COURSE SYLLABUS						
Course Title	**Course Code**	**Semester**	**Course Hour/Week**		**Credit**	**ECTS**
Landscape Ecology	ARCH328	6	**Theory** 3	**Practice** 0	3	5
Course Type	Compulsory Courses	Department Elective	Faculty Elective	University Elective	CoHE (YÖK) Compulsory	Other
		X				
Level of Course	Associate Degree (Short Cycle)		Undergraduate (First Cycle)		Graduate / Doctoral (Second / Third Cycle)	
			X			

Language of Instruction	English

Course Instructor(s)	Prof. Dr. Gülay Çetinkaya Çiftçioğlu	E-mail : gulay.cetinkaya@arucad.edu.tr Office : TI OFF11	
Course Objectives	Landscape ecology focuses on the analysis of environmental factors, ecosystem functions, and ecosystem dynamics, as related to decision-making for landscape planning and design. The ecology of landscapes, regions, or other large heterogeneous areas is the study of how landscape patterns influence the processes that determine the abundance and distribution of plants and animals. The spatial pattern or structure of a landscape is a mosaic made of various elements. The course focuses on the interaction of landscape science with the necessities and mechanisms of the human environment.		
Course Learning Outcomes	**Students will be able to:**	**Teaching methods**	**Evaluation methods**
	Define and explain ecology-related theories, structures, functions, and components of ecosystems.	Direct Teaching Technique Discussion	Mid-term: Written exam
	Explain the key principles of landscape ecology, including spatial heterogeneity, spatial extent, landscape-level ecological processes, and the role of humans	Direct Teaching Technique Discussion	Mid-term: Written exam

	in shaping landscape patterns and processes.		
	Examine how changes in spatial patterns (i.e. fragmentation) impact on the conservation of flora and fauna.	Direct Teaching Technique Discussion	Mid-term: Written exam
	Evalaute the landscape structure, functions, and changes in the landscape.	Direct Teaching Technique Case study	Homework: Assignment submission
	Compare how human decisions and actions modify landscape patterns and processes and then predict and the ecological implications for this locally, regionally, and globally.	Direct Teaching Technique Case study	Homework: Assignment submission
	Discusses the appropriate information in the decision-making process.	Direct Teaching Technique Discussion	Final - Written Exam
Course Content	• Knowledge of the concept of ecosystem and landscape approaches. • To be able to analyze the interactions and linkages between the landscape and ecosystem approaches. • To understand and analyze the cross-scale interactions between the landscape structure and functions. • Critical thinking (problem definition, analysis, and synthesis) in the process of landscape modification and/or change. • To be able to integrate the landscape ecology principles in landscape planning. • To demonstrate and write relevant reports. • To be able to integrate the principles of landscape ecology into landscape planning and management.		

COURSE OUTLINE/SCHEDULE			
Week	**Topic**	**Implementation (theory/practice)**	**Required Reading, Preliminary preparation**
1	Introduction to the course and syllabus.	T	Preparation is not required.

2	Introduction to the concept of ecosystem, succession (primary and secondary), climax, and its stages.	T	See the required reading.
3	The key attributes of ecosystems, structure, and functions, the ecosystem-based approach, and key principles.	T	See the required reading.
4	The concept of landscape and ecosystem services.	T	See the required reading.
5	Dimensions and principles of the landscape approach.	T	See the required reading.
6	History and development of landscape ecology.	T	See the required reading.
7	Linkages between the concept of ecosystem, landscape, and landscape ecology.	T	See the required reading.
8	Review and discussion of all the course topics studied & **Mid-term Exam.**	T	Preparation is required.
9	Landscape structure and patch-corridor-matrix analysis	T	See the required reading.
10	Landscape functions and potential indicators to measure them	T	See the required reading.
11	The concept of ecological corridors and its historical development	T	See the required reading.
12	Typology of the ecological corridors	T	See the required reading.
13	Design of the ecological corridors.	T	See the required reading.
14	The concept of green and blue infrastructure	T	See the required reading.
15	Linkages between the ecological corridors and green infrastructure	T	See the required reading.

16	**FINAL EXAM WEEK**	T	Preparation is required.

