

DESH BHAGAT UNIVERSITY, MANDI GOBINDGARH

FACULTY OF ALLIED HEALTH SCIENCES **Diploma of Radio Imaging Technology**

Program Outcomes (PO's):

PO1: Apply the knowledge of clinical, diagnostic and Medical physics, imaging technology, Clinical sciences, as well as an understanding of health care delivery diagnostic imaging system.

PO2: Find analyses, evaluate and apply the information systematically and shall make an appropriate diagnosis to provide quality of image along with patient care.

PO3: Demonstrate effective planning abilities including the prevention, detection, radiation Protection, diagnosis, and management of patient without compromising image quality.

PO4: Apply ethical principles like radiation protection and commit to professional ethics and responsibilities and norms of the Imaging techniques practice.

PO5: Conduct and present research and clinical studies which will contribute to the Advancement of Imaging techniques, quality, diagnosis and health sciences.

PO6: Explain theory of technology, instrumentation and physics in Medical Imaging using discipline specific.

Course Code: DRIT-101

Title of the Course: Introduction to Health Delivery System in India

L	T	P	Credit
3	-	-	3

Course Outcomes:

CO1: Provides the students a basic in sight in to the main features of India n health care delivery system.

CO2: It compares with the other systems of the world.

CO3: Develop, implement and manage various public health programs

Course Code: DRIT-102

Title of the Course: Introduction to Health Delivery System in India-Practical

L	T	P	Credit
-	-	1	1

Course Outcomes:

CO1: Provides the students a basic in sight in to the main features of Indian health care delivery system.

CO2: It compares with the other systems of the world.

CO3: Develop, implement and manage various public health programs

Course Code:DRIT-103

Title of the Course: Basic Computers & Information Science

L	T	P	Credit
1	-	-	1

Course Outcomes:

CO1: The students will be able to appreciate the role of computer technology.

CO2: The course has focus on computer organization, computer operating system and software, and MS windows.

CO3: Word processing, Excel data worksheet and Power Point presentation.

Course Code: DRIT-104

Title of the Course: Basic Computers & Information Science-Practical

L	T	P	Credit
-	-	1	1

Course Outcomes:

CO1: The students will be able to appreciate the role of computer technology.

CO2: The course has focus on computer organization, computer operating system and software, and MS windows.

CO3: Word processing, Excel data worksheet and Power Point presentation.

Course Code: DRIT-105

Title of the Course: Medical Terminology & Record Keeping (Including Anatomical Terms)

L	T	P	Credit
2	-	-	2

Course Outcomes:

CO1: This course introduces the elements of medical terminology.

CO2:Emphasis is placed on building familiarity with medical words through knowledge of roots, prefixes, and suffixes.

CO3: Topics include: origin, word building, abbreviations and symbols, terminology related to the human anatomy, reading medical orders and reports, and terminology specific to the student's field of study.

Course Code: DRIT-106

Title of the Course: Medical Terminology & Record Keeping(Including Anatomical Terms)-Practical

L	T	P	Credit
-	-	1	1

Course Outcomes:

CO1: This course introduces the elements of medical terminology.

CO2: Emphasis is placed on building familiarity with medical words through knowledge of roots, prefixes, and suffixes.

CO3: Topics include: origin, word building, abbreviations and symbols, terminology related to the human anatomy, reading medical orders and reports, and terminology specific to the student's field of study.

Course Code: DRIT-107

Title of the Course: Professionalism & Values

L	T	P	Credit
1	2	-	1

Course Outcomes:

CO1: The module on professionalism will deliver the concept of what it means to be a professional

CO2: And how a specialized profession is different from a usual vocation.

CO3: It also explains show relevant is professionalism in terms of health care system and how it affects the overall patient environment.

CO/PO Mapping						
(S/M/W indicates strength of correlation) S– Strong–Medium–Weak						
COs	Programme Outcomes (Pos)					
	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	S	S	M	M
CO2	S	S	S	S	M	M
CO3	S	S	S	S	M	M

Course Code: DRIT-108

Title of the Course: Professionalism & Values-Practical

L	T	P	Credit
-	-	2	2

Course Outcomes

CO1: The module on professionalism will deliver the concept of what it means to be a professional

CO2: And how a specialized profession is different from a usual vocation.

CO3: It also explains how relevant is professionalism in terms of health care system and how it affects the overall patient environment.

Course Code: DRIT-109

Title of the Course: Research Methodology & Biostatistics

L	T	P	Credit
2	-	-	2

Course Outcomes

CO1: To help the students understand the basic principles of research and biostatistics

CO2: To help the students understand the basic methods applied to draw inferences from the research findings.

CO3: Develop the ability to apply the methods while working on a research project work.

