



**YÜBİS**  
YASAAR UNIVERSİTESİ BELGİ SİSTEMİ  
**YAŞAR UNIVERSITY**  
**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**  
**MASTER OF INTERIOR ARCHITECTURE**  
**DEPARTMENT**  
**COURSE SYLLABUS**

Course Title	Course Code	Semester	Course Hour/Week		Local Credit	ECTS
BIOCLIMATIC DESIGN	INAR 553	Fall	Theory 3	Practice 0	3	7
<b>CourseType</b>	Elective					
<b>Language of Instruction</b>	English					
<b>Level of Course</b>	Graduate Degree(Second Cycle)					
<b>Mode of Delivery</b>						
<b>Prerequisites Course(s) (compulsory)</b>	None					
<b>Special Pre-Conditions of the Course(recommended)</b>	None					
<b>Course Coordinator</b>						
<b>Name Surname</b>	<b>Mail</b>	<b>Web</b>				
Assist. Prof. Dr. ERAY BOZKURT	eray.bozkurt@yasar.edu.tr					
<b>Course Instructor(s)</b>						
<b>Name Surname</b>	<b>Mail</b>	<b>Web</b>				
Assist. Prof. Dr. ERAY BOZKURT	eray.bozkurt@yasar.edu.tr					
<b>Course Assistant(s)/Tutor(s)</b>						
<b>Name Surname</b>	<b>Mail</b>	<b>Web</b>				
<b>Course Web Site</b>						
<b>Aim(s) of Course</b>						
The course will help the students to understand interrelationships between nature and human interventions. It will develop an awareness of thematic traditions in site design. The students will learn about the site analysis, orientation, thermal and visual comfort strategies to reduce fossil fuel consumption and greenhouse effects.						
<b>Course Content</b>						
An integrated approach to the course will be explored from a variety of perspectives to address the following course objectives:1.Bioclimatic Approach: To provide information about site conditions, topography, daylighting, traditional ideas, and thermal design processes to evaluate, assess an holistic approaches to bioclimatic design. 2.Aesthetic and Experimental Design: To introduce students to the aesthetic and experimental opportunities of the bioclimatic concepts.						
<b>Learning Outcomes of the Course</b>						
<b>Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences:</b>						
1	To learn advance level of design methodology of Bioclimatic Design in interior environment					
2	To imply innovative design ideas through a project					
3	To explore the unlimited design principles of the field					
4	To practice assessment methods in environmental design					
5	To create advance solutions for environmental problems					

<b>COURSE OUTLINE/SCHEDULE (Weekly)</b>			
<b>Week</b>	<b>Topics</b>	<b>Preliminary Preparation</b>	<b>Methodology and Implementation(Theory, practice, assignment etc.)</b>
1	Introduction: The Definition of Bioclimatic Design	Presentation	Theory
2	Climate, Orientation, Topography, and Vegetation	Presentation	Theory
3	Importance of Sun and Wind	Presentation	Theory
4	Occupation	Presentation, Discussion	Theory
5	Building Envelope	Presentation, Discussion	Theory
6	Interior Materials and Components	Student Presentations	Theory, assignment
7	Interior Lighting	Presentation	Theory
8	Passive and Active Systems	Presentation	Theory
9	MIDTERM	Presentation	Theory
10	Indoor Air Quality	Presentation	Theory
11	Energy and water use	Presentation	Theory
12	Waste Management: Resuse, Refurbish, and Recycle	Presentation	Theory
13	Design options	Discussion, student presentations	Theory, assignment
14	Presentations	Presentation	Theory, assignment
15	Final Project	Presentation	Assignment

### **Resources**

#### **Required Course Material(s)/Reading(s)/Text Book(s)**

1. Something new under the sun: an environmental history of the twentieth-century world / J.R. McNeill. New York: W.W. Norton & Company, 2001, c2000.  
EnvDesign GF13 .M39 2001
2. The sustainable urban development reader / edited by Stephen M. Wheeler and Timothy Beatley. 2nd ed. London ; New York : Routledge, 2009. EnvDesign HT166.S9135 2009.
3. Sustainable architecture white papers / edited by David E. Brown, Mindy Fox, Mary Rickel Pelletier. 1st ed. New York, NY: Earth Pledge Foundation, 2000. selected essays by architects, designers on the current state of sustainable architecture and its many facets. EnvDesign NA2542.36 .S87 2000
4. Taking shape: a new contract between architecture and nature / Susannah Hagan. Oxford; Boston: Architectural Press, 2001. EnvDesign NA2542.36 .H34 2001
5. The timeless way of building / Christopher Alexander. New York: Oxford University Press, 1979. (Classic)  
See also: "Pattern Language" and "The Oregon Experiment" . The Timeless Way of Building is the first volume of a three-volume set; Alexander presents a different perceptual framework for conceiving of, and creating architecture. In the second volume of the series, A Pattern Language, he discusses his own exploration of architecture within this perceptual framework and the two hundred fifty-three patterns that he has intuited. In the third volume, The Oregon Experiment, he explains how this "language" of two hundred fifty-three patterns was used in practice to design a building complex at the University of Oregon. EnvDesign NA2500.A45
6. Urban design: green dimensions / Cliff Moughtin with Peter Shirley. 2nd ed. Amsterdam; Boston; London: Elsevier Architectural Press, 2005. Shows how sustainable urban design can be implemented on every scale. Second edition includes the Urban Park and Bio-diversity.  
EnvDesign NA9095 .M68 2005 ,

