

# BIOPHYSICS LECTURE 2022/23 Semester I

Nursing and patient care basic course Health care and prevention basic course

## Subject of topics

- 1 Introduction, the subject of biophysics. Fundamental physics, atomic physics, electromagnetic waves.
- 2 Physics of the atomic nucleus, radioactivity, radiobiology, radiobiophysics.
3. Effect of ionizing radiation on the living organism, basic dose units
4. Isotopes and their applications in medical practice
5. Physical imaging methods in medical diagnostics, X-ray diagnostics, CT
6. Gamma camera, SPECT, PET
7. Fundamentals of NMR
8. Properties and biomedical applications of ultrasound
9. The importance of diffusion in living organisms
10. Biophysics of metabolism and transport
11. Biophysics of respiration and circulation
12. Biophysics of cell membranes, membrane models
13. Bioelectric phenomena, electrocardiography
14. Biomechanics

Location	Course	Date	Lecturer
Debrecen (Lovarda)	Full time training (Physiotherapist, public health inspector)	10-12. week Mon: 9:00-11:00 , Tue: 14:00- 16:00 , 13. week Mon:9:00-11:00	Ágnes Tóth Dr. E-mail: toth.agnes@sph.unideb.hu
Nyíregyháza (EK-107)	Full time training (Nurse practitioners)	2022.11. 23. 2022.11.28. 2022.12.05. 2022.12. 12.	Zsuzsanna Pályiné Dr. Krekk E-mail: palyikrekk.zsuzsanna@foh.unideb.hu