Course Code: DRIT-110

Title of the Course: Research Methodology & Biostatistics-Practical

L	T	P	Credit
-	-	2	1

Course Outcomes:

CO1: To help the students understand the basic principles of research and biostatistics

CO2: To help the students understand the basic methods applied to draw inferences from the research findings.

CO3: Develop the ability to apply the methods while working on a research project work

Course Code: DRIT-111

Title of the Course: Medical Law & Ethics

L	T	P	Credit
2	-	-	2

Course Outcomes:

CO1: Medical ethics has developed in to a well based discipline which acts as a "bridge" between theoretical bioethics and the bedside.

CO2: The goal is "to improve the quality of patient care by identifying, analyzing, and attempting to resolve the ethical problems that arise in practice".

CO3: It is a universal consensus that legal and ethical considerations are inherent and inseparable parts of good medical practice across the whole spectrum.

Course Code: DRIT-112

Title of the Course: Introduction to Quality & Patient Safety

L	T	P	Credit
2	-	-	2

Course Outcomes:

CO1: The objective of the course is to help students understand the basic concepts of quality in health Care.

CO2: Develop skills to implements stainable quality assurance program in the health system.

CO3: The goal is "to improve the quality of patient care by identifying, analyzing, and attempting to resolve the ethical problems that arise in practice".

Course Code: DRIT-113

Title of the Course: Principles of Management

L	T	P	Credit
2	-	-	2

Course Outcomes:

CO1: To provide knowledge about the basic principles of Management.

CO2: To provide them tools and techniques to be used in the performance of the managerial job.

CO3: To enable them to analyze and understand the environment of the organization.

Course Code: DRIT-114

Title of the Course: Community Orientation & Clinical Visit (Including Related Practical to Course)

L	T	P	Credit
1	-	-	1

Course Outcomes:

CO1: To sensitize potential learners with essential knowledge.

CO2: This will lay a sound foundation for their learning across the under-graduate program and across their career.

CO3: Innovative teaching methods should be used to ensure the attention of a student and make them more receptive such as group activities, interactive fore, role plays, and clinical bed-side demonstrations.

Course Code: DRIT-115

Title of the Course: Communication & Soft Skills

L	T	P	Credit
1	-	-	1

Course Outcomes:

CO1: Teaching the different methods of writing like letters, E-mails, report, case study, collecting the patient data etc.

CO2: Basic compositions, journals, with a focus on paragraph form and organization.

CO3: Basic concepts & principles of good communication.

Course Code: DRIT-116

Title of the Course: Communication & Soft Skills-Practical

L	T	P	Credit
-	-	1	1

Course Outcomes:

CO1: Teaching the different methods of writing like letters, E-mails, report, case study, collecting the patient data etc.

CO2: Basic compositions, journals, with a focus on paragraph form and organization.

CO3: Basic concepts & principles of good communication.

Course Code: DRIT-307

Title of the Course: Contrast & Special Radiography Procedures

L	T	P	Credit
4	-	-	4

Course Outcomes:

CO1: Understand basic concepts of diseases

CO2: Understand the basic investigation procedures for diseases.

CO3: Understand disease etiology

Course Code: DRIT-308

Title of the Course: Contrast & Special Radiography Procedures-Practical

L	T	P	Credit
-	-	4	4

Course Outcomes:

CO1: Understand basic concepts of diseases

CO2: Understand the basic investigation procedures for diseases.

CO3: Understand disease etiology

Course Code: DRIT-309

Title of the Course: Directed Clinical Education-Part-II (Studentship)

L	T	P	Credit
1	-	-	1

Course Outcomes:

CO1: Students will gain additional skills in clinical procedures, interaction with patients and professional personnel.

CO2: Students apply knowledge from previous clinical learning experience under the supervision of a radiologist or senior technologist.

CO3: Students are tested on intermediate clinical radiological skills.

Course Code: DRIT-401

Title of the Course: Physics of Newer Imaging Modalities

L	T	P	Credit
4	-	-	4

Course Outcomes:

CO1: Provide knowledge of concepts and techniques in digital image processing

CO2: Provide access to characteristics and properties of different types of medical images

CO3: Describe the structure and components of PACS.

Course Code: DRIT-402

Title of the Course: Physics of Newer Imaging Modalities-Practical

L	T	P	Credit
-	-	4	4

Course Outcomes:

CO1: Provide knowledge of concepts and techniques in digital image processing

CO2: Provide access to characteristics and properties of different types of medical images

CO3: Describe the structure and components of PACS.

Course Code: DRIT-403

Title of the Course: Clinical Radiography-Positioning-Part-II

L	T	P	Credit
4	-	-	4

Course Outcomes:

CO1: To understand basic theories related with properties of matter and its application to determine values of various physical quantities associated with matter.

CO2: Apply basic radiographic positioning techniques to capture images of the chest, abdomen, and selected parts of the upper and lower extremities.

