



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Statically Indeterminate Structures							
Course Code		ZTY623		Course Level		Third Cycle (Doctorate Degree)			
ECTS Credit	6	Workload	150 (<i>Hours</i>)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		It is aimed that students who understood isostatic systems to be gained knowledge on; effects of material geometry, strain and deformation, compliance with the geometric and strain and deformation equation							
Course Content		Wood, steel, reinforced concrete structures analysis and sizing, isostatic and indeterminate systems, snow, wind, earth and so on. Examination of loads, construction cost							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Project Based Study, Individual Study, Problem Solving					
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	Çakıroğlu, A. ve E. Çetmeli 1990. Yapı Statiği Cilt 2. Beta Basım Yayım A.Ş. İstanbul.
2	Can H., 2002. Çözümlü Örneklerle Yapı Statiği, Birsen Yayınevi, İstanbul
3	Paçacı, M. 1984. Statik –Betonarme Proje Nasıl Yapılır. TMMOB İnşaat Mühendisleri Odası Ankara Şubesi Yayını, Ankara.
4	Sabis, T. 1971. Yapı Statiği. İstanbul Teknik Üniversitesi Kütüphanesi, Sayı:845, İstanbul

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction, steps for structural analysis, assumptions for structural analysis, definition of hyperstatic-system
2	Theoretical	Relationship among linear load, shearing force and bending moment
3	Theoretical	Relationship among linear load, shearing force and bending moment
4	Theoretical	Truss systems
5	Theoretical	Hyperstatic-systems, loads on a hyperstatic-system
6	Theoretical	Analysis of hyperstatic-systems,
7	Theoretical	Relocation and deformation calculations in beams and portal frames
8	Theoretical	Relocation and deformation calculations in beams and portal frames
9	Theoretical	MID-TERM EXAM
10	Theoretical	Relocation and deformation in truss systems
11	Theoretical	Calculation methods for hiperstatic systems, Cross method
12	Theoretical	Calculation methods for hiperstatic systems, Cross method
13	Theoretical	Calculation methods for hiperstatic systems, Cross method
14	Theoretical	Calculation methods for hiperstatic systems, Biro method
15	Theoretical	Calculation methods for hiperstatic systems, Biro method
16	Final Exam	FİNAL EXAM

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	6	3	126
Midterm Examination	1	8	2	10
Final Examination	1	12	2	14
Total Workload (Hours)				150
[Total Workload (Hours) / 25*] = ECTS				6

*25 hour workload is accepted as 1 ECTS



Learning Outcomes

1	Classifying loads on a structural system
2	Explaining behaviour of load-carrying mechanisms
3	Calculating normal force, shearing force and moment in load-bearing systems
4	Classifying load-bearing systems in terms of static conditions
5	Using contemporary techniques and calculation tools required for engineering applications
6	Calculating loads on a hyperstatic-system

Programme Outcomes (Agricultural Structures and Irrigation Doctorate)

1	Ability to analyze, synthesize and evaluate different forms of scientific knowledge in the field of studies
2	Approach to information systematically, and gain skills related to their field the research methods
3	Innovative science to develop a scientific method or a method that is known to practice in their field
4	Ability to organize and manage the project and advanced scientific research
5	Advanced technologies, find solutions to engineering problems taking advantage of the software and model approaches
6	Creative, unbiased and critical thinking
7	A topic in the field of written, verbally and visually as the ability to express
8	Ability to publish in refereed journals National and international the results of studies

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4	L5	L6
P1	5	5	5	5	5	5
P2	4	5	5	5	5	5
P3	4	4	5	5	4	4
P4	4	5	5	4	4	5
P5	5	4	5	4	5	4
P6	5	5	4	3	3	3
P7	5	4	5	5	5	5
P8	5	5	5	5	5	5

