

PART I (Senate Approval)							
Offering School	Antalya Bilim University-Faculty of Fine Arts and Architecture						
Offering Department	Architecture						
Program(s) Offered to	Architecture					Must	
Course Code	ARC 2406						
Course Name	Building Science II						
Language of Instruction	English						
Type of Course	Theory&Practical						
Level of Course	Undergraduate						
Hours per Week	Lecture: 3	Laboratory:	Recitation:	Practical: 1	Studio:	Other:	
ECTS Credit	6						
Grading Mode	Letter Grade						
Pre-requisites	ARC 2405						
Co-requisites	None						
Registration Restriction	Students of Architecture can take the course						
Educational Objective	The course, in general, present technical representation based information and knowledge about not only traditional but also contemporary building materials, construction systems and technologies						
Course Description	Construction methods and technical training are provided in three modules. ARC 2404 teaches the mechanical properties of materials, their structural behavior, and the hierarchy of structural elements to come together in a way that supports embodying the design skills they developed in design courses, which was started in the fall semester and continued in this course. Theoretical knowledge will be put into practice in the form of 3D models and 2D drawings at 1/20 and larger scales, especially for the building and construction systems that students will design themselves.						
Learning Outcomes	LO1	Defining the performance requirements of structural elements					
	LO2	To reveal the relations of building elements with each other					
	LO3	Understanding the construction of a building from the foundation to the roof systems during the construction process					
	LO4	To apply building and construction systems in line with the acquired theoretical knowledge					
	LO5	To find solutions to problems to be encountered in practice					
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.	X				
	PO2	Ability to work individually, and in intra-disciplinary and multi-disciplinary teams.			X	X	X
	PO3	Recognition of the need for life-long learning and ability to access information , follow developments in science and technology, and continually reinvent oneself.				X	X
	PO4	Knowledge of project management, risk management, innovation and change management, entrepreneurship, and sustainable development.			X	X	X
	PO5	Awareness of sectors and ability to prepare a business plan.				X	
	PO6	Understanding of professional and ethical responsibility and demonstrating ethical behavior.	X				
Faculty Specific Outcomes	PO7	The graduated students have the ability of conceptualizing, applying, analyzing, synthesizing and evaluating information effectively (Critical Thinking).	X	X	X	X	X
	PO8	The graduated students produce innovative ideas and products with creativity (Creativeness).			X	X	X
	PO9	The graduated students have the ability of leadership, entrepreneurship and self-leadership skills (Leadership and Entrepreneurship).			X		X
	PO10	The graduated students care about the ethical values and principles; behave in accordance with these in professional and social life (Ethical Behavior).					
	PO11	The graduated students; 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	The graduated students can effectively use information 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	X	X	X	X
Discipline Specific Outcomes (program)	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)	X	X	X	X	X
	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)	X	X	X	X	X
	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.	X	X	X	X	X
	PO18	To knowledge and understanding to analyze building design and systems regarding architectural practice (from prehistoric times to the present). (Knowledge)					
	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)	X	X	X	X	X

PO27	Aware of lifelong learning and identifying the necessary needs for professional development and self-development. (Learning Competence)					
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	Introduction	X				
	S2	2	Developing a project, prepare materials list, planning the construction site details		X	X		
	S3	3	Understanding performance requirements of foundation, making model of the 'foundation'	X		X	X	X
	S4	4	Making model of the 'foundation'			X	X	X
	S5	5	Understanding performance requirements of vertical and horizontal structural systems, making model of the 'columns'	X		X	X	X
	S6	6	Ytong aerated concrete block wall application		X	X	X	X
	S7	7	Structural system model		X	X	X	X
	S8	8	Midterm Exam	X	X	X	X	X
	S9	9	Understanding performance requirements of circulation systems, making model of the 'stairs'	X	X	X	X	X
	S10	10	Understanding performance requirements of exterior walls, making model of the 'exterior walls'	X	X	X	X	X
	S11	11	Understanding performance requirements of interior walls, making model of the 'interior walls'	X	X	X	X	X
	S12	12	Lecture-Roof Systems	X				
	S13	13	Understanding performance requirements of roof systems, making model of the 'roof systems'	X	X	X	X	X
	S14	14	Making model of the 'roof systems'		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 Jury	30%	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		-	-
	A3	Homework		-	-
	A4	Project	30%	The project will end with a presentation.	
	A5	Report		-	
	A6	Presentation		-	
	A7	Attendance/Interaction			

	A8	Class/Lab/ Field Work			
	A9	Final Jury	40%		
	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
	Project	30%		A+	60-64
	Midterm exam	30%		A	55-59
	Final exam	40%		A-	50-54
				B+	45-49
				B	40-44
			B-	0-39	
Öğretim Metodları, Tahmini Öğrenci Yüğü	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.		4 hours (13 weeks)=52 hrs
	Time expected to be allocated by student				
	2	Project Development	Studio work		6 hours (13 weeks)=78 hrs
	3	Midterm Exam Preparation			10 hours (1 week)= 10 hrs
	4	Midterm Exam			4 hours (1 week)= 4 hrs
	10	Final Exam Preparation			10 hours (1 week)= 10 hrs
	11	FinalExam			4 hours (1 week)= 4 hrs
	TOTAL				150 saat
IV. PART					
Instructor	Name				
	E-mail				
	Phone Number				
	Office Number				
	Office Hours	4 hours (according to school semestre)			
Course Materials	Mandatory				
	Recommended				
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 for 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.			