

Course Code	Course Name	Teorical	Practice	Laboratory	Credits	ECTS
FZK-2003	Optical Waves Laboratory	0.00	4.00	0.00	2.00	4.00
Course Detail						
<b>Course Language</b>	: Turkish					
<b>Qualification Degree</b>	: Bachelor					
<b>Course Type</b>	: Compulsory					
<b>Preconditions</b>	: Not					
<b>Objectives of the Course</b>	: This course aims to do experiments about the optic and waves course					
<b>Course Contents</b>	: Optics and Waves with the experimental results reinforce the theoretical knowledge learned in class and practice the skills.					
<b>Recommended or Required Reading</b>	: Optic and waves lab manual French, A. P. (Çev.: Nazım Uçar / 2004). Vibrations and Waves. İstanbul: Aktif Yayınevi Goca, N. (Çeviri: Celal Çakır / 2000). Optic. İstanbul: Aktif Yayınevi.					
<b>Planned Learning Activities and Teaching Methods</b>	: Lecturing Assignment Presentation Doing Project Discussion Group work Make critique Reading					
<b>Recommended Optional Programme Components</b>	: Current research topics for students					
<b>Course Instructors</b>	: Arş. Gör. Dr. Betül Atalay					
<b>Instructor's Assistants</b>	: NA					
<b>Presentation Of Course</b>	: Face to face, laboratory					

## Course Outcomes

## Upon the completion of this course a student :

- 1 Gain a different perspective to the events of nature
- 2 Gain detailed study of physical systems, and analytical approach
- 3 explain natural phenomena and analysis
- 4 Able to do team-work
- 5 Design experiment and evaluate data

## Preconditions

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## Weekly Contents

	Teorical	Practice	Laboratory	Preparation Info	Teaching Methods
1.Week			*Lens rules and optical instruments		
2.Week			*Lens rules and optical instruments		
3.Week			*Diffraction and interference		
4.Week			* Diffraction and interference		
5.Week			*Michelson Interferometer		
6.Week			*Prism Spectroscopy		
7.Week			*Prism Spectroscopy		
8.Week			*Simple Harmonic Motion and Conservation of energy		
9.Week			*Simple Harmonic Motion and Conservation of energy		
10.Week			*Damped oscillation motion		
11.Week			*Damped oscillation motion		
12.Week			*Polarization and Malu's Law		
13.Week			*Polarization and Malu's Law		
14.Week			* Newton rings		

## Assesment Methods %

- 1 Final : 60.000
- 2 Laboratory : 40.000

## ECTS Workload

Activities	Count	Time(Hour)	Sum of Workload
Ödev	12	1.00	12.00
Final	1	3.00	3.00
Laboratory	14	4.00	56.00
Preparation for final	1	20.00	20.00
Preliminary Study	14	2.00	28.00

Activities	Count	Time(Hour)	Sum of Workload
			Total : 119.00
			Sum of Workload / 30 ( Hour ) : 4
			ECTS : 4.00

Program And OutcomeRelation																								
	P.O. 1	P.O. 2	P.O. 3	P.O. 4	P.O. 5	P.O. 6	P.O. 7	P.O. 8	P.O. 9	P.O. 10	P.O. 11	P.O. 12	P.O. 13	P.O. 14	P.O. 15	P.O. 16	P.O. 17	P.O. 18	P.O. 19	P.O. 20	P.O. 21	P.O. 22	P.O. 23	P.O. 24
L.O. 1	4	5	4	3	5	4	5	4	4	4	4	2	2	2	3	5	2	4	1	2	1	2	4	4
L.O. 2	4	4	4	5	5	5	5	4	4	4	4	2	1	2	4	3	2	4	1	2	1	2	3	3
L.O. 3	5	4	4	5	5	5	5	5	5	5	2	3	2	2	4	3	2	3	2	3	2	2	4	3
L.O. 4	4	5	4	5	4	4	5	4	4	3	2	3	2	4	3	5	3	3	3	4	3	4	4	4
L.O. 5	5	4	4	5	5	5	5	5	5	5	4	3	2	3	4	4	3	3	2	4	3	3	4	4

Ders/Program Çıktıları İlişkisi																								
P.O. 1	P.O. 2	P.O. 3	P.O. 4	P.O. 5	P.O. 6	P.O. 7	P.O. 8	P.O. 9	P.O. 10	P.O. 11	P.O. 12	P.O. 13	P.O. 14	P.O. 15	P.O. 16	P.O. 17	P.O. 18	P.O. 19	P.O. 20	P.O. 21	P.O. 22	P.O. 23	P.O. 24	P.O. 2
4	4	4	4	4	4	5	4	4	4	3	3	2	3	3	4	3	3	2	3	2	3	4	4	3