YEDITEPE UNIVERSITY

COURSE DESCRIPTION AND APPLICATION INFORMATION

Course Title	*Code*	*Semester*	*T+A+L Hour*	*Credits*	*ECTS*
SMART BUILDINGS AND INTERIORS	SIS 505	1	3 + 0 + 0	3	7

Prerequisites	-

Language of Instruction	English
Course Level	Master's Degree
Course Type	Mandatory
Course Coordinator	
Instructors	
Assistants	-
Goals	The aim of this course is to ensure that students get the initial level of knowledge and awareness of Science and Technology for the integration of design-oriented basic information and innovative approaches.
Content	Smart buildings, the generic name of science-technology integrated buildings. Control and automation technologies and their integration is understood mostly. These issues are new and under development. Require a multi-disciplinary and inter-sectoral cooperation in innovation. ‘’What are the Green Buildings & Sustainable Designs’’ is introduced.

Learning Outcomes	**Program Learning Outcomes**	**Teaching Methods**	**Assessment Methods**
1) Explains the concept of Smart Buildings-Smart Homes	1,2,3,4,5	1,2,3,12	A,C
2) Student Explains, Sustainable Designs, Green Building, Innovative Approaches, Energy Efficient Buildings concepts.	5,6,8	1,2,3,12	A,C
3) Student will analyze the design of Space (Science and Technology integrated), consider and explain the findings.	3,7,9,10	1,2,3,12	A,C
4) Explains the relationship between Smart Communities and Smart Buildings.	2,4	1,2,3,12	A,C
5) Analyzes, the relationships Kinetic Architecture & Design	10	1,2,3,12	A,C
6) Develops innovative perspective on the relationship of Smart buildings/Innovative Approaches (Tomorrow's Life)	10	1,2,3,12	A,C

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion 12: Case Study
Assessment Methods:	A: Testing B: Presentation C: Homework

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	INTRODUCTION, AIMS AND BASIC CONCEPTS.	
2	INTERDISCIPLINARY, INTERSECTORAL RELATIONS, BASIC INFORMATION	
3	SUBJECTS OF SMART BUILDING OVERVIEW BASIC CONCEPTS	
4	BASIC INFORMATION ABOUT TECHNOLOGY INTEGRATED APPLICATIONS	
5	ENVIRONMENTAL BUILDING EVALUATION SYSTEMS	
6	SMART HOMES, TECHNOLOGICAL INFRASTRUCTURES AND SUSTAINABLE DESIGN	Seminary
7	DEVELOPMENT OF BUILDING TECHNOLOGIES, HISTORY AND BASIC CONCEPTS	
8	BASIC INFORMATION ABOUT GREEN BUILDINGS, ECO-FRIENDLY BUILDINGS,	
9	ENERGY EFFICIENT BUILDINGS, RENEWABLE ENERGY SOURCES, BASIC CONCEPTS	
10	BIODESIGN AND BIOMIMICRY	
11	**MIDTERM EXAM**	
12	THE BASIC INFORMATION ABOUT CONTROL AND AUTOMATION TECHNOLOGIES	
13	WHAT IS SYSTEM DESIGN, SYSTEM INTEGRATION AND DESIGN BASICS	
14	INTELLIGENT BUILDINGS AND KINETIC ARCHITECTURE, THE BASIC INFORMATION	

RECOMMENDED SOURCES	
Course Notes / Textbooks	1) Lecture Notes, Lecture Presentation images (slides)
Additional Resources	2) Smart Buildings, Jim Snopoli, Lighting Source Inc. (2006), 3) Intelligent Building and Building Automation, Shengwei Wang (2009), 4) Smart Building Systems, James Snopoli, Spon Media, (2010), 5) Advanced Building Systems, Klaus Daniels, Birkhauser, (2003); 6) Sustainable Architecture, Brian Edwards, Architectural Press, (1999), 7) WEB; (Green Buildings - Eco Building)

MATERIAL SHARING	
Documents	Lecture Notes; (Slide-Poster) images, Magazines, Interview, articles, and other publications;
Assignments	Personalized and customized (Career goal_point of interest) research paper.

Exams	1) Single mid-term exam (11. Week - 2. Exam week); 2) Two Quizzes (pop-up) (when assessment needed for); 3) Final Exam (17.-18. Weeks – One of)

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Midterm Exam	1	100
Total		**100**
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		50
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		50
Total		**100**

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes	Contribution					
		1	2	3	4	5	
1	Ability to have knowledge about sustainable design principles and application methods.			**X**			
2	Ability to have knowledge of the history and scope of sustainable design.		**X**				
3	Ability to explain the general principles of ecological design approaches on an architectural scale.				**X**		
4	Ability to recognize environmental technologies and use them within the scope of architectural design.					**X**	
5	Ability to critically evaluate the academic and professional studies on sustainable design.		**X**				
6	Ability to explain the social extent of sustainability and to research, analyze and critically evaluate the sustainability of cultural heritage.			**X**			
7	The ability to individually maintain a study on sustainability.		**X**				
8	The ability to convey an individual and/or group study about sustainability in written, verbal and visual forms.						
9	The ability to search for information, use databases and other resources, and conduct an original scientific study.	**X**					
10	The ability to respect social and cultural rights, be sensitive to the		**X**				

conservation of the natural environment and cultural heritage, and the ability to decide and act with a sense of justice.

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 14x Total course hours)	14	3	42
Hours for off-the-classroom study (Pre-study, practice)	14	6	84
Midterm Exam	1	3	3
Quizzes	2	2	4
Assignment (Homework)	1	40	40
Final Exam	1	3	3
Total Work Load			**176**
Total Work Load / 25 (h)			7.04
ECTS Credit of the Course			**7**