

PART I (Senate Approval)							
Offering School	Antalya Bilim University-Faculty of Fine Arts and Architecture						
Offering Department	Architecture						
Program(s) Offered to	Architecture					Core Course	
Course Code	ARC 1404						
Course Name	INTRODUCTION TO BUILDING SCIENCE						
Language of Instruction	English						
Type of Course	Theory						
Level of Course	Undergraduate						
Hours per Week	Lecture: 3	Laboratory:	Recitation:	Practical:	Studio:	Other:	
ECTS Credit	5						
Grading Mode	Letter Grade						
Pre-requisites							
Co-requisites							
Registration Restriction							
Educational Objective	This lesson; It aims to help students learn basic concepts about building and construction systems, to recognize building elements, and to give students conceptual information about detail design. The conceptual knowledge acquired is supported by in-studio practices. Explaining the concepts of building, construction and architecture. Introducing building elements and construction systems and understanding them through performance requirements. Introducing the materials used in building elements with examples.						
Course Description	Transfer of information about building and construction systems to the students through presentations by the executives. Making various drawing and model applications in the studio environment to reinforce the acquired knowledge. Questioning the level of knowledge acquired by students through midterm and final evaluation exams.						
Learning Outcomes	LO1	Students' understanding of basic information about structure					
	LO2	Ability to define performance requirements in building design					
	LO3	Knowledge of material recognition and selection					
	LO4	Ability to have knowledge and practice about the carrier system					
	LO5						
PART II (Faculty Board Approval)							
Basic Outcomes (University-wide)		Program Outcomes	LO1	LO2	LO3	LO4	LO5
	PO1	Ability to communicate effectively and write and present a report in Turkish and English.					
	PO2	Ability to work individually, and in intra-disciplinary and multi-disciplinary teams.					
	PO3	Recognition of the need for life-long learning and ability to access information, follow developments in science and technology, and continually reinvent oneself.					
	PO4	Knowledge of project management, risk management, innovation and change management, entrepreneurship, and sustainable development.					
	PO5	Awareness of sectors and ability to prepare a business plan.					
Faculty Specific Outcomes	PO6	Understanding of professional and ethical responsibility and demonstrating ethical behavior.					
	PO7	Gain the ability of conceptualizing, applying, analyzing, synthesizing and evaluating information effectively (Critical Thinking)	X	X	X	X	X
	PO8	Produce innovative ideas and products with creativity (Creativeness).					
	PO9	Gain the ability of leadership, entrepreneurship and self-leadership skills (Leadership and Entrepreneurship).					
	PO10	Care about the ethical values and principles; behave in accordance with these in professional and social life (Ethical Behavior).					
	PO11	Understand, define and reach the information that they need; use information effectively and share it with others (Information Literacy).	X	X	X	X	X
	PO12	Use information effectively and communication technologies while learning, and can share their knowledge and experience with others using technology and visual means (Information and Communication Technology Literacy).					X
	PO13	Learns the concepts of architectural design and theories of architecture as well as the intellectual, historical and cultural background to evaluate them from a critical perspective and use them in developing design solutions. One can express one's solutions verbally and in written form. (Knowledge and Ability)					
	PO14	Knows to express each stage of the design process formally by using hand drawings together with the European Computer Driving Licence and other software technologies. (Knowledge and Communication Competence)					
	PO15	Designing space (environment, construction, building) on different scales that are sensitive to the natural and built environment within the framework of basic design and architectural principles. One also knows research methods. (Knowledge and Ability)					
	PO16	Speak at least one foreign language at B1 General Level of European Language Portfolio to express oneself and to follow developments in the field of architecture. (Knowledge and Communication Competence)					
	PO17	Executes an independent project or to take responsibility in multidisciplinary studies, to communicate effectively and share knowledge and competency during the design process. (Competency to work independently and take responsibility)					
	PO18	To knowledge and understanding to analyze building design and systems regarding architectural practice (from prehistoric times to the present). (Knowledge)	X	X	X	X	X

