Course Title	**MATERIALS & BUILDING SYSTEMS**				
Course Code	**MBS 401**				
Course Type	**Compulsory**				
Level	Undergraduate				
Year / Semester	Year 3 / Semester 5				
Teacher's Name	Dr. Dora Chatzi Rodopoulou, Christina Skouloudi				
ECTS	6	Lectures / week		Laboratories / week	
Course Purpose and Objectives	The course offers an introduction to the principles and practices applied to the constructed environment, providing an overview on the subjects of materials, components, assemblies, environmental systems, and construction theory. Through weekly lectures on topics related to materials and building systems, the course examines the anatomy of a building and the way building systems impact the design of the interior space. Through a study of historical precedents, this course examines how the evolution of materials, technologies and integrated systems has impacted design solutions. Beyond an introduction to the various building systems-including structural, mechanical, plumbing, and electrical-the course will explore how acoustic, lighting and thermal design impacts the quality of the interior environment.				
Learning Outcomes	Upon completion of this course students will: ● have acquired knowledge on key materials, building components and construction methods ● be able to understand and use materials, components, assemblies and building systems to advance the design development of small and medium scale buildings and achieve sustainable outcomes. ● be able to understand the importance of climate-responsive design and environmental factors on the design development of buildings and integrate environmental design principles in their design				
Prerequisites	-	Required	Materials Light color design Advanced design applications Senior Design Project		

Course Content	.-Materials (Glass, Wood, concrete, metal, stone, plastic): physical properties, histories, environmental impacts, and application - Building components - Construction methods -Building Systems (heat and air flow, thermal comfort and insulation, lighting and acoustics): characteristics and application
Teaching Methodology	• Lectures
Bibliography	Allen, Edward, and Joseph Iano. *Fundamentals of Building Construction: Materials and Methods*. New York, NY: John Wiley & Sons, 2003. ISBN: 9780471219033. Corky Binggeli. Building Systems for Interior Designers, 3rd Edition, New York, NY: John Wiley & Sons, 2016, ISBN: 978-1-118-92554-6 Lechner, Norbert. *Heating, Cooling, Lighting: Design Methods for Architects*. New York, NY: John Wiley & Sons, 2000. ISBN: 9780471241430. Victoria, Ballard Bell and Patrick, Rand, Materials for design, 2006, New York: Princeton Architectural Press
Assessment	Participation 10% Midterm Exam 30% Quizzes 20% Final Exam 40%
Language	English