



YENEPOYA

(DEEMED TO BE UNIVERSITY)

Recognized under Sec 3(A) of the UGC Act 1956

Accredited by NAAC with 'A' Grade

YENEPOYA INSTITUTE OF ALLIED HEALTH SCIENCES

PROGRAM OUTCOMES AND COURSE OUTCOMES

POSTGRADUATION PROGRAM

M.Sc. MEDICAL IMAGING TECHNOLOGY


ATTESTED

Dr. Gangadhara Somayaji K S
Registrar
Yenepoya (Deemed to be University)
University Road, Durgamkotte
Hyderabad - 500011

PROGRAM OUTCOMES
POSTGRADUATE PROGRAM
M.SC. MEDICAL IMAGING TECHNOLOGY

(Knowledge - K, Skill - S, Attitude - A)

- PO 1 Function as competent advanced level medical imaging technologists (K,S,A)
- PO 2 Demonstrate the ability to use theoretical knowledge and critical thinking skills in clinical practice(K,S)
- PO 3 Have an advanced theoretical knowledge on all the modalities (K,S)
- PO 4 modify the protocols according to the demand and need(K,S)
- PO 5 Train students in routine/special imaging procedure on different modalities (K,S,A)
- PO 6 select and operate different modalities as per to the need of physician(K,S)
- PO 7 Upgrade knowledge and skills in a changing healthcare scenario (K,S,A)
- PO 8 Should be capable of supervise / guide the staff working on various advanced modalities(K,S,A)
- PO 9 provide best clinical information to the physician (K,S,A)
- PO 10 Should be capable of teaching, proposing/executing research project (K,S,A)


ATTESTED

Dr. Gangadhara Somayaji K S
Registrar
Yenepoya (Deemed to be University)
University Road, Deralakota,
Mangalore 575 014, Karnataka

COURSE OUTCOMES
POSTGRADUATE PROGRAM
M.SC. MEDICAL IMAGING TECHNOLOGY

SEMESTER 1

| | CO | Description |
|--|-----------|---|
| Instrumentation and Physics of Radiography | CO 1 | Understand the basic and advance physics behind x-ray |
| | CO 2 | Construction and working of Equipments used in x- ray. |
| | CO 3 | Application of Equipments in Medical Imaging Technology |
| Principles of Exposure and Image Processing | CO | Description |
| | CO1 | Construction and working of film, intensifying screen, cassette, dark room, computed radiography, direct radiography, automatic processor |
| | CO2 | To understand radiographic film Processing chemistry. |
| | CO3 | To study the factors affecting image quality in radiographic image and their application |
| Basic and Advanced Techniques of Imaging and Processing | CO | Description |
| | CO 1 | Understand the basic and advance physics behind x-ray |
| | CO 2 | Construction and working of Equipments used in x- ray. |
| | CO 3 | Construction and working of film, intensifying screen, cassette, dark room, computed radiography, direct radiography, automatic processor |
| | CO4 | To understand radiographic film Processing chemistry. |
| Biomedical Research and Biostatistics | CO | Description |
| | CO 1 | To Understand Statistical Terms. |
| | CO 2 | To Possess Knowledge and Skill in the use of Basic Statistical and Research Methodology. |

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Dr. Gangadhara Somayaji K S
 Registrar
 Yenepoya (Deemed to be University)
 University Road, Devalakatte
 Mangalore 575 018, Karnataka

SEMESTER 2

| | CO | Description |
|--|-----------|--|
| Radiographic Positioning and Procedures | CO 1 | to distinguish indications and contra indications for procedure based on patient history |
| | CO 2 | to classify the contrast media based on solubility and physiology of excretion |
| | CO 3 | to assist radiologist by setting the equipment required for procedure |

| | CO | Description |
|---|-----------|---|
| Radiation Protection and Management in Radiology | CO 1 | to identify the protective measures to be taken in the department |
| | CO 2 | to choose appropriate exposure factors |
| | CO 3 | to implement radiation surveys effectively |

| | CO | Description |
|---|-----------|---|
| Basic and Advanced Instrumentation in CT | CO 1 | understand the advanced principle of computed tomography |
| | CO 2 | to have an idea of components of CT and its relation in image formation |
| | CO 3 | complete knowledge about the protocols done in CT |

| | CO | Description |
|---|-----------|--|
| Methods of Radiation Protection Evaluation and Imaging Techniques of CT and Procedures | CO1 | to distinguish indications and contra indications for procedure based on patient history |
| | CO2 | to classify the contrast media based on solubility and physiology of excretion |
| | CO3 | to identify the protective measures to be taken in the department |
| | CO4 | to choose appropriate exposure factors |
| | CO5 | understand the advanced principle of computed tomography |
| | CO6 | to have an idea of components of CT and its relation in image formation |

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Dr. Gangadhara Somayaji K S
Registrar
Yenepoya (Deemed to be University)
University Road, D. S. Rd,
Mangalore, Karnataka 575009

SEMESTER 3

| | | |
|---|-----------|---|
| Basic and Advanced Instrumentation of Ultrasound and Doppler | CO | Description |
| | CO1 | to infer different protocols used for various anatomical regions |
| | CO2 | to memorize physics beyond ultrasound imaging |
| | CO3 | to define the advancements in ultrasound and doppler imaging |
| Nuclear Medicine Imaging and Basics of Radiation Therapy | CO | Description |
| | CO1 | to have knowledge of proper handling of radioactive sources |
| | CO2 | to know how the radiation will be detected by radiation detection devices |
| | CO3 | to know how the radiation will be detected by radiation detection devices |
| Patient Care and Techniques of Ultrasound and Nuclear Medicine | CO | Description |
| | CO1 | to infer different protocols using practical knowledge of various anatomical regions |
| | CO2 | to memorize physics beyond ultrasound imaging |
| | CO3 | to have knowledge of proper handling of radioactive sources |
| | CO4 | to know how the radiation will be detected by radiation detection devices |
| Health care Management | CO | Description |
| | CO1 | Concepts of Hospitals – Students will gain Knowledge about hospital administration & planning. |
| | CO2 | Workflow in hospitals - Enumerate and identify various Clinical Services like OPD, IPD, ward Management, OT, Emergency, disaster Management and ICU |
| | CO3 | Organizational Structures – To Learn to meet special challenges posed by human behavior in workplace of 21 st century |
| | CO4 | Quality management – To create an awareness about the process of applying for and implementing various accreditation process in healthcare facilities |

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SEMESTER 4

| | CO | Description |
|---|-----|---|
| Basic and Advanced Instrumentation of MRI | CO1 | To understand the advanced principle of MRI |
| | CO2 | to have knowledge about the things restricted in MRI to carry |
| | CO3 | to perform scans with ideal sequences |
| Interventional Radiology | CO1 | to have a good idea on vascular anatomy |
| | CO2 | to distinguish the types of catheters and their uses |
| | CO3 | to have and understanding on the various equipments used in cath-lab |
| Patient Care in Radiology | CO1 | know precautions to handle emergency patients of different pathology |
| | CO2 | to be able to perform basic and advanced life support to the patient in case of emergency |
| | CO3 | to know the emergency drugs used in the department |
| Patient Care & Techniques of Clinical MRI and Interventional Radiology | CO1 | To have a practical understand advanced techniques of MRI |
| | CO2 | to have knowledge about the things restricted in MRI to carry |
| | CO3 | to have a good idea on vascular anatomy |
| | CO4 | to distinguish the types of catheters and their uses |
| | CO5 | know precautions to handle emergency patients of different pathology |
| | CO6 | to be able to perform basic and advanced life support to the patient in case of emergency |

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