces of the rigid systems. They learn how to calculate the internal forces of the bent and twisted, mixed-geometry systems that are very useful in practice. In the light of this education, students become ready to work on the advanced subjects of technical mechanics and other related further technical subjects.			
Prerequisites				
Coordinator				
Lecturer(s)	Prof. Dr. rer. nat. Wolfgang MÜLLER			
Assistant(s)	Research Assist. Ferit Yardımcı			
Work Placement	No			
Recommended or Required Reading				
Books / Lecture Notes	Wolfgang H. Müller, Ferdinand Ferber, Technische Mechanik für Ingenieure, 4. Auflage, Hanser Verlag / Fachbuch Verlag Leipzig. Russell C. Hibbeler: Technische Mechanik/2 - Festigkeitslehre 8. aktualisierte Aufl. München: Pearson Studium 2013 (insges. 3 Bände).			
Other Sources	Wolfgang H. Müller, Ferdinand Ferber, Technische Mechanik für Ingenieure, 4. Auflage, Hanser Verlag / Fachbuch Verlag Leipzig. Russell C. Hibbeler: Technische Mechanik/2 - Festigkeitslehre 8. aktualisierte Aufl. München: Pearson Studium 2013 (insges. 3 Bände). Martin Mayr: Technische Mechanik. Übungsbeispiele und Aufgaben. 2. stark erw. Auflage. München: Hanser 2000. Wolfgang H. Müller, Ferdinand Ferber, Technische Mechanik für Ingenieure, 4. Auflage, Hanser Verlag / Fachbuch Verlag Leipzig.			
Additional Course Material				
Documents				
Assignments				

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Exams			
Course Composition			
Mathematics und Basic Sciences			35%
Engineering			60%
Engineering Design			5%
Social Sciences			%
Educational Sciences			%
Natural Sciences			25%
Health Sciences			%
Expert Knowledge			%
Assessment			
Activity		Count	Percentage (%)
Midterm Exam		2	40
Quiz			
Assignments			
Attendance			
Recitations			
Projects			
Final Exam		1	60
		Total	100
ECTS Points and Work Load			
Activity	Count	Duration	Work Load (Hours)
Lectures	1	70	70
Self-Study	1	70	70
Assignments			
Presentation / Seminar Preparation			
Midterm Exam	1	7	7
Recitations			
Laboratory			
Projects			
Final Exam	1	21	1
		Total Work Load	168
		ECTS Points (Total Work Load / Hours)	6
Learning Outcomes			
1	The students can: evaluate the basic laws of mechanics within the framework of a given definition or problem, make conversions with SI units, analyse equilibrium conditions of the external forces acting on the object by		



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1	5	5	5	5	5	5	5	5
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
Contribution Level	1: Low 2: Low-intermediate 3: Intermediate 4: High 5: Very High							
Compiled by:								
Date of Compilation:								