General	Title and code of subject,	ETR 510 Optoelectronic devices transmitting and processing			
information	number of credits	information 8 ECTS			
	Department	Physics and Electronics			
	Acadomic somostor	2024 Fall			
	I ecturer	PhD dosent Gasanov Elchin			
	F-mail:	elgafgas@vahoo.com			
	Phone number:	+994 50 5287740			
	Lecture room/Schedule	11 Mehseti Street AZ1096 Baku Azer	baijan (Neftchilar campus)		
		room	suljui (Poroniu cumpus),		
	Consultations	II, 15:00 – 16:00			
	Office hours				
Prerequisites					
Course language	English				
subject	Major				
Textbooks and	List of used literature.				
additional	1. Handbook of Optoelec	ctronics, Edited by John P. Dakin, Robert	Brown, 2017,		
materials	2. R. G. Hunsperger, Inte	grated Optics: Theory and Technology, B	Berlin and Heidelberg, Springer-		
	Verlag, 1999	ro M Sugimato N Hamano and T V	masa "Double Heterostructure		
	5. K. Kasanara, I. Tashiro, M. Sugimolo, N. Hamano, and I. Yanase, Double Helerostructure Optoelectronic Switch as a Dynamic Memory with Low Power Consumption" Appl. Phys.				
	Lett., vol. 52, 2011, pr	679–681	er consumption , rippi. rings.		
Teaching	Lecture		+		
methods	Group discussions at seminar	8	+		
Assessment	Components	Date/ Deadline	Percent (%)		
	Tests (oral questioning)	During the semester	5		
	Activity	At each lesson	10		
			10		
	Quizzes	During the semester	15		
	Quizzes Attendance Midterm exam	During the semester During the semester	15 5 30		
	Quizzes Attendance Midterm exam Final exam	During the semester During the semester	10 15 5 30 35		
	Quizzes Attendance Midterm exam Final exam Final	During the semester During the semester	10 15 5 30 35 100		
Course	Quizzes Attendance Midterm exam Final exam Final Optoelectronics is one of the	During the semester During the semester most developed areas in functional micro	15 5 30 35 100 electronics, since optical and		
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policy and	General information on the subject will be provided for the students during lectures.
behavior)	Student's knowledge on the previous topics will be evaluated and new topic will be explained by mins of visual aids during seminars. Student's knowledge level will be tested oraly and in written forms before midterm and final exams. Submission of the individual works by the end of course is obligatory.
	• Effectiveness (pass/fail) This course strictly follows the assessment policy conducted by the subject teaching faculty. Hencew a student must score at least 60% to pass the course normally. In case of failure he will be forced to repeate the course in the next term or year.
	• Plagiarism
	Cheating or other forms of plagiarism during review surveys, midterms and final exams will result in disqualification. In this case a student will automatically receive zero "0" without furher discussion.
	Professional conduct directives
	Students will behave professionally during class hours to create a conductive academic environment. Off course discussions and unethical behavior are strictly prohibited.
	• Attendance
	Participation of students at all classis is important. Students should inform dean's office about missing lessons for particular reasons (illness, family issues and etc.). Students, missing more than 25% of lessons, are not allowed to take the exam.
	• Quizzes.
	Quizzes will be four times during semester. The time of quizzes will be announced in the classrom three
	weeks before. The quizzes will be related to the homework material.
	• Activity
	Students who will be active during discussion of past lessons will be awarded with one activity
	mark.

This program reflects the comprehensive information about the subject and information about any changes will be provided in advance.

Week	Dates (planned)	Subject topics	Textbook/ Assignments
1	21/09/24	Optoelectronic storage devicesDestination.	[1] p.709-741
		Problem solving.	
2	28/09/24	Types and characteristics: CD-ROM DRIVE DEVICE	[1] p.750-773
		Data transfer rate.	[1] p-780-795
		Problem solving.	
3	05/10/24	Optoelectronics - development prospects.	[1] p.800-815
		Problem solving.	
4	12/10/24	Holographic storage device. Theory and principle of physical action.	[1] p.815-838
		Problem solving.	
5	19/10/24	Optoelectronics. Semiconductor light emitting structures	
		Problem solving.	
6	26.10/24	Calculation and design of the LED Design Examples	[1] p.846-872
		Problem solving.	
7	02/11./24	Optoelectronics In discrete execution; micro execution	[1]p.881-900,
		Problem solving	
8	09/11/24	Physical and technological foundations of optoelectronics	[1] p.957-984
		Problem solving.	

9		Mid term exam	
10	16/11/24	Fiber Optic Sensors Measured physical quantity Used physical phenomenon, property	[1] p.916-947
		Problem solving	
11	23/11/24	Laser optoelectronic devices Typical structure of an electronic meter	[4]p. 73-96
		Problem solving	
12	30/11/24	Machine memory Information and memory Accumulation of information.	[1] p.1061-1085
		Problem solving	
13	07/12/24	Main characteristics, classification and hierarchy of memory	[3]p.555-611
		Problem solving.	
14	14/12/24	Magnetic storage devices Magnetic recording	[1] page 9-6
		Problem solving	[1] page 10-6
15	21. 12/24	Memory in cognitive psychology	[1] page 11-6
		Computer metaphor in the study of the structural organization of memory	

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