CO3: Evaluate radiographic images of the chest, abdomen, and selected parts of the upper and lower extremities for diagnostic quality.

Course Code: DRIT-404

Title of the Course: Clinical Radiography-Positioning-Part-II (Practical)

L	T	P	Credit
-	-	4	4

Course Outcomes:

CO1: To understand basic theories related with properties of matter and its application to determine values of various physical quantities associated with matter.

CO2: Apply basic radiographic positioning techniques to capture images of the chest, abdomen, and selected parts of the upper and lower extremities.

CO3: Evaluate radiographic images of the chest, abdomen, and selected parts of the upper and lower extremities for diagnostic quality.

Course Code: DRIT-405

Title of the Course: Newer Modalities Imaging Techniques Including Patient Care

L	T	P	Credit
4	-	-	4

Course Outcomes:

CO1: Provide knowledge of concepts and techniques in digital image processing

CO2: Provide access to characteristics and properties of different types of medical images

CO3: Describe the structure and components of PACS.

Course Code: DRIT-406

Title of the Course: Newer Modalities Imaging Techniques Including Patient Care-Practical

L	T	P	Credit
-	-	4	4

Course Outcomes:

CO1: Provide knowledge of concepts and techniques in digital image processing

CO2: Provide access to characteristics and properties of different types of medical images

CO3: Describe the structure and components of PACS.

Course Code: DRIT-407

Title of the Course: Quality Control in Radiology & Radiation Safety

L	T	P	Credit
4	-	-	4

Course Outcomes:

CO1: Identify the parts of the x-ray machine and explain their purpose and function.

CO2: Explain how x-rays are produced and how they travel.

CO3: Demonstrate use of the controls on a x-ray machine and explain how they influence the x-ray beam.

Course Code: DRIT-408

Title of the Course: Quality Control in Radiology & Radiation Safety-Practical

L	T	P	Credit
-	-	4	4

Course Outcomes:

CO1: Identify the parts of the x-ray machine and explain their purpose and function.

CO2: Explain how x-rays are produced and how they travel.

CO3: Demonstrate use of the controls on a x-ray machine and explain how they influence the x-ray beam.

Course Code: DRIT-409

Title of the Course: Directed Clinical Education-Part-III (Studentship)

L	T	P	Credit
1	-	-	1

Course Outcomes:

CO1: Students will gain additional skills in clinical procedures, interaction with patients and professional personnel.

CO2: Students apply knowledge from previous clinical learning experience under the supervision of a

radiologist or senior technologist.

CO3: Students are tested on intermediate clinical radiological skills.

Course Code: DRIT-501

Title of the Course: Cross Sectional Anatomy & Physiology

L	T	P	Credit
4	-	-	4

Course Outcomes:

CO1: To study about the different types of MRI techniques

CO2: To study about the role of MRI in diseases investigation.

CO3: To understand how the MRI works for special investigation.

Course Code: DRIT-502

Title of the Course: Cross Sectional Anatomy & Physiology-Practical

L	T	P	Credit
-	-	4	4

Course Outcomes:

CO1: To study about the different types of MRI techniques

CO2: To study about the role of MRI in diseases investigation.

CO3: To understand how the MRI works for special investigation.

Course Code: DRIT-503

Title of the Course: Physics of Advanced Imaging Technology

L	T	P	Credit
4	-	-	4

Course Outcomes:

CO1: To study about the different types of CT techniques

CO2: To study about the role of MRI in diseases investigation.

CO3: To understand how the MRI works for special investigation.

Course Code: DRIT-504

Title of the Course: Physics of Advanced Imaging Technology-Practical

L	T	P	Credit
-	-	4	4

Course Outcomes:

CO1: To study about the different types of CT techniques

CO2: To study about the role of MRI in diseases investigation.

CO3: To understand how the MRI works for special investigation.

Course Code: DRIT-505

Title of the Course: Radiographic Techniques of Advanced Imaging Technology

L	T	P	Credit
4	-	-	4

Course Outcomes:

CO1: Knowledge of Ultrasound Techniques for Practical Exposure.

CO2: Provide Basic Concepts of Ultrasound & Doppler.

CO3: Demonstrate Knowledge & Understanding of Human Gross Anatomy & Sectional Anatomy.

Course Code: DRIT-506

Title of the Course: Radiographic Techniques of Advanced Imaging Technology-Practical

L	T	P	Credit
-	-	4	4

Course Outcomes:

CO1: Knowledge of Ultrasound Techniques for Practical Exposure.

CO2: Provide Basic Concepts of Ultrasound & Doppler.

CO3: Demonstrate Knowledge & Understanding of Human Gross Anatomy & Sectional Anatomy.

