Hindi Vidya Prachar Samiti's

Ramniranjan Jhunjhunwala College

of Arts, Science & Commerce

(Empowered Autonomous College)

Affiliated to

UNIVERSITY OF MUMBAI

Syllabus for the TY (under NEP)

Program: B.Sc. MEDICAL IMAGING TECHNOLOGY

Title: DISCIPLINE SPECIFIC CORE

SEMESTER	:	**VI**
TITLE	:	**DISCIPLINE SPECIFIC COURSE 1**
TITLE OF THE SUBJECT/COURSE	:	**Effective Administration Skills**
COURSE CODE	:	RJDSCMIT361
CREDITS	:	04
DURATION	:	60 hrs

LEARNING OBJECTIVES	
1	Understand the role of administration in an organization.
2	Develop effective communication skills, decision making skills, strategic management.
3	Understand how technology advancement in hospitals.
4	Understand effective administration helps in exploring new opportunities.

Course Outcome No.	On completing the course, the student will be able to:	PSO Addressed	Bloom's Levels
CO1	Demonstrate a clear understanding of administrative roles.Apply effective communication techniques	PSO13	I, II, III
CO2	Plan, organize, and manage tasks efficiently. Make informed decisions in administrative settings	PSO13	I, II, III
CO3	Learn to communicate professionally through verbal, written, and digital methods to ensure smooth workflow.	PSO17	I, II, III

SEMESTER VI			
Course Code: RJDSCMIT361		**Course Title: Effective Administration Skills**	**Credits**
Unit	**Unit Name**	**Topic**	**4**
I	Over view of adminsitration	Overview of Hospital Administration Roles and Responsibilities of Hospital Administrators Organizational Structure of Healthcare Facilities Leadership and Management Skills Communication and Interpersonal Skills Time Management and Decision Making Legal and Ethical Aspects in Hospital Administration	2
II	Operational Management	Human Resource Management in Hospital Patient Care Management and Service Excellence Financial Management and Budgeting Inventory and Supply Chain Management Quality Assurance and Accreditation (NABH, ISO) Use of Information Technology in Hospital Administration Crisis Management and Problem-Solving	2

References:

"Hospital Administration and Human Resource Management" – by Dr. S.L. Goel

"Hospital Administration: Principles and Practice" – by K.S. Gupta

SEMESTER	:	**VI**
TITLE	:	**DISCIPLINE SPECIFIC COURSE 2**
TITLE OF THE SUBJECT/COURSE	:	**Doppler Ultrasound and PET Scan**
COURSE CODE	:	RJDSCMIT361
CREDITS	:	04
DURATION	:	60 hrs

LEARNING OBJECTIVES	
1	Understand the physical principles and instrumentation of Doppler ultrasound and PET scan.
2	Demonstrate knowledge of PET imaging protocols, radiopharmaceuticals, and hybrid imaging.
3	Interpret imaging findings accurately and recognize artefacts and limitations.
4	Doppler ultrasound techniques for vascular, obstetric, and fetal assessments

Course Outcome No.	On completing the course, the student will be able to:	PSO Addressed	Bloom's Levels
CO1	Demonstrate a clear understanding of USG, PET and Doppler Ultrasound techniques.	PSO13	I, II, III
CO2	Preparedness to integrate imaging findings into multidisciplinary healthcare practice.	PSO13	I, II, III
CO3	Ability to analyze and interpret Doppler and PET images for clinical decision-making.	PSO17	I, II, III

SEMESTER VI			
Course Code: RJDSCMIT362		**Course Title: DOPPLER ULTRASOUND AND PET SCAN**	**Credits**
Unit	**Unit Name**	**Topic**	**4**
I	Doppler USG	Introduction to Doppler Ultrasound Physics of Doppler Effect Types of Doppler: Continuous, Pulsed, Color, Power Doppler Equipment and Instrumentation Vascular Imaging Protocols (Carotid, Peripheral, Abdominal Vessels) Obstetric and Fetal Doppler Applications Interpretation of Doppler Findings Artefacts and Troubleshooting	2
II	PET Scan	Introduction to PET Imaging Principles of PET and Radiopharmaceuticals PET-CT Hybrid Imaging Patient Preparation and Safety Oncology Applications Neurology and Cardiology Application Image Acquisition and Reconstruction Interpretation and Reporting	2

References:

- **"Doppler Ultrasound in Clinical Practice"** – by Michael R. Pellerito & Joseph F. Polak
- **"Positron Emission Tomography: Basic Sciences"** – by Peter E. Valk, Dale L. Bailey, David W. Townsend

Hindi Vidya Prachar Samiti's Ramniranjan Jhunjhunwala College of Arts, Science & Commerce
(Empowered Autonomous)

NEP - T.Y.B.Sc Medical Imaging Technology Syllabus Semester V & VI 2025-26