Discipline Specific Outcomes (program)	PO19	Develops a design that respectable to cultural heritage and sustainable by recognizing historical and cultural assets and understanding the importance of these values. (Knowledge and Ability)						
	PO20	The necessary knowledge and ability about contemporary restoration theories and preparation of restoration project by using research, documentation and different measurement methods in the process of documenting the current state of historic buildings and environments. (Knowledge and Ability)						
	PO21	Produces sustainable solutions to current problems by following the developments and technologies in the field of production. (Ability)	X	X	X	X	X	
	PO22	Knows to develop designs about environmental and social sustainability principles, the issues related to disasters and accessible designs that meet community needs. (Knowledge and Ability)						
	PO23	Gains the ability to use modern technologies in building and environmental design, to develop and produce innovative solutions; learns necessary information about building materials, techniques and structural behaviors, the laws, regulations and standards and includes them in the design process. (Knowledge and Ability)	X	X	X	X	X	
	PO24	To gain the basic knowledge of lighting, acoustics, air conditioning and energy use in the design of environmental systems. (Knowledge)						
	PO25	Knows the historical development of structural systems, types of structural elements such as foundation, wall, flooring, stairs, roof, design, and construction techniques of these elements and applies this information in the projects. (Knowledge and Ability)	X	X	X	X	X	
	PO26	Has competence in project management, organization, planning, and leadership for the realization of professional practice and informs individuals and institutions on issues related to a field and shares one's suggestions for solutions to the experts or non-experts in verbally and written form. To produce collaborations and projects with the awareness of social responsibility (Competence to take responsibility and social and Ability)						
	PO27	Aware of lifelong learning and identifying the necessary needs for professional development and self-development. (Learning Competence)	X	X	X	X	X	
	PO28	Has an awareness of professional and ethical behavior; collects data considering social, environmental, and ethical results. One is responsible for the environment, the professional problems and provides professional services like occupational health and safety within the legal frameworks. (Field Specific Competence)						
PART III (Department Board Approval)								
Course Subjects, Contribution of Course Subjects to Learning Outcomes, and Methods for Assessing Learning of Course Subjects	Subject	Week	Subject Explanation	LO1	LO2	LO3	LO4	LO5
	S1	1	Giving general information about the course	X	X	X	X	X
	S2	2	Giving general information about Building Information and introducing the concepts	X	X	X	X	X
	S3	3	Performance requirements	X	X	X	X	X
	S4	4	Discussion of performance requirements over space types	X	X	X	X	X
	S5	5	Introduction to structural system	X	X	X	X	X
	S6	6	Masonry systems	X	X	X	X	X
	S7	7	Skeletal systems	X	X	X	X	X
	S8	8	Midterm	X	X	X	X	X
	S9	9	Structural system- application	X	X	X	X	X
	S10	10	Structural system- application	X	X	X	X	X
	S11	11	Material selection criteria based on performance requirements	X	X	X	X	X
	S12	12	Student presentations	X	X	X	X	X
	S13	13	Introduction of building elements, concepts	X	X	X	X	X
	S14	14	Applicaition and general repetition of the course	X	X	X	X	X
Assessment Methods, Weight in Course Grade, Implementation and Make-Up Rules	No	Type	Weight	Implementation Rule		Make-Up Rule		
	A1	Midterm Exam	20%	There will be one midterm exam. Midterm exam date will be determined during the semester.		A make-up exam will be provided if the student provides an acceptable legitimate document, according to the school regulation		
	A2	Quiz	10%	There will quiz(es). The date will be determined during the semester.		A make-up exam will be provided if the student provides an acceptable legitimate document, according to the school regulation		
	A3	Homework	30%	Homeworks will be given to the students throughout the semester		A make-up homework will be provided if the student provides an acceptable legitimate document, according to the school regulation		
	A4	Project						
	A5	Report						

	A6	Presentation						
	A7	Attendance/Interaction						
	A8	Class/Lab./ Field Work						
	A9	Final	40%	There will be one final exam. Final exam date will be determined during the semester.		A make-up exam will be provided if the student provides an acceptable legitimate document, according to the school regulation		
	TOTAL		100%					
Evidence of Achievement of Learning Outcomes	Students will demonstrate learning outcomes through class activities, debates and project assignments. These activities reflect a transdisciplinary approach, asking the student to make connections between different topics. Generally every topic is tested with at least one exam question.							
