AYDIN ADNAN MENDERES UNIVERSITY
GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
LANDSCAPE ARCHITECTURE
LANDSCAPE ARCHITECTURE
LANDSCAPE ARCHITECTURE MASTER
COURSE INFORMATION FORM

Course Title	Environmental Modeling in Landscape Planning								
Course Code	ZPM535		Couse Level		Second Cycle (Master's Degree)				
ECTS Credit	8	Workload	200 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	Description of the environmental modelling techniques in landscape analysis and the context of current methods. Transmission of theory of integration of the modelling outputs into landscape planning and management policies.								
Course Content	Revision of the techniques in data processing and coversion applied to modelling applications Identifiying different environmental modelling approaches								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Project Based Study, Individual Study								
Name of Lecturer(s)									

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading	
1	Agarwal, C., Green, G.M., Grove, J.M., Evans, T.P. and Schweik, C.M., 2002, A Review and Assessment of Land-Use Change Models: Dynamics of Space, Time, and Human Choice, Gen. Tech. Rep., NE-297, Newton Square, PA (USDA, Forest Service, Northern Research Station).
2	Batty, M., 1981, Urban Models, Quantitative Geography: a British View, Wrigley, N. and Bennett, R. J. (Eds.)): Routledge and Kegan Paul, London,419.
3	Clarke, K.C., Hoppen, S. and Gaydos, L., 1996, “Methods and Techniques for Rigorous Calibartion of a Cellular Automaton Model of Urban Growth”,p://www.ncgia.ucsb.edu/projects/gig/Pub/SLEUTHPapers_Nov24/Clark e_Hoppen_Gaydos_1996.pdf
4	Clarke, K.C., Hoppen, S. and Gaydos, L., 1997, A self-modifying cellular automaton model of historical urbanization in the San Francisco Bay area, Environment and Planning B: Planning and Design, 24(2):247–261.
5	EPA, 2000, “Projecting Land-Use Change: A Summary of Models for Assessing the Effects of Community Growth and Change on Land-Use Patterns”, U.S.EPA/600/R-00/098, Environmental Protection Agency, Office of Research and Development, Cincinnati, Ohio, 260p
6	Erdoğan, N., 2011, İzmir ili Örneğinde Peyzaj Değişim Senaryolarına Yönelik Modelleme Yaklaşımı: CLUE-s, Doktora Tezi, Ege Üniversitesi Fen Bilimleri Enstitüsü, Peyzaj Mimarlığı Anabilim Dalı, İzmir, 200s
7	Haase, D. and Schwarz, N., 2009, Simulation Models on Human–Nature Interactions in Urban Landscapes: A Review Including Spatial Economics, System Dynamics, Cellular Automata and Agent-based Approaches, Living Reviews in Landscape Research, 3(2):1-45
8	Lambin, E.F., 2004, Modelling Land-Use Change, 245-254, Environmental Modelling: Finding Simplicity in Complexity, Wainwright, J. and Mulligan, M. (Eds.), John Wiley & Sons, London, 430p
9	Tanrıöver, A.A., 2011, Adana Kentsel Gelişiminin Uzaktan Algılama ve Coğrafi Bilgi Sistemleri Kullanılarak Modellenmesi, Doktora Tezi,Çukurova Üniversitesi Fen Bilimleri Enstitüsü, Peyzaj Mimarlığı Anabilim Dalı, Adana, 203s

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction to course: content, reason, importance, process method and needs.
2	Theoretical	Introduction to Environmental Modelling
3	Theoretical	Environmental Modelling Approaches
4	Theoretical	Environmental Modelling Approaches
5	Theoretical	Environmental Modelling Approaches
6	Theoretical	Environmental Modelling in Landscape Planning
7	Theoretical	Environmental Modelling in Landscape Planning
8	Intermediate Exam	Midterm exam
9	Theoretical	Describing model data input requirements
10	Theoretical	Preparing the data layers required for the model
11	Theoretical	Scenario creation in environmental modeling
12	Theoretical	Scenario creation in environmental modeling

13	Theoretical	Evaluation and interpretation of model outputs
14	Theoretical	Evaluation and interpretation of model outputs
15	Theoretical	Evaluation and interpretation of model outputs
16	Theoretical	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	8	3	154
Midterm Examination	1	20	1	21
Final Examination	1	24	1	25
			Total Workload (Hours)	200
			[Total Workload (Hours) / 25*] = **ECTS**	8

**25 hour workload is accepted as 1 ECTS*

Learning Outcomes

1	Having knowledge about modeling techniques used for different scales in landscape analysis and current methods
2	learns the context of environmental modelling techniques
3	learns the logic of environmental modellling
4	to be able to apply environmental modelling techniques
5	to be able to create scenarious for future in landscape planning

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	2	2	2	2	2
P2	5	5	5	5	5
P3	5	5	5	5	5
P4	5	5	5	5	5
P5	1	1	1	1	1