School of Fine Arts Design and Architecture / Interior Architecture and Environmental Design

2023 - 2024 Academic Year

LIGHTING DESIGN and LED TECHNOLOGY

Syllabus

Course Description					
Name	**Code**	**Semester**	**T+A Hour**	**Credit**	**ECTS**
LIGHTING DESIGN and LED TECHNOLOGY	ICT3115275	Fall Semester	1+2	2	4

Prerequisites Courses	
Recommended Elective Courses	
Language of Instruction	Turkish
Course Level	First Cycle (Bachelor's Degree)
Course Type	Elective
Course Coordinator	Assist.Prof. Mustafa ERDEM
Name of Lecturer(s)	
Assistant(s)	
Aim	The effects of lighting design and applications on human health, together with today's conditions, and the design together with its systems, giving principles and methods in design and application.
Course Content	This course contains; Introduction, Basic Lighting and general information ,Light, color, optics and perception,The effect of lighting on the user and the concept of visual comfort ,Applied Group Work, Perception and Effect of Light in Space ,Design of Natural, Artificial and Mixed Lighting Systems for Indoors, Analysis of Indoor Lighting Examples, Effects on Daily Life, Application,Design of Outdoor Natural, Artificial and Mixed Lighting Systems, Application ,Lighting design in public space. (Urban spaces, public transportation vehicles, health facilities, etc.) General information about lighting of health buildings and examination of examples ,Midterm,Practical Field Trip, Indoor Natural and Artificial Lighting Applications,Hands-on Field Trip, Outdoor Natural and Artificial Lighting Applications ,Teaching the Dialux Program A Discussion on Developing Technologies in Lighting Design, Technology Follow-up and the Future of the Industry ,Teaching the Dialux Program,Evaluation of "Lighting and Sustainability" with Examples Project Development with Students/ Interview with Lighting Designers,Discussion of Implementation Projects, Practical Workshop.

Course Learning Outcomes	**Teaching Methods**	**Assessment Methods**
Knowledge and Skills to be Gained by the Course The importance of lighting design, its effect on health buildings, its use in living spaces, Fine structure (window, door, floor, wall and ceiling coverings, etc.) design together with building systems (mechanical, electrical, plumbing, special systems). Developing design and application knowledge and skills, reading application drawings.	10, 16, 9	A, E

Teaching Methods	10: Discussion Method, 16: Question - Answer Technique, 9: Lecture Method
Assessment Methods	A: Traditional Written Exam, E: Homework

Lecture Schedule

Sequence	**Topics**	**Preliminary Preparation**
1	Introduction, Basic Lighting and general information	
2	Light, color, optics and perception	
3	The effect of lighting on the user and the concept of visual comfort	
4	Applied Group Work, Perception and Effect of Light in Space	
5	Design of Natural, Artificial and Mixed Lighting Systems for Indoors, Analysis of Indoor Lighting Examples, Effects on Daily Life, Application	
6	Design of Outdoor Natural, Artificial and Mixed Lighting Systems, Application	
7	Lighting design in public space. (Urban spaces, public transportation vehicles, health facilities, etc.) General information about lighting of health buildings and examination of examples	
8	Midterm	
9	Practical Field Trip, Indoor Natural and Artificial Lighting Applications	
10	Hands-on Field Trip, Outdoor Natural and Artificial Lighting Applications	
11	Teaching the Dialux Program A Discussion on Developing Technologies in Lighting Design, Technology Follow-up and the Future of the Industry	
12	Teaching the Dialux Program	
13	Evaluation of "Lighting and Sustainability" with Examples Project Development with Students/ Interview with Lighting Designers	
14	Discussion of Implementation Projects, Practical Workshop	

Evaluation Methods	**Weight(%)**
Midterm Exam	50
General Exam	50

Resources
It will be shared during the lesson.