

Identification	Subject	Structural Analysis	
	Department	Civil Engineering	
	Program	Undergraduate	
	Term		
	Instructor	Ali Atefi	
	E-mail:	aatefi@khazar.org	
	Phone:	050 6589536	
	Classroom/hours		
	Office hours		
Prerequisites	Engineering Mechanics – Statics – Strength of materials		
Language	English		
Compulsory/Elective	Compulsory		
Description	This course deals with the structural models and is looking for a solution to analyze them subjected to applied loads. This is a traditional field in engineering education, and is taught in almost all civil engineering curricula.		
Required textbooks and course materials	1. Vaidyanadhan, R and Perumal, P, "Comprehensive Structural Analysis – Vol. 1 & Vol. 2", Laxmi Publications Pvt. Ltd, New Delhi, 2003. 2. L.S. Negi & R.S. Jangid, "Structural Analysis", Tata McGraw Hill Publications, New Delhi, 6th Edition, 2003. 3. Punmia.B.C, Ashok Kumar Jain and Arun Kumar Jain, "Theory of structures", Laxmi Publications Pvt. Ltd., New Delhi, 2004		
Course website			
Course outline	Degrees of freedom, analyzing trusses, Indeterminate structures, Energy methods, deformations		
Course objectives	To introduce the students to basic theory and concepts of structural analysis and the classical methods for the analysis of buildings.		
Learning outcomes	Students will be able to <ul style="list-style-type: none"> • analysis trusses, frames and arches • analyse structures for moving loads and • will be conversant with classical methods of analysis. 		
Teaching methods	Lecture		x
	Experiential exercise		x
	Assisted work		x
	Assisted lab work		x
	Others		
Evaluation	Methods	Date/deadlines	Percentage (%)
	Midterm Exam		30
	Class Participation and Attendance		10
	Quizzes		25
	Lab Exercises		-
	Project (3 phases)		-
	Final Exam		35
	Total		100
Policy	<ul style="list-style-type: none"> • NO CELL PHONES are allowed during lecture and lab sessions. PLEASE turn them off before lecture! (Not silent or vibrating mode) • No late assignments will be accepted without prior arrangement with the instructor for acceptable excuses. Medical and family emergency will be considered on case-by-case basis. • No late homework will be accepted. Homework is to be completed on an individual basis. Students may discuss homework with classmates, but 		

	<p>students are responsible for your own work. If students have consulted classmates, please note the individuals name on the top of students' assignment.</p> <ul style="list-style-type: none">• Quizzes may be given unannounced throughout the term and will count as one homework. There will be no make-up quizzes.• No make-up exams. If students miss an exam, a zero score will be assigned to the missed exam.• If students should miss class due to personal emergency or medical reasons, please notify the instructor by email immediately. A doctor's note will be required for make-up work.• Students are responsible for completing the reading assigned from the textbook related to the covered topics and for checking email regularly for important information and announcements related to the course.• University policy on academic honesty concerning exams and individual work will be strictly enforced.• BE ON TIME!
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Tentative Schedule			
Week	Date/Day (Tentative)	Topics	Textbook/Assignments
1		Introduction	Chapter 1
2		General Principles	Chapter 1
3		Trusses	Chapter 1
4		Freedom and indeterminacy	Chapter 1
5		Freedom and indeterminacy	Chapter 1
6		SLOPE-DEFLECTION METHOD:	Chapter 2
7		SLOPE-DEFLECTION METHOD:	Chapter 3
8		Midterm Exam	Chapter 3
9		MOMENT DISTRIBUTION METHOD	Chapter 4
10		MOMENT DISTRIBUTION METHOD	Chapter 5
11		ENERGY THEOREMS	Chapter 5
12		MOVING LOADS	Chapter 6
13		INFLUENCE LINES	Chapter 7
14		INDETERMINATE STRUCTURAL ANALYSIS	Chapter 8
15		MATRIX METHODS OF ANALYSIS	Chapter 8
16		Final Exam	

This syllabus is a guide for the course and any modifications to it will be announced in advance.