COURSE	E DESCRIPTION FORM					
Course Code and Title	CE446 STRUCTURAL ANALYSIS III					
Semester	8					
Catalog description	Simple beam analysis, approximate methods for two and three dimensional analysis, stiffness matrix method, computer applications					
Required reading	R.C. Hibbeler, "Yapı Statiği", Çevirenler: K. Soyluk, T. Gültop, Palme vayınları.					
Recommended reading	 H.H. West, Fundamentals of Structural Analysis", Wiley C.H. Norris, J.B. Wilbur, "Elementary Structural Analysis", McGraw Hill 					
ECTS	4					
Prerequisites and co-requisites	No prerequisite. Required attendance to lectures is at least 70% of total term hours.					
Compulsory/Elective	Technical elective course					
Language of instruction	English					
Aim of course	The aim of this course to teach how to analyze beam and frame systems with various methods.					
Learning outcomes of the course unit	 Upon completion of the course student should be able to; 1. analyze a beam using transfer matrix method, 2. use approximate methods for two and three dimensional problems, 3. analyze plane systems using stiffness matrix method, 4. use a structural analysis software. 					
Mode of delivery	The mode of delivery of this course is face to face.					
Course content Planned learning activities and teaching methods	 The mode of derivery of this course is face to face. Transfer matrix method for simple beam analysis Transfer matrix method for simple beam analysis Portal method Cantilever method I. Midterm Muto method 3 dimensional analysis of shear structures under lateral loads 3 dimensional analysis of shear structures under lateral loads 3 dimensional analysis of shear structures under lateral loads Stiffness matrix method for plane systems Stuctural analysis software and applications Structural analysis software and applications Structural analysis software and applications Structural analysis software and applications Becture hours per week (3+0) Reading Homework Midterm exam and required works 					
Assessment methods and criteria	Quantity Percentage (%)				
	Mid-terms250Assignment510ExercisesProjectsPracticeQuizContribution of In-term Studies to Overall Grade %60					

	Contribution of				40			
	Final E	xamination						
	to Over	all Grade						
	(%)							
	Attenda	ance						
Workload	V	Vork activity	Total Week	Weekly	Т	otal		
() Of Moud			Count	Duration	Wo	rkload		
				(in hour)	in Se	emester		
	Theoretic Course B	cal Study Hours of	f 14	3		42		
	Practicin	g Hours of Course	e 0	0		0		
	Per Weel	k						
	Reading		14	1		14		
	Searchin	g in Internet and	0	0		0		
	Designin	g and Applying	0	0		0		
	Materials	8	-	-		-		
	Preparing	g Reports	5	2		10		
	Preparing	g Presentation	0	0	_	0		
	Mid-Ter	n and Studving fo	or 2	10	-	20		
	Mid-Ter	n		10				
	Final and	l Studying for Fina	al 1	10		15		
	Other		0	0	-	0		
	Total Wo	orkload:			4	101		
	ECTS:	Jikioud / 23.				4		
Course's contribution to program	No	Program Learnin	ng Outcomes	1	2 3	4 5		
L O	1	Adequate know	wledge in mathemati	cs,		Х		
		science and	engineering subject the relevant disciplin	ets				
		ability to use	theoretical and appli	ed				
		knowledge in	these areas in compl	ex				
		engineering prol	blems.					
	2	Ability to identi	ify, formulate, and sol	ve		Х		
		ability to select and apply property		ber				
		analysis and modeling methods f		nis				
	2	purpose.				37		
	3	Ability to desi	ign a complex syste	m, tic		Х		
		constraints and conditions, in such a way		ay				
		as to meet the desired result; ability to		to				
		apply modern of	design methods for th	nis				
	4	Ability to devise	e, select, and use mode	rn		X		
		techniques and tools neede		or				
		analyzing and solving complex problems		ns				
		encountered practice: ability	in civil engineeri	ng				
		technologies an	nd to use at least o	ne				
		computer pr	ogramming langua	ge				
	F	effectively.	destant and south	v v				
	5	Addity to experiments g	ather data analyze a	nd A				
		interpret resu	llts for investigati	ng				
		complex civil e	engineering problems	or				
	6	discipline specif	tic research questions.					
	0	disciplinary a	and multi-disciplina	iry A				
		teams.	· · · · · · ·	<u> </u>				
	7	Ability to work	individually.	\cdot		Х		
	8	Ability to com	municate effectively	1n 10	X			
		ability to write	e effective reports a	nd				
		comprehend wri	itten reports.					
	9	Knowledge of	English of B1 lev	/el	Х			

					1		
		according to <u>Common European</u>					
	10	Framework of Reference.		v			
	10	make effective presentations and give		л			
		and receive clear and intelligible					
		instructions					
	11	Recognition of the need for lifelong					x
	11	learning: ability to access information to					23
		follow developments in science and					
		technology, and to continue to educate					
		him/herself.					
	12	Consciousness to behave according to			Х		
		ethical principles and professional and					
		ethical responsibility.					
	13	Knowledge on standards used in civil	Х				
		engineering practice.					
	14	Knowledge about business life practices	Х				
		such as project management, risk					
		management, and change management.					
	15	Awareness in entrepreneurship,	Х				
		innovation; knowledge about sustainable					
	16	development.	v				
	16	Knowledge about the global and social	х				
		health anyironmont and safety and					
		contemporary issues of the century					
		reflected into the field of engineering					
	17	Awareness of the legal consequences of	x				
	- /	engineering solutions.					
Name of lecturer(s) and contact	Prof. Dr.	. Sinan ALTIN saltin@gazi.edu.tr					
information	Prof. Dr.	. Tekin GÜLTOP tgultop@gazi.edu	.tr				
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	Acces Dr. Debeder ALVAVUZ helecome@conjust.ct						
	Assoc. Dr. Bahadır ALYAVUZ <u>balyavuz@gazi.edu.tr</u>						