#### **Recommended Course Material(s)/Reading(s)/Other**

1. Building cities: towards a civil society and sustainable environment / edited by Norman Crowe, Richard Economakis and Michael Lykoudis; with Mark Gage. London: Artmedia Press, 1999. EnvDesign NA9053.H76 B85 1999
2. Cradle to cradle: remaking the way we make things / William McDonough & Michael Braungart. 1st ed. New York: North Point Press, 2002. Focuses on the nature of sustainability and the transformation of human industry through ecologically intelligent design.

EnvDesign TD794.5 .M395 2002 / Bus Econ TD794.5 .M395 2002

3.Design with nature / Ian L. McHarg. [1st ed.] Garden City, N.Y., Published for the American Museum of Natural History [by] the Natural History Press, 1969. Helped to define the fields of landscape architecture, urban and regional planning, and ecological design. EnvDesign HM206.M18

4.The environmental tradition: studies in the architecture of environment / Dean Hawkes. Lond: E&FN Spon; New York:Chapman & Hall, 1996. EnvDesign NA2542.35 .H39 1996

5.From eco-cities to living machines: principles of ecological design / Nancy Jack Todd & John Todd. Berkeley, Calif.: North Atlantic Books, c1994. EnvDesign GF50.T62 1994

6.Global symposium on sustainable environments / sponsored by the American Institute of Architects, U.S. Department of Energy, Washington, D.C.: American Institute of Architects, c1995. EnvDesign NA2542.3.G63 1994

7.Green architecture: a guide to sustainable design / Michael J.Crosbie. Rockport, Mass: Rockport Publishers; Washington, D.C. distributed by the American Institute of Architects Press, c1994. EnvDesign NA2542.3.C76 1994b

### ASSESSMENT

Semester Activities/ Studies	NUMBER	WEIGHT in %
Mid-Term	1	20
Attendance	0	0
Quiz	0	0
Assignment(s)	2	30
Project	1	50
Field Studies(Technical Visits)	0	0
Presentation/Seminar	0	0
Practice(Laboratory, Virtual Court,Studio Studies etc.)	0	0
Other(Placement/Internship etc.)	0	0
<b>TOTAL</b>	<b>4</b>	<b>100</b>
Contribution of Semester Activities/Studies to the Final Grade		40
Contribution of final Examination/final Project/Dissertation to the final Grade		60
<b>TOTAL</b>		<b>100</b>

### CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME OUTCOMES

Faculty	DEPARTMENT					
<b>GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES</b>	<b>MASTER OF INTERIOR ARCHITECTURE</b>					
No	Programme Outcomes	Level of Contribut 1-lowest 5- highest				
		1	2	3	4	5

1	To develop a clear question, uses abstract thoughts to express ideas, evaluates the opposing views and reaches valuable results.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	To contribute valuable assets in the research field for the knowledge and practice of the teams from the academic and professional environment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	To work independently, develops learning skills that will help to complete the related research project.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	To share findings and conclusions reached in a study, in a systematic manner with the related or unrelated expert groups.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	To show the dialectical thinking on social norms and relationships and can lead change.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	To communicate verbally and in writing using at least one foreign language.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	To use computer software programmes to interact with the advanced information and communication technologies in today's world.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### ECTS /STUDENT WORKLOAD

<b>ACTIVITIES</b>	<b>NUMBER</b>	<b>UNIT</b>	<b>HOUR</b>	<b>Total WorkLoad</b>
Course Teaching Hours(14 weeks*total course hours	14	Week	3	42
Preliminary Preparation and finalizing of course notes, further self-study	0	Week	0	0
Assignment(s)	2	Number	27	54
Presentation/Seminar	1	Number	6	6
Quiz	0	Number	0	0
Mid-Term	1	Week	3	3
Project	2	Number	14	28
Field Studies(Technical Visits)	0	Number	0	0
Practice(Laboratory, Virtual Court,Studio Studies etc.	0	Number	0	0
Final Examination/ Final Project/ Dissertation andPreparation	1	Number	42	42
Other(Placement/Intership etc.)	0	Number	0	0
<b>Total WorkLoad</b>				<b>175</b>
<b>Total Workload/ 25</b>				<b>7,00</b>
<b>ECTS</b>				<b>7</b>
<b>ETHICAL RULES WITH REGARD TO THE COURSE (IF AVAILABLE)</b>				
Minimum of %80 attendance required for passing grade. Late arrival and/or early departure from a session will be recorded as an absence.				
<b>ASSESSMENT and EVALUATION METHODS:</b>				
Final Grades will be determined according to the Yaşar University Graduate Degree Education and Examination Regulation				
<b>PREPARED BY</b>	Assist. Prof. Dr. ERAY BOZKURT			
<b>UPDATED</b>	09.01.2012 10:58:56			
<b>APPROVED</b>	16.01.2012 14:48:25			