

MANGALORE UNIVERSITY
MSc Medical Physics

Semester – III: Practical Nuclear/Radiation

MPP 507: Medical Physics Practical-VII

(4 hr in a week)

Objective:

To provide practical knowledge on sources of ionising radiations used in diagnosis and therapy, radioisotope uptake and their measurements.

Outcomes:

Students will be able to:

- ☐ Understand the radiation sources and their production,
- ☐ Evaluate the radiographic images,
- ☐ Design and conduct experiments to measure radiation output and their dosimetric evaluation.

List of experiments:

1. Calibration and use of alanine dosimeter using ESR technique.
2. Preparation and standardization of unsealed sources.
3. Quality assurance of a diagnostic x-ray machine.
4. Evaluation of characteristics of a radiographic image.
5. Study and calibration of thyroid uptake measurement unit.
6. Dose output measurement of photon (^{60}Co gamma rays and high energy x-rays) beams used in radiotherapy treatment.
7. Dose output measurement of electron beams used in radiotherapy treatment.
8. Determination of percentage depth dose of photon and electron beams.

Additional experiments may be added