

Program of Study : General medicine
Course : CLINICAL BIOPHYSICS
Abbreviation : LBF/VA021
Schedule : 15 hours of lectures
 15 hours of seminars
Course Distribution : fourth year, winter semester
Number of Credits : 2
Course Form : continuous

The course will be held on Tuesdays from 13:30 to 15:00 in the small lecture hall on the right.

Teachers : MUDr. Mgr. Robert Bajgar, Ph.D.
 prim. MUDr. Mgr. Jaroslav Maceček, Ph.D., MBA
 MUDr. Martin Sněhota
 Mgr. Svatopluk Binder, Ph.D.
 Mgr. Jaromír Vachutka, Ph.D.
 Dr. Christian Kollmann

	Date	Subject	Hrs.	Teacher
1	20.9.	Lasers in medicine, microsurgery.	2	BAJGAR
2	27.9.	Pulse wave.	2	BINDER
3	4.10.	Hemodialysis, peritoneal dialysis, continual methods, hemoperfusion, plasmapheresis.	2	MACEČEK
4	11.10.	US examination simulator.	2	SNĚHOTA VACHUTKA
5	18.10.	Photodynamic therapy (PDT). Principal of PDT, types of photodynamic active drugs, sources of radiation. Biological response, methods of cell damage analysing, clinical applications	2	BAJGAR
6	25.10.	Clinical applications of ultrasound.	2	VACHUTKA KOLLMANN
7	1.11.	Radionuclide imaging, positron emission tomography (PET).		BAJGAR
8	8.11.	Nuclear magnetic resonance imaging (MRI).	2	BAJGAR
9	15.11	Upper GI endoscopy, examination simulator.	2	MACEČEK
10	22.11.	Enteroscopy and colonoscopy, examination simulator.	2	MACEČEK
11	29.11.	ERCP and Endosonography, examination simulator.	2	MACEČEK
12	6.12.	Cardiotocography (CTG).	2	SNĚHOTA
13	13.12.	Biophysical principles of non-invasive and invasive therapeutic methods, alternative medicine.	2	BAJGAR
14	20.12.	Presentation of seminar papers.	2	BAJGAR
15	3.1.	Presentation of seminar papers.	2	BAJGAR

Completed by: Colloquium.

Requirements: Active participation in seminars.

Recommended literature:

Barr, RG.: Elastography: A Practical Approach, 2016.

Gilmore, D, Waterstram-Rich, KM.: Nuclear Medicine and PET/CT: Technology and Techniques, 2016.

Nölting, B.: Methods in Modern Biophysics, 2005.

Prof. RNDr. Hana Kolářová, CSc.
přednostka ústavu