

**Rayat Shikshan Sanstha's**  
**Karmaveer Bhaurao Patil College Vashi Navi Mumbai (Autonomous)**

**Name of the Program:**  
**B.Sc. Medical Imaging Technology**  
**(MIT)**

**Program Outcomes (PO)**

<b>PO-1</b>	<b>Disciplinary Knowledge:</b> Understanding different modalities and their functions in Medical imaging technology like X-ray, CT scan, MRI, Fluoroscopy, Interventional radiology, ECG through on the job training and internships in the hospitals.
<b>PO-2</b>	<b>Communication Skills:</b> Develop various communication skills such as reading, listening and speaking skills etc., which we will help in expressing ideas and views clearly and effectively.
<b>PO-3</b>	<b>Critical Thinking:</b> Think creatively to propose novel ideas in explaining the scientific data, facts and figures related to science and technology.
<b>PO-4</b>	<b>Analytical Reasoning and Problem Solving:</b> Identify, describe, formulate, interpret, analyze the data systematically and solve theoretical and numerical problems in the diverse areas of science and technology and provide alternate solutions to the problems.
<b>PO-5</b>	<b>Sense of Inquiry:</b> Curious for asking relevant questions like why and how for better understanding of the basic concepts, fundamental principles, scientific theories and applications related to the study.
<b>PO-6</b>	<b>Use of Modern Tools:</b> Use of modern tools, equipment, instrumentation and laboratory techniques to design and perform the experiments and write the programs in different languages (software).
<b>PO-7</b>	<b>Research Skills:</b> Ability to search for, find, collect, analyze, interpret and evaluate information/data that is relevant to the subjects related to science and technology being studied.

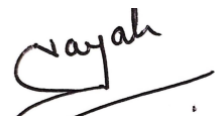
	<b>Application of Knowledge:</b>
<b>PO-8</b>	Develop scientific outlook with respect to the subjects related to science and technology and also participate in various social and cultural activities.
	<b>Ethical Awareness:</b>
<b>PO-9</b>	Imbibe ethical and social values in personal and social life leading to cultured and civilized personality.
	<b>Teamwork:</b>
<b>PO-10</b>	Work effectively within the groups and individuals, participate and take initiative for various field-based situations related to science, technology and society at large.
	<b>Environment and Sustainability:</b>
<b>PO-11</b>	Understand how development in science and technology and interdisciplinary subjects are taking place for protecting our environment and sustainable developments.
	<b>Lifelong Learning:</b>
<b>PO-12</b>	Ability of self-driven to explore, learn and gain knowledge and new skills to improve the quality of life and sense of self-worth by paying attention to the ideas and goals throughout the life.



Program Coordinator



BOS Chairman



Principal



## Rayat Shikshan Sanstha's

**Karmaveer Bhaurao Patil College Vashi, Navi Mumbai (Autonomous)**

### **Name of the Specific Program: B.Sc. Medical Imaging Technology (MIT) Program Specific Outcomes (PSO)**

At the end of four year program students will understand and be able to

<b>PSO-1</b>	Understanding different branches and their functions of medical Imaging like X-ray, CT, MRI, Fluoroscopy, ECG through on the job training and internships in hospitals.
<b>PSO-2</b>	Demonstrate knowledge using right positioning techniques & perform radiographic procedures of specified imaging modality such as X-ray, CT, MRI technology ensuring safety of patients and personnel involved.
<b>PSO-3</b>	Identify and analyse artifacts related to various Imaging domains of clinically relevant procedure of the patients & maintain quality of the images also determine right exposure factors to achieve optimum radiographic procedures consistent with minimizing dose to patients.
<b>PSO-4</b>	Employ effective communication practices to provide sufficient information effectively to the patient about the imaging options available, purpose of the procedure, benefits, possible adverse consequences, and limitations
<b>PSO-5</b>	Understand and apply principles of radiation protection for the patient, technologist, and others and recognize their technologist role in the health care system and function effectively in a multidisciplinary health care team.
<b>PSO-6</b>	Practice effective written communication skills for creating & analyzing medical imaging reports.
<b>PSO-7</b>	Learning the advancement & modifications of high-resolution technology in the Imaging set up, their upkeep and error minimization.
<b>PSO-8</b>	Developing a professional Imaging technologist through various ability enhancement programs on communication skills, life skills, field visits and personality development workshops.
<b>PSO-9</b>	Understanding the larger scope of medical profession and creating an opportunity for higher education in hospital management domain and overseas work opportunities.

