

Course Code	Course Name	Course Type	Course Pool (if any)	Weekly Course Hours		Credits	ECTS Credits	Semester								
				T	U											
<b>EE4092</b>	Selected Topics in Electrical and Electronics Engineering	Seçimlik		3	0	5	5	2								
Prerequisite Courses (Course Code and Name, Min Letter Grade to success)		Prerequisite to (Course Code and Name, Min Letter Grade to success)		Weekly Time & Classroom Schedule (Day, Hours, Classroom)												
-		-														
<b>Course Lecturer</b>	Asst.Prof.Dr. Mehmet Saadeddin ÖZTÜRK		<b>Teaching Assistant(s)</b>													
<b>Office</b>	M2-252		<b>Office</b>													
<b>Tel / Extention</b>	0216 777 3580		<b>Tel / Extention</b>													
<b>E-mail</b>	<a href="mailto:saadeddin.ozturk@marmara.edu.tr">saadeddin.ozturk@marmara.edu.tr</a>		<b>E-mail</b>													
<b>Web</b>	<a href="https://avesis.marmara.edu.tr/saadeddin.ozturk">https://avesis.marmara.edu.tr/saadeddin.ozturk</a>		<b>Web</b>													
<b>Office Days and Hours</b>	TBA		<b>Office Days and Hours</b>													
<b>Course Objectives</b>	This course aims to describe the physical principles behind light tissue interaction and optical imaging at different media settings.															
	<b>Course web pages:</b>															
<b>Textbooks and/or References (Recommended Reading)</b>	1	Jerome Mertz, Introduction to Optical Microscopy, 2010, Roberts and Company, USA														
	2	Ivan Andonovic, Deepak Uttamchandani, Principles of Modern Optical Systems, 1989, Artech House, USA														
	3	Karl F. Renk, Basics of Laser Physics For Students of Science and Engineering, 2017, Springer														
	4	David A Boas, Constantinos Pitris and Nimmi Ramanujam, Handbook of biomedical optics, 2011, CRC Press														
	5	Jürgen Popp (Ed.) vd. Handbook of Biophotonics, 2011, Wiley														
	6	R Splinter and B A Hooper, An Introduction to Biomedical Optics, 2007, CRC Press														
<b>Learning Outcomes</b>	1	Physical principles underlying the geometrical optics will be gained														
	2	Physical principles underlying the wave optics will be gained														
	3	Mathematical background on light interaction with optical components and image formation will be gained														
	4	Breadth understanding on light tissue interaction and image formation through scattering media will be gained														
	5	Working principles of different optical imaging techniques will be obtained.														
	Program Gains / Outputs															1:Week; 2:Medium; 3:Strong
<b>Program Gains x Course Learning Gains Matrix</b>	PG1	PG2	PG3	PG4	PG5	PG6	PG7	PG8	PG9	PG10	PG11	PG12	PG13	PG14	PG15	<b>Course Learning Gains</b>
	3										0	2				DK1 Physical principles ...
	3		3									2				DK2 Physical principles ...
	3	3	3													DK3 Mathematical backgro...
	2	2		2												DK4 Breadth understandin...
	2			3	3	1	1					3				DK5 Working principles ...
	3	3	3	3	3	1	1	0	0	0	0	2	0	0	0	<b>TOTAL EFFECT</b>



Theoretical hours	3,00	42	Midterm & preparation	2,00	28	Laboratory/Atelier & preparation		
Application hours			Quiz & preparation			Presentation & preparation	2,00	28
Pre-class and Post-class self study	2,00	28	Project & preparation	2,00	28	Research & preparation		
Pre and post-application self study			Homework & preparation			Final & preparation	3,00	42
<b>Total Student Workload Hours:</b>	<b>196</b>		<b>1 ECTS Credits = 25 Student Workload Hours</b>			<b>Workload Calculation:</b>	False: $[196/25]=8$ . Doğrusu=5.	