Course Code: DRIT-507

Title of the Course: Regulatory Requirements in Diagnostic Radiology & Imaging, Act & Rules, Regulations for JCI, NABH, NABHR

L	T	P	Credit
4	-	-	4

Course Outcomes:

CO1: Identify the parts of the x-ray machine and explain their purpose and function.

CO2: Explain how x-rays are produced and how they travel.

CO3: Demonstrate use of the controls on an x-ray machine and explain how they influence the x-ray beam.

Course Code: DRIT-508

Title of the Course: Regulatory Requirements in Diagnostic Radiology & Imaging, Act & Rules, Regulations for JCI, NABH, NABHR

L	T	P	Credit
1	-	-	1

Course Outcomes:

CO1: Identify the parts of the x-ray machine and explain their purpose and function.

CO2: Explain how x-rays are produced and how they travel.

CO3: Demonstrate use of the controls on an x-ray machine and explain how they influence the x-ray beam.

Course Code: DRIT-509

Title of the Course: Directed Clinical Education-Part-IV (Studentship)

L	T	P	Credit
1	-	-	1

Course Outcomes:

CO1: Students will gain additional skills in clinical procedures, interaction with patients and professional personnel.

CO2: Students apply knowledge from previous clinical learning experience under the supervision of a radiologist or senior technologist.

CO3: Students are tested on intermediate clinical radiological skills.

CO/PO Mapping	
(S/M/W indicates strength of correlation)S– Strong–Medium–Weak	
COs	Programme Outcomes (Pos)

	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	S	S	M	M
CO2	S	S	S	S	M	M
CO3	S	S	S	S	M	M

Course Code: DRIT-601

Title of the Course: Quality Assurance & Radiation Safety (AERB Guidelines) In Diagnostic Radiology-Part-II

L	T	P	Credit
4	-	-	4

Course Outcomes:

CO1: Identify the parts of the x-ray machine and explain their purpose and function.

CO2: Explain how x-rays are produced and how they travel.

CO3: Demonstrate use of the controls on an x-ray machine and explain how they influence the x-ray beam.

Course Code: DRIT-602

Title of the Course: Quality Assurance & Radiation Safety (AERB Guidelines) In Diagnostic Radiology-Part-II

L	T	P	Credit
-	-	4	4

Course Outcomes:

CO1: Identify the parts of the x-ray machine and explain their purpose and function.

CO2: Explain how x-rays are produced and how they travel.

CO3: Demonstrate use of the controls on an x-ray machine and explain how they influence the x-ray beam.

Course Code: DRIT-603

Title of the Course: Research Methodology

L	T	P	Credit
4	-	-	4

Course Outcomes:

CO1: The Student will know about various statistical approaches

CO2: Students should understand and gain knowledge of research tools in radiology.

CO3: They will understand data bases and their applications.

Course Code: DRIT-604

Title of the Course: Research Methodology -Practical

L	T	P	Credit
-	-	4	4

Course Outcomes:

CO1: The Student will know about various statistical approaches

CO2: Students should understand and gain knowledge of research tools in radiology.

CO3: They will understand data bases and their applications.

CO/PO Mapping	
(S/M/W indicates strength of correlation) S– Strong–Medium–Weak	
COs	Programme Outcomes (Pos)

	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	S	S	M	M
CO2	S	S	S	S	M	M
CO3	S	S	S	S	M	M

Course Code: DRIT-605

Title of the Course: Hospital Practice & Care of Patients

L	T	P	Credit
4	-	-	4

Course Outcomes:

CO1: The student will operate imaging equipment and accessory devices to produce quality radiographs

CO2: The student will practice appropriate radiation protection while performing radiologic procedures on children and adults.

CO3: The student will demonstrate the ability to solve clinical problems and assessment skills necessary to provide patient care

Course Code: DRIT-606

Title of the Course: Hospital Practice & Care of Patients-Practical

L	T	P	Credit
-	-	4	4

Course Outcomes:

CO1: The student will operate imaging equipment and accessory devices to produce quality radiographs.

CO2: The student will practice appropriate radiation protection while performing radiologic procedures on children and adults.

CO3: The student will demonstrate the ability to solve clinical problems and assessment skills necessary to provide patient care.

CO/PO Mapping						
(S/M/W indicates strength of correlation) S– Strong–Medium–Weak						
COs	Programme Outcomes (Pos)					
	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	S	S	M	M
CO2	S	S	S	S	M	M
CO3	S	S	S	S	M	M

Course Code: DRIT-607

Title of the Course: Directed Clinical Education-Part-V (Studentship)

L	T	P	Credit
1	-	-	1

Course Outcomes:

CO1: Students will gain additional skills in clinical procedures, interaction with patients and professional personnel.

CO2: Students apply knowledge from previous clinical learning experience under the supervision of a radiologist or senior technologist.

CO3: Students are tested on intermediate clinical radiological skills.