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## Course Outcome (CO) Semester 1

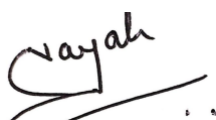
Course Code	Name of the Course	Course outcomes
UGMITC101	<b>General Human Anatomy &amp; Physiology</b>	<p><b>CO1.</b> Explain the morphology, physiology of skeletal system along with the physiology of muscle contraction in co-ordination with the joints, their articulation and skin [1-3]*</p> <p><b>CO2.</b> Describe &amp; explain the composition, function of various body fluids like blood, lymph cardiovascular and respiratory system their significance and related disorders. [2]*</p> <p><b>CO3.</b> Classify the peripheral nervous system, nerves and morphology of special senses &amp; Discuss diseases, disorders, and conditions commonly found in healthcare occupations [4]*</p>
UGMITC102	<b>Fundamentals of Hospital Practices &amp; Protocols</b>	<p><b>CO1.</b> Recognize, define, and spell terms related to the pathology and treatment of body systems. Analyze and apply knowledge to a real-life scenario. Define common word roots, combining forms, suffixes, and prefixes. Identify and describe the major functions and structures of the body systems [1]*</p> <p><b>CO2.</b> Explain methods to prevent the spread of infection. Summarize the engineering, work practice, and environmental controls that protect against healthcare-associated infections AND Identify barriers and personal protective equipment for protection from exposure to potentially infectious material and Improve their general hygiene routine and personal image. Understand the importance and benefits of self-care.[5-4]*</p> <p><b>CO3</b> Implement strategies for Standard and Transmission-Based Precautions in healthcare settings. Prevent the spread of germs and disease by using the correct techniques for hand hygiene. Protect oneself and those served by technologist recognizing the chain of infection[3]*</p>
UGMITAEC101	<b>Communication Skill</b>	<p><b>CO1.</b> Understanding and improving General vocabulary, properly understand the meaning and implement in academics through formal communication[1&amp;2]*</p> <p><b>CO2.</b> Applying parts of speech while framing sentences. Additionally, they will learn all the kinds of sentences that are required while having a basic interaction in English with anyone[3]</p> <p><b>CO3.</b> Understanding the time mentioned in the sentences by identifying action verbs &amp; helping verbs and then frame sentences mentioning about the proper work/event happened on specific time. [1&amp;2]*</p>
UGMITGE101B	<b>Introduction to Physics-1</b>	<p><b>CO1:</b> Understand the fundamental concepts of quantities and units, and their significance in scientific measurement. various physical quantities, such as length, mass, time, and their measurement methods [2]*</p> <p><b>CO2:</b> Explain the structure of an atom, the properties of its subatomic particles, and how it contributes to the periodic table. [3]*</p> <p><b>CO3:</b> Analyze the inverse square law as it relates to electromagnetic phenomena and discuss the fundamental concepts of electronics, including their significance in technological applications and Discuss the magnetic effect of electric current and its applications in devices such as electromagnets and electric motors. [2-4]*</p>

**Course Outcome (CO)**  
**Semester 2**

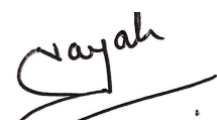
<p><b>X-Ray technology &amp; Positioning</b></p>	<p><b>CO1.</b> Study of medical instruments and equipment technology in a X-ray set up [1]*</p> <p><b>CO2.</b> Learn aspect of patient care, from diagnostic testing ,treatment and radiographic appearances of both normal and common abnormal conditions [3]*</p> <p><b>CO3.</b> Understand the basic patient positioning during radiographic investigation and overall X-ray organization [2]*</p>
<p><b>Fundamentals of surfaced anatomy</b></p>	<p><b>CO1.</b> Analyze, locate and demonstrate surface marking of clinically important structures in the cadaver and correlate it with living anatomy.[4]*</p> <p><b>CO2.</b> Understanding important anatomic structures visualized by imaging techniques, specifically x-ray radiographs and Basic Postural Observational Skill: To make understand to the students about different anatomical landmark of upper limbs, lower limbs, thorax, and abdomen. [5-2]*</p> <p><b>CO3.</b> Demonstrate accurate palpation skills of surface anatomy structure &amp; describe all movements available at all joints and anatomy &amp; physiology of cardiovascular, respiratory, digestive, nervous, urinary &amp; reproductive system.[6-3]*</p>
<p><b>Communication skills</b></p>	<p><b>CO1.</b> Learning report writing will make practice objective and passive form of writing. Additionally, the will learn to draft and present a Power Point Presentation that will be an aid while they present their views on certain topics. [1]*</p> <p><b>CO2.</b> Creating the respective Resume and Job application for applying in various organizations and Understanding formal, informal, spoken &amp; written English that will bridge the gap between their thoughts and words [2-3]*</p> <p><b>CO3.</b> Students will dramatize (Role-pay) the certain topics to get involved in context and to experience the intention behind those sentences. [4&amp;6]*</p>
<p><b>Introduction to Physics-2</b></p>	<p><b>CO1.</b> study of all animals from tiny insects to large mammals as per Animal kingdom classification.[1]*</p> <p><b>CO2.</b> to understand the vital normal physiological processes that is necessary to sustain human life[2]*</p> <p><b>CO3.</b> Study of genes, genetic variations and heredity. DNA, RNA and genetic code for better understanding of genetics and molecular biology. [2]*</p> <p><b>CO4.</b> To understand the normal and pathological life processes that occur for animal life to exist.[1]*</p>



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