

# Fundamental of Physics

**Calendar:** 1st semester

**Contact Hours:** T:30,0; PL:22,5; O:15,0

## **Learning outcomes of the curricular unit**

The main aim of this course is to provide the students with fundamental knowledge of applied physics to biological phenomena. After finishing the course students should have acquired the following competencies: Ability to setup, simplify, and solve a variety of physical problems; Set out, interpret and solve physical problems; Develop analytical skills.

## **Syllabus:**

1. Basics Concepts about measures and quantities; 2. Light and their wave properties; 3. Geometrical Optics and optical instruments; 4. Mechanical properties of solids; 5. Properties of fluids; 6. Electricity and Magnetism Laboratory component: PL1- Laws of reflection and refraction; PL2 - Determination of focal length lens; PL3 - Calibration of an elastic spring; PL4 - Determination of the Coefficient of Viscosity of a Liquid; PL5 - Static Electricity; PL6 - Electric circuits.

## **Teaching methodologies (including evaluation):**

The modular course is organized into lectures, solving problems class sessions (tutorial sessions) and laboratory classes. The lecture is taught using PowerPoint presentations where the fundamental principles and important applications are explained. The tutorial sessions are organized in a set of problems for each chapter that should be solved by students with minimum assistance. In the laboratory classes will be executed six lab works with evaluation through technical reports. The final grade will be determined by the assessment as following: Final exam (80%) and laboratory evaluation (20%)