MANGALORE UNIVERSITY

MSc Medical Physics

MPP 508: Medical Physics Practical-VIII

(4 hr in a week)

Objective:

To familiarise students with radiation sources, their integrity and calibration for different applications; radiation contamination; installation of sources and machines; operation, calibration and their use in diagnosis and therapy.

Outcomes:

Students will be able to:

- install, checking the integrity, calibrating and operating the radiation sources and machines,
- perform computerised treatment planning and radiotherapy,

- install equipment used in diagnostic radiology and conducting radiation protection survey,
- conduct survey of radioisotope laboratory and contamination.

List of experiments:

1. Integrity check and calibration of low activity brachytherapy sources.
2. AKS/ RAKR measurement of HDR brachytherapy sources using well type and cylindrical ionisation chambers.
3. In-phantom dosimetry of a brachytherapy source.
4. Familiarisation with treatment planning procedure using a computerised radiotherapy treatment planning system.
5. Survey of a radioisotope laboratory and study of surface and air contamination.
6. Absorption and backscattering of gamma rays - Determination of HVT.
7. Radiation protection survey of teletherapy installations.
8. Radiation protection survey of diagnostic radiology installations.

Additional experiments may be added

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