

**Medical Biophysics – General medicine
2024/25**

Tue 11,30–12,20 /Thu 13,30–15,10, (B11, 114) Main lecturer: Prof. Mornstein

Tuesday September 17th
Lecture cancelled

Thursday September 19th
Lecture cancelled

Tuesday September 24th
**Medical Physics and Biophysics: Introduction
Thermodynamic principles.**

Thursday September 26th
Structure of matter. Structure of living matter (Mgr. Vlk)

Tuesday October 1st
Thermodynamics and life

Thursday October 3rd
Biomolecular and Cellular Research Devices

Tuesday October 8th
Sensory perception I (Intro + hearing)

Thursday October 10th
Resting and action membrane potential

Tuesday October 15th
Sensory perception II (hearing and vestibular sense, optics of eye)

Thursday October 17th
Biophysics of visual perception III (vision, sensory perception examination and aids)

Tuesday October 22nd
Biosignals and their processing. Thermometry

Thursday October 24th
Nanomedical Devices (Assoc. Prof. Bernard)

Tuesday October 29th
Devices for electrochemical analysis. Auxiliary laboratory devices

Thursday October 31st

X-ray Imaging

Tuesday November 5th

Endoscopes, tissue ablation devices and lithotripters

Thursday November 7th

Nuclear medicine and radiotherapy I

Tuesday November 12th

Nuclear medicine and radiotherapy II

Thursday November 14th

Magnetic resonance imaging (MRI). Infrared imaging

Tuesday November 19th

Safety aspects of air pressure and gravity changes, and ultrasound

Thursday November 21st

Biophysics of cardiovascular system. Biophysics of breathing. Spirography

Tuesday November 26th

Devices for substitution and assist of body organs

Thursday November 28th

Microscopy (Mgr. Vlk)

Tuesday December 3rd

Physical Therapy (Mgr. Staffa)

Thursday December 5th

Ultrasound diagnostics

*Tue December 10th and Thu December 12th
autopsy practice*

Tuesday December 17th

**Protection of the Patient from Ionizing Radiation and Image Quality Outcomes in
X-Ray Imaging**

Thursday December 19th

Healthcare informatics (Dr. Bourek)