

**Medical Biophysics – General medicine
2021/22**

Tue 10,00–10,50, /Thu 12,00–13,40, (B11, 114) Main lecturer: Prof. Mornstein

Tuesday September 13th

Medical Physics and Biophysics: Introduction

Thursday September 15th

Structure of matter. Structure of living matter

Tuesday September 20th

Thermodynamic principles.

Thursday September 22nd

Healthcare informatics (Dr. Bourek)

Tuesday September 27th

Thermodynamics and life

Thursday September 29th

Biomolecular and Cellular Research Devices (Mgr. Vlk)

Tuesday October 4th

Resting and action membrane potential

Thursday October 6th

Introduction to biophysics of receptors. Biophysics of hearing and vestibular sense

Tuesday October 11th

Biophysics of visual perception I

Thursday October 13th

**Biophysics of visual perception II
Sensory perception examination and aids**

Tuesday October 18th

Biosignals and their processing. Thermometry

Thursday October 20st

Nanomedical Devices (Assoc. Prof. Bernard)

Tuesday October 25th

Devices for electrochemical analysis. Auxiliary laboratory devices

Thursday October 27th

X-ray Imaging

Tuesday November 1st

Endoscopes, tissue ablation devices and lithotripters

Thursday November 3rd

Magnetic resonance imaging (MRI). Infrared imaging

Tuesday November 8th

Nuclear medicine and radiotherapy I

Thursday November 10th

Nuclear medicine and radiotherapy II

Tuesday November 15th

Biophysics of cardiovascular system. Biophysics of breathing. Spirography

Thursday November 17th

State holiday

Tuesday November 22th

Safety aspects of air pressure and gravity changes, and ultrasound

Thursday November 24th

Microscopy (Mgr. Vlk)

Tuesday November 29th

Devices for substitution and assist of body organs

Thursday December 1st

Ultrasound diagnostics

Tuesday December 6th

Physical Therapy

Thursday December 8th

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

*Tue December 13th and Thu December 15th
autopsy practice*