AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title		Climate Change and Landscape Planning						
Course Code		ZPM539		Couse Level		Second Cycle (Master's Degree)		
ECTS Credit	8	Workload	200 *(Hours)*	Theory	3	Practice	0	Laboratory	0

Objectives of the Course	The aim of this course is to understand the importance of the problem of climate change; to introduce the factors and responsibilities of landscape architecture profession discipline to reduce global climate change by introducing the factors related to energy efficiency and climate comfort in the field of landscape planning, introducing methods and analyzes and new developments related to increasing energy efficiency and climate comfort; To gain a more sensitive planner perspective to the climate.
Course Content	Climate, energy and energy resources; Natural and artificial environmental factors that can cause changes in the effectiveness of climatic data (solar radiation, wind, air temperature, air humidity, etc.); Interaction between landscape elements and microclimate; Urban heat island phenomenon and measurement methods; The role and use of plants in energy efficient landscape design and planning; Management of energy and microclimate components in landscape.
Work Placement	N/A
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Demonstration, Project Based Study, Individual Study
Name of Lecturer(s)	

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	30
Practice	1	30

Recommended or Required Reading

1	Droege, P. (2010). Climate Design: Design And Planning For The Age Of Climate Change
2	Oke, T. R. (1973). City size and the urban heat island. Atmospheric Environment (1967), 7(8), 769-779.
3	Akbari, H. & Kolokots, D. (2016). Three decades of urban heat islands and mitigation technologies research. Energy and Buildings, 133, 834-842.
4	Huang, L., Zhao, D., Wang, J., Zhu, J. & Li, J. (2008). Scale impacts of land cover and vegetation corridors on urban thermal behavior in Nanjing, China. Theoretical and Applied Climatology, 94(3-4), 241-257.
5	Tonyaloğlu, E. E. (2019). Kentleşmenin kentsel termal çevre üzerindeki etkisinin değerlendirilmesi, efeler ve İncirliova (Aydın) örneği. Türkiye Peyzaj Araştırmaları Dergisi, 2(1), 1-13.
6	Weng, Q., Lub, D. & Schubrınga, L. (2004). Estimation of land surface temperature-vegetation abundance relationship for urban heat island studies. Remote Sensing of Environment, 89, 467-483.

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction to course: content, reason, importance, process method and needs
2	Theoretical	Landscape Planning, Global warming and carbon storage
3	Theoretical	The reasons of climate change problem
4	Theoretical	Global and national greenhouse gas statistics, relevant international and national policies
5	Theoretical	Current planning practice and climate
6	Theoretical	Management of energy and microclimate components in landscape
7	Theoretical	Role and use of plants in energy efficient landscape design
8	Intermediate Exam	Midterm exam
9	Theoretical	The effect of urbanization on the atmosphere and the concept of urban heat island
10	Theoretical	Urban heat island measurement techniques 1
11	Theoretical	Urban heat island measurement techniques 2
12	Theoretical	Urban heat island measurement techniques 3
13	Theoretical	Adaptation to climate change in landscape planning process
14	Theoretical	Adaptation to climate change in landscape planning process
15	Theoretical	Interpretation of examples from all over the world and Turkey

16	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	4	2	84
Lecture - Practice	14	4	2	84
Assignment	2	4	1	10
Midterm Examination	1	10	1	11
Final Examination	1	10	1	11
			Total Workload (Hours)	200
			[Total Workload (Hours) / 25*] = **ECTS**	8

25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	To be able to comprehend problems related to climate change
2	To be able to understand issues of climate dynamics, energy and the use of renewable energy sources
3	To be able to understand the role of the landscape planning process on microclimate and increase the comfort of living
4	To be able to learn the new approaches to planning and technology to mitigating climate change
5	To be able to know how to manage a landscape in terms of climate and energy efficiency

Programme Outcomes *(Landscape Architecture Master)*

1	e
2	e
3	e
4	e
5	e

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5
P1	5	5	5	5	5
P2	5	5	5	5	5
P3	5	5	5	5	5
P4	5	5	5	5	5
P5	1	1	1	1	1