**Medical Biophysics – General medicine – Biophysics for physiotherapy**

**2023/24**

Tue 12,00–12,50, /Thu 11,00–12,40, (B11, 114) Main lecturer: Prof. Mornstein

Tuesday September 19th

**Medical Physics and Biophysics: Introduction**

Thursday September 21st

**Healthcare informatics (Dr. Bourek)**

Tuesday September 26th

 **Thermodynamic principles.**

Thursday September 28th

***State holiday***

Tuesday October 3rd

**Thermodynamics and life**

Thursday October 5th

**Biomolecular and Cellular Research Devices**

Tuesday October 10th

**Resting and action membrane potential**

Thursday October 12th

**Structure of matter. Structure of living matter (Mgr. Vlk)**

Tuesday October 17th

**Sensory perception I (Intro + hearing)**

Thursday October 19th

**Sensory perception II (hearing and vestibular sense, eye)**

Tuesday October 24th

**Biosignals and their processing. Thermometry**

Thursday October 26th

**Biophysics of visual perception III (vision, sensory perception examination and aids)**

Tuesday October 31st

**Devices for electrochemical analysis. Auxiliary laboratory devices**

Thursday November 2nd

**Nanomedical Devices (Assoc. Prof. Bernard)**

Tuesday November 7th

**Endoscopes, tissue ablation devices and lithotripters**

Thursday November 9th

**X-ray Imaging**

Tuesday November 14th

**Nuclear medicine and radiotherapy I**

Thursday November 16th

**Magnetic resonance imaging (MRI). Infrared imaging**

Tuesday November 21st

**Biophysics of cardiovascular system. Biophysics of breathing. Spirography**

Thursday November 23rd

**Nuclear medicine and radiotherapy II**

Tuesday November 28th

**Safety aspects of air pressure and gravity changes, and ultrasound**

Thursday November 30th

**Microscopy (Mgr. Vlk)**

Tuesday December 5th

**Devices for substitution and assist of body organs**

Thursday December 7th

**Ultrasound diagnostics**

Tuesday December 12th

**Physical Therapy**

Thursday December 14th

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

*Tue December 19th and Thu December 21th*

*autopsy practice*