

FUNDAMENTALS OF OPTICS AND PHONICS

1	Course Title:	FUNDAMENTALS OF OPTICS AND PHONICS
2	Course Code:	EEM4305
3	Type of Course:	Optional
4	Level of Course:	First Cycle
5	Year of Study:	4
6	Semester:	7
7	ECTS Credits Allocated:	4.00
8	Theoretical (hour/week):	3.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	0
11	Prerequisites:	
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Doç. Dr. UMUT AYDEMİR
15	Course Lecturers:	Doç. Dr. Şekip Esat HAYBER
16	Contact information of the Course Coordinator:	umutaydemir@uludag.edu.tr, sehayber@uludag.edu.tr
17	Website:	
18	Objective of the Course:	To introduce the reflections of photonics theory to optical communication and related technologies, to examine the application relationship of basic concepts and to give the realization of optical communication elements.
19	Contribution of the Course to Professional Development:	1. Defines the concept of Electro-Optical System. 2. To understand the basic principles of optics. 3. To learn the subjects of photonics.
20	Learning Outcomes:	
	1	Defines the concept of Electro-Optical System.
	2	To understand the basic principles of optics.
	3	To learn the subjects of photonics.
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21	Course Content:	
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Week	Theoretical	Practice
1	Geometric optics: Fermat's principle	
2	Geometric optics: Reflection, refraction and Fresnel relations	
3	Geometric optics: Total internal reflection, fiber guiding	

Contribution Level:	1 very low	2 low	3 Medium	4 High	5 Very High
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