

# MATHEMATICAL AND PHYSICAL BASES OF MEDICAL BIOPHYSICS

## First Semester

---

Tutor: *Dr. István Voszka*

Altogether 14 hours lecture during the first four weeks of the semester

**Credit 1**

### Topics of lectures:

1. Mathematics, necessary for the understanding of biophysical laws
2. Physical quantities and units
3. Kinematics – motions
4. Statics – changes of shape, forces, mechanical stress, pressure
5. Dynamics – work, energy
6. Oscillations, waves
7. Fluid mechanics
8. Thermodynamics
9. Electricity – charges in rest and in motion
10. Magnetism, magnetic induction