

Program	Level of studies		First cycle	
	Program name		Educational Physics	
Course name	LASER PHYSICS FUNDAMENTALS			
Course ID	Semester	Course status	ECTS credits	L+E
PTH6411	VI	ELECTIVE	4	2+1
Lecturer	Prof. dr. Dejan Milošević			
Aims and intended learning outcomes	The aim of the course is to introduce students to basic concepts of laser physics. The learning outcome is mastering knowledge from the basics of laser physics.			
Course content				
Interaction of laser radiation with matter. Creation of inverse population. Optical resonators. Continuous and non-stationary laser modes. Types of lasers. Laser applications.				
Student workload (hours)		Grading		
Lectures and Exercises	50	Assessment method	Points	
Exam preparation	50	Partial exam	50	
Assignments		Final exam	50	
Other				
Total	100			
		Total	100	
Literature				
Mandatory:				
1. D. Milošević, Osnove lasera (sa zbirkom riješenih zadataka), 1996. (available at e-learning)				
Recommended:				
1. V. Henč-Bartolić, L. Bistričić, Predavanja i auditorne vježbe iz fizike lasera, Element, Zagreb, 2001.				
2. D. Milatović, Optoelektronika, Svjetlost, Sarajevo, 1987.				
3. N. Konjević, Uvod u kvantnu elektroniku, laseri, Naučna knjiga, Beograd, 1981.				
4. S. Lugomer, M. Stipančić, Laser – fizikalne osnove, konstrukcija i primjene, Svjetlost, Sarajevo, 1977.				
5. W. T. Silfvast, Laser Fundamentals, Cambridge University Press, Cambridge, 1996.				
Remarks				