**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)**