	FORM	Index: Fo 04.01.01-02
	SYNOPSIS	Edition: P
		Date: 03.09.2013 г.
		Page 1 of 2

**SYNOPSIS OF MEDICAL RADIOLOGY
(NUCLEAR MEDICINE AND RADIOTHERAPY)
THIRD -YEAR, 6th SEMESTER STUDENTS ELE
ACADEMIC 2015/2016 YEAR**

A. NUCLEAR MEDICINE


1. Basic physics of Nuclear Medicine. Atom and nucleus. Nuclides, isotopes and isobares.
2. Ionizing rays-species, attributes. Radioactivity, radioactive decay equation, half-life. Radioactivity and measurements of radioactivity.
3. Radiopharmaceuticals. Physical, chemical and biological characterization.
4. Basic principles of Nuclear Medicine. Radionuclide detection and imaging.
5. Principles of radioprotection in Nuclear Medicine.
6. Nuclear Medicine in Endocrinology. Functional and functional-morphological tests.
7. Nuclear Medicine in Nephrology.
8. Nuclear Medicine in Gastroenterology.
9. Nuclear Medicine in Cardiology.
10. Nuclear Medicine in Pulmology.
11. Nuclear Medicine in Neurology.
12. Nuclear Medicine in Bone and Joint diseases.
13. Nuclear Medicine in Hematology.
14. Nuclear Medicine in diagnosis of Lymph system.
15. Nuclear Medicine in Oncology.
16. Principles of Radioimmunoassay.

B. RADIOTHERAPY

17. Basic physics of radiotherapy. Ionizing rays-species, attributes, interactions of radiation with the matter.
18. Dozimetric quantities and measurements- absorbed dose and power of dose.
19. Radiobiologic foundations of radiotherapy. Theories, purposes of radiotherapy, radiosensitivity and radioresistence of normal and patologic tissues and organs.
20. Radiotherapy in complex treatment of cancer.
21. External beam radiotherapy- methods.
22. Brachithery and metabolic radiotherapy.
23. Planning, performing and control of radiotherapy.
24. Adverse events connected with radiotherapy in normal tissues and organs. Principles of radioprotection in radiotherapy.
25. Radiotherapy of cancer of the cervix uteri.
26. Radiotherapy of cancer of the corpus uteri.
27. Radiotherapy of breast cancer.
28. Radiotherapy of larynx cancer.
29. Radiotherapy of nasopharynx cancer.
30. Radiotherapy of lymphomas.
31. Radiotherapy of cancer of the skin.
32. Radiotherapy of nononcology diseases.

REFERENCES:

1. Fundamentals of Nuclear Medicine. Naomi P. Alazraki, M.D., Fred S. Mishkin, M.D., The Society of Nuclear Medicine, Inc., 1988.
2. Clinical Practice of Nuclear Medicine. Andrew Taylor, Jr., M.D., Frederick L. Datz, M.D., Churchill Livingstone Inc., 1991.

	FORM	Index: Fo 04.01.01-02
		Edition: P
	SYNOPSIS	Date: 03.09.2013 г.
		Page 2 of 2

HEAD OF THE COURSE:

/Assoc.Prof. Dr. M.Donchev, PhD/