Identification	**Subject**	Architectural Structures (6 ECTS)	
	Department	Civil Engineering	
	Program	Undergraduate	
	Term	Fall 2019	
	Instructor	**Ziaaddin Zamanzadeh**	
	E-mail:	zzamanzadeh@khazar.org	
	Phone:		
	Classroom/hours		
	Office hours		
Prerequisites	Strength of materials – Structural Analysis		
Language	English		
Compulsory/Elective	**Elective**		
Description	Introduction to the physical principles that govern classical statics and strengths of materials through the design of timber, steel or concrete components of architectural structures; computer applications		
Required textbooks and course materials	*"Mechanics of Materials" by Ferdinand P. Beer, E. Russell Johnston, Jr., John T. DeWolf, David F. Mazurek, Sixth Edition published by McGraw-Hill (2011)* *"STRUCTURE AS ARCHITECTURE" by Andrew W. Charleson, Elsevier/Architectural press, (2005)*		
Course website			
Course outline	Stresses and strain in solids, uniaxial loading, linear elasticity, material behavior, aesthetics, architecture fundamentals.		
Course objectives	To understand the significance, assumptions, applications, and limitations of the basic principles of Statics and Strength of Materials as they apply to the design and analysis of structural members and simple connections. In this way, the student will be able to design different types of structures as an architectural element and also analyze it by considering aesthetic aspects.		
Learning outcomes	• Understand the basic concepts of stress, strain, deformation, and material behavior under different types of loading: axial, torsion, bending, • Perform stress analysis and design of beams subjected to bending and shearing loads using several methods, • Perform optimized-well shaped design of structures, • Understand and analyze special structures like monuments etc.		
Teaching methods	**Lecture**		x
	Experiential exercise		x
	Assisted work		x
	Assisted lab work		x
	Others		
Evaluation	**Methods**	**Date/deadlines**	**Percentage (%)**
	Midterm Exam		25
	Class Participation and Attendance		5
	Quizzes		20
	Lab Exercises		-
	Project (3 phases)		15
	Final Exam		35
	Total		100
Policy	• 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 students are responsible for your own work. If students have consulted classmates, please note the individuals name on the top of students' assignment. • 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!

Tentative Schedule			
Week	**Date/Day (Tentative)**	**Topics**	**Textbook/Assignments**
1		Basic Concepts and Principles	Chapter 1
2		Design Considerations	Chapter 2
3		Mohr's circle	Chapter 3
4		Structural Materials	Chapter 4
5		Structural systems	Chapter 4
6		Loading systems (Distributed Loads on Beams, Concentrated Loads and Load Tracing)	Chapter 4
7		Midterm exam	-
8		Case study	-
9		Case study	-
10		Determinacy of structures	Chapter 5
11		Determinacy of structures	Chapter 5
12		Stability of Structures and design	Chapter 6
13		Shear and Bending Moment Diagrams in beams	Chapter 7
14		Shear and Bending Moment Diagrams in frames	Chapter 8
15		Design Project Reviews	Chapter 8
		Final Exam	

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