Required Course Material(s) / Reading(s)/ Text Book(s)	Landscape ecology: a top-down approach. Edited by James Sanderson and Larry D. Harris. Boca Raton, Fla.: CRC Press, c2020. **Call number: QH541.15.L35 L335 2020.** Planning landscape: dimensions, elements, typologies by Astrid Zimmermann. Basel: Birkhauser, 2015. **Call number: SB472.45 .Z561 2015.** Fieldwork in landscape architecture: methods, actions, tools by Thomas Oles and Paula Horrigan. London, NY: Routledge, 2025. **Call number: SB472.45 .O54 2025.**
Recommended Course Material(s)/ Reading(s) /Other	Nature-based design in landscape architecture by Bruce Sharky. London, NY: Routledge, 2024. **Call number: SB470.53 .S53 2024.**

ASSESSMENT		
Learning Activities	**NUMBER**	**WEIGHT in %**
Mid-Term	1	30
Quiz		
Assignment	1	30
Project		
Field Study		
Presentation / Seminar		
Studio Practice		
Other		
Contribution of Final Examination/Final Project/ Dissertation to the Final Grade	1	40
TOTAL		100

No	**PROGRAMME LEARNING OUTCOMES**	Level of Contribution (1- lowest/ 5- highest)				
		1	2	3	4	5
1	Understand architectural history, theory, and cultural heritage, including the relationship between local/vernacular traditions and global architectural discourse.			X		
2	Understand the technical knowledge and the principles of structural systems, building technology, environmental performance, and construction processes as integrated components of architectural design.		X			
3	Comprehend sustainability, ecological sensitivity, and climate-responsive design principles and their application across different scales of the built environment.		X			
4	Recognize the legal, ethical, and professional frameworks governing architectural practice, including relevant codes, standards, universal ethical values, and the principles of project management and cost estimation.			X		
5	Apply creative and critical design thinking to develop holistic architectural solutions that respond to spatial, environmental, cultural, and social challenges at local, national, and global scales.	X				
6	Produce professional drawings, models, technical documentation, and digital/parametric visualizations that effectively communicate architectural proposals at all stages of design.	X				
7	Conduct systematic, evidence-based research and apply critical evaluation methods to inform and validate design decisions throughout the design process.					X
8	Integrate interdisciplinary knowledge — spanning art, engineering, ecology, and social sciences — to produce innovative and contextually sensitive design outcomes.	X				
9	Demonstrate professional and ethical responsibility, with sensitivity to environmental sustainability, socio-cultural diversity, and the well-being of communities served by architectural practice.			X		
10	Collaborate effectively in interdisciplinary and intercultural teams, demonstrating leadership, communication, and project management competencies in design and professional contexts.		X			
11	Communicate architectural ideas persuasively and clearly in verbal, visual, and written form to professional, academic, client, and public audiences.					X
12	Engage in continuous self-reflection, lifelong learning, and active contribution to the evolving architectural profession at local, regional, and international levels.				X	

ECTS / STUDENT WORKLOAD				
ACTIVITIES	**NUMBER**	**UNIT**	**HOUR**	**TOTAL (WORKLOAD)**

Course Teaching Hour (X weeks * total course hours)	15	1	3	45
Preliminary Preparation and self- study	15	1	2	30
Mid-Term	1	1	15	15
Quiz				
Assignment	1	1	20	20
Project				
Field Study				
Presentation / Seminar				
Studio Practice				
Final Examination/ Final Project/ Dissertation	1	1	15	15
Other				
TOTAL WORKLOAD				125
TOTAL WORKLOAD / 125/25				5
ECTS				**5**

ETHICAL RULES WITH REGARD TO THE COURSE

Plagiarism Disclaimer

Detected and undetected plagiarism is a serious offence at any time and it could have devastating effects on your degree result and future professional lives.

Plagiarism is easy to avoid if you make sure to identify and acknowledge your sources thoroughly and do not copy directly from visual examples, designs, or notes that have in turn been taken word for word from your sources.

	SDG 1: No Poverty	
	SDG 2: Zero Hunger	
	SDG 3: Good Health and Well-Being	X
	SDG 4: Quality Education	X
	SDG 5: Gender Equality	
	SDG 6: Clean Water and Sanitation	
	SDG 7: Affordable and Clean Energy	
	SDG 8: Decent Work and Economic Growth	
	SDG 9: Industry, Innovation and Infrastructure	
	SDG 10: Reduced Inequalities	
	SDG 11: Sustainable Cities and Communities	X
	SDG 12: Responsible Consumption and Production	
	SDG 13: Climate Action	X
	SDG 14: Life Below Water	X
	SDG 15: Life on Land	X
	SDG 16:Peace, Justice and Strong Institutions	
	SDG 17:Partnership for the Goals	

ASSESSMENT DETAILS AND EVALUATION CRITERIA:	
Final Grades will be determined according to the Course Learning Activities and Final Examination/ Project/ Dissertation Assessment Details as below, and comply by the Education and Examination Regulation set forth by the University.	
PREPARED BY	Prof. Dr. Gülay Çetinkaya Çiftçioğlu
UPDATED	02.02.2026

APPROVED	