

TOPICS OF PRACTICAL EXERCISES

Subject:	<i>Clinical Biophysics</i>		
Study Programme:	<i>General Medicine</i>	Study Programme:	<i>General Medicine</i>
Evaluation:	<i>exam</i>	Evaluation:	<i>exam</i>
Content:	0h lecture, 1h practice / week		Content:

Department: Department of Medical and Clinical Biophysics

<i>Week</i>	<i>Practical Lessons</i>
1.- 4.	Lasers in medicine, Physical basics of lasers, types of lasers used in medicine, safety aspects of the use lasers, Clinical application of lasers in ophthalmology, diabetic retinopathy – panretinal photocoagulation, glaucoma – iridotomy, capsulotomy, correction of refractive properties of the eye, laser surgery observation
5.-7.	Physiotherapy in rehabilitation, Physical and biophysical basics of galvanic current, diathermy and diadynamic current, magnetotherapy and ultrasound in physiotherapy of vertebral diseases, Observation of practical application of physiotherapy
8.-14.	Nuclear magnetic resonance tomography, Physical basics of nuclear magnetic resonance, magnetic properties of nuclei, Larmor equation, resonance and relaxation, relaxation times, Basic principles of imaging, spatial encoding of signal, possible hazards of NMR imaging, Clinical application of magnetic resonance (MR), equipment in local hospital, modelling of the examination of patient, images of tissues with disorders, advantages and disadvantages MR compared to CT, Observation of the examination of patient.

doc. RNDr. Ján Sabo, CSc., mim. prof.
prednosta Ústavu lekárskej a klinickej biofyziky