Method for Determining Letter Grade	Upon successful completion of all assessment methods, the total scores will be averaged and converted into a final letter grade using the following percentages and grading criteria.							
	ASSESSMENT METHOD	EFFECT ON GRADING	GRADE	MARKS	VALUE	GRADE	MARKS	VALUE
	Midterm	20%	A+	100	4,00	C+	60-64	2,40
	Quiz	10%	A	95-100	4,00	C	55-59	2,20
	Homework	30%	A-	85-94	3,70	C-	50-54	2,00
	Final	40%	B+	80-84	3,30	D+	45-49	1,70
		B	75-79	3,00	D	40-44	1,50	
		B-	65-74	2,70	F	0-39	0,00	
Teaching Methods, Estimated Student Load	No	Method	Explanation				Hours	
	Time applied by Instructor							
	1	Lecture	Lecturing and utilizing whiteboard and slides. Sample questions and answers to strengthen learning. In class exams.				3 hours (13 weeks) =39 hrs	
	2	Interactive Lecture						
	3	Recitation						
	4	Laboratory						
	5	Practical	Quiz				1 hours (1 weeks) =1 hrs	
	6	Field Work	A site visit can be made with the students or a competent officer can visit the course.				1 hours (1 weeks) =1 hrs	
	Time expected to be allocated by student							
	7	Project	midterm				1 hours (1 weeks) =1 hrs	
	8	Homework	homework				5 hours (11 weeks) =55 hrs	
	9	Pre-class Learning of Course Material	final				1 hours (1 weeks) =1 hrs	
	10	Review of Course Material	midterm preparation				1 hours (7 weeks) =7 hrs	
	11	Studio	final exam preparation				1 hours (12 weeks) =12 hrs	
12	Office Hour	meetings				1 hours (8 weeks) =8 hrs		
TOTAL						125		
IV. PART								
Instructor	Name							
	E-mail							
	Phone Number	0242 245 00 00						
	Office Number							
	Office Hours	6 hours (according to school semestre)						
Course Materials	Mandatory							
	Recommended	Allen, E., Iano, J., "Fundamentals of Building Construction, Materials and Methods", John Wiley and Sons, 1990. Blane, A., "Internal Components", Mitchell's Building Series, Longman, 1994. Ching, F. D. K., "Building Construction Illustrated", Van Nostrand Reinhold, 1991. Chudley, R., "Construction Technology I, II, III, IV", Longman Ltd., 1999. Foster, J. S., Raymond Harrington, R., "Structure and Fabric, Part 2", Mitchell's Building Series, Longman, 1996. Foster, J. S., "Structure and Fabric, Part 1", Mitchell's Building Series, Longman, 1996. Millais, M., "Building Structures", E&FN Spon, 1997. Olin, H., Schmitt, J.L., Lewis, W. "Construction, Principles, Materials, and Methods, Van Nostrand Reinhold, 1995. Osborn D., "Introduction to Building", Batsford Limited, 1985. Reid, E., "Understanding Buildings - A Multidisciplinary Approach", Construction Press, 1984.						
Other	Scholastic Honesty	Violations of scholastic honesty include, but are not limited to cheating, plagiarizing, fabricating information or citations, facilitating acts of dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students. Any form of scholastic dishonesty is a serious academic violation and will result in a disciplinary action.						
	Students with Disabilities	Reasonable accommodations will be made for students with verifiable disabilities.						
	Safety Issues							
	Flexibility	Circumstances may arise during the course that prevents the instructor from fulfilling each and every component of this syllabus; therefore, the syllabus is subject to change. Students will be notified prior to any changes.						