Level: PhD

Course title: Non-ionizing radiation

Status: elective

ECTS: 15

Requirements: none

Learning objectives

The goal of this course is to teach the students about origin and characteristics of non-ionizing radiation, about methods of its detection and its role in modern civilization, as well as about protection from non-ionizing radiation.

Learning outcomes

After the successful completion of this course, the students will be familiar with origin and characteristics of non-ionizing radiation, with methods of its detection, as well as with protection from non-ionizing radiation.

Syllabus

The basic properties of non-ionizing electromagnetic radiation. The interaction of electric and magnetic fields with the environment. The absorption of electromagnetic radiation in living organisms. Instruments for producing of electromagnetic radiation. Detection of non-ionizing radiation. Protection from non-ionizing radiation. Exposure to non-ionizing electromagnetic radiation. Sources of RF radiation in the environment. Sources of electromagnetic radiation in medicine. Legislation standards.

Weekly teaching load				Other:
Lectures: 5	Exercises:	Other forms of teaching:	Student research: 5	