Course description

Department/Unit /	KFY / FYPY2			**Academic Year**	2016/2017
Title	Physics 2			**Type of completion**	Exam
Accredited/Credits	Yes, 2 Cred.			**Type of completion**	Written
Number of hours	Přednáška 2 [Hours/Week]				
Occ/max	Status A	Status B	Status C	**Course credit prior to**	NO
Summer semester	18 / -	0 / 0	0 / 2	**Counted into average**	YES
Winter semester	0 / -	0 / -	0 / -	**Min. (B+C) students**	not determined
Timetable	Yes			**Repeated registration**	NO
Language of instruction	Czech			**Semester taught**	Summer semester
Substituted course	None				
Preclusive courses	KFY/ELMGP and KFY/VOPTP				
Prerequisite	N/A				
Informally recommended courses	N/A				
Courses depending on this Course	N/A				

Course objectives:

Opakování a prohloubení znalostí z nauky o pružných kmitech a vlnách, elektřiny a magnetismu, optiky a atomistiky s ohledem na cílovou skupinu studentů, pro něž je tento předmět určen.

Requirements on student

Input: Secondary knowledge from above-mentioned part physics.
Check out: Establishment knowledge to the extent of educational text physics for biologist 2.

Content

Harmonic oscillation and waves, acoustics
Damped and forced mechanical oscillators
Characteristics of wave
Basic concepts and quantities of physical acoustics

Electricity and magnetism
Basic concepts and quantities from electrostatics
Basic concepts and quantities from electrodynamics
Magnetic field
Electromagnetic induction
Electromagnetic oscillations and waves

Optics
Basic concepts and quantities from geometric optics
Optical apparatus
Basic concepts and quantities from waves and particles optics
Basic concepts and quantities from photometry

Atomics
Basic concepts and quantities from comics structures
Basic concepts and quantities from nuclear physics
radioactivity

Prerequisites - other information about course preconditions

none

Competences acquired

Development knowledge from areas electricity and magnetism and optics.

Studijní opory

Guarantors and lecturers

- **Guarantors:** RNDr. Libuše Švecová, Ph.D.
- **Lecturer:** RNDr. Libuše Švecová, Ph.D.

Literature

- **Basic:** Sklenák, L. *Fyzika pro biology 2. Učební text PrF OU.*. Ostrava, 2009.
- **Basic:** *Libovolná, pokud možno nepříliš stará publikace zaměřená na přehled středoškolské fyziky*.
- **Extending:** HORÁK, Z., KRUPKA, I. *Fyzika*. Praha, 1966.
- **Extending:** *INTERNET*.
- **Extending:** POLÁK, J. *Přehled středoškolské matematiky. 6. vyd. : Prometheus,*. Praha, 1997.

Time requirements

Activities	Time requirements for activity [h]
Being present in classes	26
Self-tutoring	20
Preparation for test	8
Consultation of work with the teacher/tutor (incl. electronic)	5
Total:	**59**

assessment methods

professional knowledge

Point system

Written examination

prerequisite

professional knowledge

none

teaching methods

professional knowledge

Monologic (explanation, lecture, briefing)

Working with text (coursebook, book)

learning outcomes

professional knowledge

Development knowledge from areas electricity and magnetism and optics.

Course is included in study programmes:

Study Programme	Type of	Form of	Branch	Stage	St. plan v.	Year	Block	Status	R.year	R.
Chemistry	Bachelor	Full-time	Chemistry	1	2012	2016	Povinné předměty	A	1	LS