

**College of Paramedical Sciences
Teerthanker Mahaveer University**

M.Sc. (Medical Radiological Imaging Techniques)

Programme Outcome

PO-1	:	Understanding ways of functioning effectively as an individual independently and as a member in diverse team in multidisciplinary settings (Attitude).
PO-2	:	Understanding requirements of continuous education as a function of growth and maintenance of professional competence (Lifelong learning).
PO-3	:	Understanding environmental consciousness and societal concerns in achieving sustainable development (Environment and Sustainability).
PO-4	:	Applying computer skills in health care system and taking entrepreneurial decisions (Entrepreneurship).
PO-5	:	Applying knowledge to assess societal, health, safety and legal issues related to Professional practice (Social interaction & effective citizenship).
PO-6	:	Applying systematized problem solving techniques to identify and correct procedural errors to verify the accuracy of laboratory result obtained.(Problem analysis and solving).
PO-7	:	Applying appropriate techniques, resources and tools with an understanding of limitations (Technology savvy/usage).
PO-8	:	Developing the ability towards ethical as well as critical thinking. (Critical thinking)
PO-9	:	Executing professional conduct and interpersonal communicational skills effectively with society at large (Communication).

Programme Specific Outcome

PSO-1	:	Understanding the relationship between physics and radiology & modern imaging techniques.
PSO-2	:	Understanding laws/provisions for radiation safety by various regulatory bodies.
PSO-3	:	Applying the basic and advanced knowledge of hardware, software and applications of computers in health care systems.
PSO-4	:	Applying quality assurance, quality control measures, safety procedures and Maintenance of radiological equipments.
PSO-5	:	Analyzing the protocols to perform various Radiological Procedures
PSO-6	:	Evaluating the factors affecting technical quality of images and various pathological conditions.
PSO-7	:	Formulating plan for handling patient with drugs & equipments in general as well in emergency situation.

Course Outcomes

MRIT101	CO-1	Annotating the basic concepts, theories, techniques & equipment, in and conventional radiography relevant to X-Ray equipments.
	CO-2	Tagging related anatomy of organ for independently performing different diagnostic radiologic procedures.

	CO-3	Discussing equipment and supplies necessary to complete special radiographic procedures with administration of contrast media.
	CO-4	Evaluating the safety aspects of contrast media and describe the allergic reactions associated to use of different contrast media for diagnostic purpose.
MRIT102	CO-1	Understanding the basic concepts, theories & method, in applied physics and conventional radiography relevant to X-Ray equipments.
	CO-2	Expressing the components and working of equipments related to x-ray.
	CO-3	Operating X-Ray imaging equipment independently.
	CO-4	Demonstrating application of different components of x-ray.
	CO-5	Analyzing maintenance requirement and care of x-ray equipments in radiology department.
MRIT103	CO-1	Understanding the basic concepts, theories & method, in applied physics relevant to radiological imaging techniques & image quality
	CO-2	Categorizing provisions for radiation safety by various national & international regulatory bodies.
	CO-3	Tagging of different imaging modalities in radiology department
	CO-4	Differentiating EMR and its application in X –ray diagnosis and therapy.
	CO-5	Evaluating the factors affecting the image quality from x ray.
MRIT201	CO-1	Understanding the concepts of patient care in radiology department with reference to different responsibility of imaging technologist.
	CO-2	Understanding nursing procedures in radiology including handling of emergency situations.
	CO-3	Recognizing care of patient during various procedures performed in radiology department and executing first aid.
	CO-4	Discussing and performing various infection control methods with psychological consideration
	CO-5	Implementing effective communication skills with patients and co-workers.
MRIT202	CO-1	Understanding the concepts and methods of radiation protection principles and their applications in radiology department.
	CO-2	Obtaining knowledge for management and handling the equipments for various procedures.
	CO-3	Applying the knowledge of department construction layout instructions given by AERB
	CO-4	Applying the regulations of radiation practices according to internationally accepted methods.
	CO-5	Practicing the techniques of radiation protection of patients, occupational workers and general public from secondary radiation.
MRIT203	CO-1	Understanding the basic concepts, theories, techniques & equipments for different interventional radiological procedures.
	CO-2	Applying the patient preparations needed before & post procedure care in any interventional radiological examination
	CO-3	Applying provisions for radiation safety and protection as prescribed by various national & international regulatory bodies.
	CO-4	Calculating the factors affecting the image quality.
	CO-5	Applying Care, maintenance and tests, Quality assurance program for

		equipments.
MRIT301	CO-1	Understanding Biostatistics & methodology of research.
	CO-2	Assessing and designing of research.
	CO-3	Analyzing the Clinical audit and data
MRIT302	CO-1	Understanding the basic physics, working and handling of computed tomography equipment.
	CO-2	Understanding history, generation & terminology related to computed tomography.
	CO-3	Describing the components and working of equipment related to C.T.
	CO-4	Obtaining knowledge for management and handling the patients and equipment for various procedures.
	CO-5	Applying the techniques of the patient preparations and post procedure care in any CT examination.
MRIT303	CO-1	Understanding the basic concepts, theories & method, in applied physics relevant to radiological imaging techniques & image quality
	CO-2	Identifying the difference in working and use of different X-ray modalities such as Portable, mobile and Fluoroscopic equipment's.
	CO-3	Understanding & applying provisions for radiation monitoring, safety and protection during Fluoroscopic procedures.
	CO-4	Analyzing and identifying the process of image formation and image development.
	CO-5	Understanding the working and applying the techniques to maintain image quality.
MRIT401	CO-1	Understanding different scanning protocol and its application in medical diagnosis and treatment.
	CO-2	Explaining the basic physics, techniques & equipment components relevant to Ultrasonography
	CO-3	Integrating and illustrating various pathological conditions of clinical Ultrasonography.
	CO-4	Executing the quality management of imaging system
MRIT402	CO-1	Understating about the basic physics and working of MRI equipment
	CO-2	Summarizing the essential hardware and execute different parameters in imaging.
	CO-3	Illustrating the scanning protocols, patient preparation and patient care.
	CO-4	Describing safety procedure for providing clinically safe imaging environment.
	CO-5	Evaluating the factors affecting the image quality
MRIT403	CO-1	Understanding about the applied physics of nuclear medicine.
	CO-2	Understanding about the production of radioactive elements and their use in various procedures
	CO-3	Obtaining knowledge for management and handling patients and the equipment for various procedures.
	CO-4	Analyzing and recognizing the dose and route of administration of radiopharmaceuticals as per clinical procedure requirement.
	CO-5	Understanding of the radiation monitoring & dose management as per different regulatory bodies (AERB, BARC, ICRP) guidelines.