Program	Level of studies		**First cycle**	
	Program name		**Educational Physics**	
Course name	**PHYSICS LABORATORY IV**			
Course ID	Semester	Course status	ECTS credits	L+E
PHY4211	**IV**	**MANDATORY**	**2**	**0+2**
Lecturer	**Prof. dr. Mustafa Busuladžić**			
Aims and intended learning outcomes	The goal of this course is to provide students with a general knowledge of the principles of geometrical and physical optics, and optical instrumentation, as well as a hands-on practice experience through laboratory work. At the end of the course the student should be able to: -handle optical elements and set-up basic optical experiments; -apply basic knowledge of principles and theories about behaviour of the light to conduct experiments; -collect and appropriately analyze data working independently and in collaboration with other students.			

Course content

Spherical mirrors.
Converging and diverging lenses.
Optical instruments.
Spectrometry.
Photometry.
Interference. Young double-slit experiment. Newton rings.
Fraunhofer diffraction at a single slit.
Plane diffraction grating.
Polarization.
He-Ne laser.

Student workload (hours)		Grading	
Lectures and Exercises	30	Assessment method	Points
Exam preparation	20	Course Test	50
Total	50	Final Exam	50
		Total	100

Literature

1. Lecture notes.
2. Nada Gabela, Praktikum iz optike, drugo izdanje, PMF, Sarajevo, 2000.

Remarks

Continuous knowledge and skills assessment will be carried out through midterm exams. This includes written tests as well as an optics laboratory exam. The laboratory exam is used to assess each student's ability to make accurate measurements with typical optics lab instruments, analyze and interpret obtained data. The successful completion of the course implies achieving at least 55% of the total number of points in both the partial and final exam.