

TOROS ÜNİVERSİTESİ

Faculty Of Engineering
Electrical And Electronics Engineering (English)

Course Information

LIGHTING SYSTEMS					
Code	Semester	Theoretical	Practice	National Credit	ECTS Credit
		Hour / Week			
EEE414	Spring	3	0	3	6

Prerequisites and co-requisites	
Language of instruction	English
Type	Elective
Level of Course	Bachelor's
Lecturer	Asst. Prof. Dr. Cevher AK
Mode of Delivery	Face to Face
Suggested Subject	
Professional practise (internship)	None
Objectives of the Course	In theory, the information described in the parallel course, effective, efficient, economical account whether a lighting, electricity, indoor plumbing regulations and technical specifications for the project by drawing a sample project to do all the calculations and make the project acceptable.
Contents of the Course	The purpose of illumination and classification. Important theories of photometric light-emitting yasalar.ışık basic forms. Physiological optics calculations. Fundamentals of light production. Lamps. Light sources. Types of lighting fixtures and lighting. Lighting accounts canceled. Electrical installation materials inside. Architectural features of the exercise project. Plumbing connection diagram. Electrical Interior Facilities Ordinance important ingredients. Table loading table. Project control.

Learning Outcomes of Course

#	Learning Outcomes
1	Can recognize and make classify lighting terms
2	Getting knowledge about the laws photometric magnitudes.
3	Light and visual event production by understanding the basics of light moments.
4	Getting knowledge about recognize the characteristics of lamps and lighting fixtures, and can select the appropriate lighting armature.
5	Can learn lighting components and lighting account.
6	Allows the electricity internal installation regulations and electricity indoor plumbing materials
7	Getting knowledge about Architectural features of a drill project, learn how to make domestic installations.
8	Getting knowledge about to spend the most appropriate route the internal plumbing of a building project by drawing electricity, switch and outlet placement, line, lines of sorties and the main column.

Course Syllabus

#	Subjects	Teaching Methods and Technics
1	The purpose of lighting, and the classification of the subject. Light and visual event. Light intensity and the recipe. Luminous intensity	Lecture
2	Photometric law (cosine law, the law of inverse square of Distances, Lambert's law, law of space-angle projection).	Lecture
3	Photometric example of solving problems related to the law. Light-emitting basic forms. The plane, sphere, cylinder,	Lecture

	half-sphere.	
4	Physiological optics accounts. Adaptation. Contrast sensitivity and shape. Example problems.	Lecture
5	Visual speed and critical vibration frequency. Talbott law.	Lecture
6	Fundamentals of light production. Photometric quantities. Energy flux, luminous flux, the amount of light, the light intensity. Activity factor.	Lecture
7	Midterm	Exam
8	Foundations of the production of luminescent light. Incandescent lamps, arc lamps, fluorescent lamps, discharge lamps. External characteristics of the discharge lamps. Study of the economic value of lamps.	Lecture
9	Types of lighting fixtures and lighting. Lighting components. The light level, lighting level, photographic excitation, photometric radiance, glow, shadow, light color, glare.	Lecture
10	Lighting calculation methods. Yield method. Factors affecting the efficiency of the room. Room index. Illumination of the rooms. Voltage drop calculations. Example problems.	Lecture
11	Electrical installation materials inside. Switches, fuses pipes. 1 / 50 scale architectural features of the exercise project, project materials.	Lecture
12	Electrical domestic plumbing project preparation and drawing of a model project within the framework of principles of regulation. On one-line diagrams and drawings. The light level and the selection of devices. Strong flow chart drawing of the colon.	Lecture
13	Plumbing connection diagram. Domestic electrical installations, low current and high current installations and drawings. Feeder, column and main column line formation.	Lecture
14	Preparation of the installation schedule table. Insurance selection, selection of wire cross-section, to account for voltage drop	Lecture
15	Project control	Lecture
16	Final Exam	Exam

Course Syllabus

#	Material / Resources	Information About Resources	Reference / Recommended Resources
1	Muzaffer ÖZKAYA, Aydınlatma Tekniği, Uludağ Üniv. Yayınları, 1981		
2	Ali DOĞRU, Elektrik Tesisat Planları, Sözleşme, Keşif ve Planlama		
3	Aydın ESEN Aydınlatma Dersi Notları		
4	İsmail KAŞIKÇI Aydınlatma Dersi Notları		

Method of Assessment

#	Weight	Work Type	Work Title
1	40%	Mid-Term Exam	Mid-Term Exam
2	60%	Final Exam	Final Exam

Relationship between Learning Outcomes of Course and Program Outcomes

#	Learning Outcomes	Program Outcomes	Method of Assessment
1	Can recognize and make classify lighting terms	12	1,2
2	Getting knowledge about the laws photometric magnitudes.	13	1,2
3	Light and visual event production by understanding the basics of light moments.	14	1,2
4	Getting knowledge about recognize the characteristics of lamps and lighting fixtures, and can select the appropriate lighting armature.	15	1,2
5	Can learn lighting components and lighting account.	12	1,2
6	Allows the electricity internal installation regulations and electricity indoor plumbing materials	13	1,2
7	Getting knowledge about Architectural features of a drill project, learn how to make domestic installations.	14	1,2

8	Getting knowledge about to spend the most appropriate route the internal plumbing of a building project by drawing electricity, switch and outlet placement, line, lines of sorties and the main column.	15	1,2
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PS. The numbers, which are shown in the column Method of Assessment, presents the methods shown in the previous table, titled as Method of Assessment.

Work Load Details

#	Type of Work	Quantity	Time (Hour)	Work Load
1	Course Duration	14	3	42
2	Course Duration Except Class (Preliminary Study, Enhancement)	14	7	98
3	Presentation and Seminar Preparation	0	0	0
4	Web Research, Library and Archival Work	0	0	0
5	Document/Information Listing	0	0	0
6	Workshop	0	0	0
7	Preparation for Midterm Exam	1	2	2
8	Midterm Exam	1	1	1
9	Quiz	0	0	0
10	Homework	0	0	0
11	Midterm Project	0	0	0
12	Midterm Exercise	0	0	0
13	Final Project	0	0	0
14	Final Exercise	0	0	0
15	Preparation for Final Exam	1	6	6
16	Final Exam	1	1	1
				150