



University of Tehran
School of Electrical and Computer Engineering

Course:	8101201 – Lighting Lab		
Course type:	Elective	EE, CE, IT	Credit: 1
Level:	Undergraduate		
Co-requisite(s):			
Prerequisite(s):			
Prerequisite by topic:			
Textbook(s):	[1] Casimer DeCusatis, “Handbook of Applied Photometry”, American Institute of Physics, 1998.		
Coordinator:	A. A. Shayegani Akmal		
Goals:	<p>The goal of the course is to :</p> <p>Be familiar with different lighting sources and measuring methods of various parameters related to lighting engineering</p> <p>To apply measuring instruments to evaluate lighting quantities</p>		
Outcome:	<p>Upon successful completion of the course, students will be able</p> <ol style="list-style-type: none"> 1. To know different types of typical lamps 2. To measure main characteristics of lighting sources 3. To evaluate light distribution of lighting sources 		
Topics:	<p>During the course, students take part in 10 sessions titled:</p> <ol style="list-style-type: none"> 1- Introduction to incandescent light bulb and measuring methods of light flux 2- Introduction to fluorescent lamps and compare with incandescent light lamps 3- Introduction to mercury-vapor lamps 4- Introduction to sodium-vapor lamps and metal-halide Lamps 5- To measure the light distribution by far field method 6- To measure the light distribution by near field method 7- To measure characteristics of light color, light temperature, and light spectrum 8- To measure radiations in range of infrared and ultraviolet light 9- To measure illumination and brightness using LMT illuminance meter(luxmeters)-1 		

	10- To measure illumination and brightness using LMT illuminance meter(luxmeters)-2						
Computer usage:							
Assignments:	At the beginning of every session, pre-report of current session and report of the previous session should be handed in.						
Projects:							
Grading:	<table> <tr> <td>Pre-reports:</td> <td>20%</td> </tr> <tr> <td>Reports</td> <td>50%</td> </tr> <tr> <td>Final exam:</td> <td>30%</td> </tr> </table>	Pre-reports:	20%	Reports	50%	Final exam:	30%
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Reports	50%						
Final exam:	30%						
Further readings:							
Prepared by:	Amir Abbas Shayegani Akmal						
Date:	November 9, 2017						

*EE: Electrical Engineering CE: Computer Engineering IT: Information Technology