



YENEPOYA

(DEEMED TO BE UNIVERSITY)

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

Accredited by NAAC with 'A+' Grade

Yenepoya (Deemed to be University)

Deralakatte, Mangalore

Name of the Program

POST-DOCTORAL CERTIFICATE COURSE IN CROSS-SECTIONAL IMAGING

**REGULATIONS AND CURRICULUM GOVERNING POST DOCTORAL
CERTIFICATE COURSE IN CROSS-SECTIONAL IMAGING**

(Academic year from which the curriculum is/was implemented/ revised/ amended)

2023-24

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Preamble

Abdominal disorders are a major cause of morbidity and mortality worldwide. Frequently these patients have complex clinical problems, which require multidisciplinary approach for appropriate patient management. Abdominal pathologies and disorders still present a diagnostic dilemma for clinicians as well as general radiologists. The accuracy of clinical assessment is variable and depends upon clinical experience and support from various interdisciplinary departments. For this reason, there has justifiably been an increasing reliance on accurate diagnosis with the help of experts in abdominal Radiology to guide management.

Acute abdomen is a medical emergency. It can represent a wide spectrum of conditions, ranging from a benign and self-limiting disease to a surgical emergency. Nevertheless, only one quarter of patients who have previously been classified with an acute abdomen receive surgical treatment. Hence, it's a topic of clinical dilemma as to which group of patients would need urgent surgical intervention.

Rapid advances in clinical subspecialties and research mandate that an advanced course in abdominal Radiology is to sustain a good quality abdominal reporting programme for our population. Thus, there is a growing need to start a postdoctoral fellowship course in Abdominal Radiology to create a core of dedicated young professionals equipped to provide expert care and conduct quality research relevant to our population.

PROGRAM CODE – YMC/CC/001

Eligibility for admission:

Postgraduate with diploma, or MD, or DNB in Radiology following a Medical Graduation (MBBS) which is recognized by NMC.

Aim of the Program/Course:

The aim of the course is to develop outstanding subspecialist radiologists with expertise and skills in cross-sectional Radiology.

Objectives/Outcomes of the program
(Knowledge/Skill/Attitude/Communication)

Course Outcomes

At the end of the course, the student should be able to acquire the following competencies.

- CO01: Develop a systematic approach for cross-sectional imaging
- CO02: Attain skills in interpretation of cross-sectional imaging in routine cases and emergencies.
- CO03: Develop skills with latest advances and protocols in cross-sectional imaging.

Course Specific Outcomes

CSO01	Demonstrate ability to use all modern diagnostic imaging modalities including fusion imaging, ultrasound, DSA, CT, MR, SPECT, CT SPECT, PET, CT-PET and radionuclide scans.
CSO02	Demonstrate clinical expertise in the diagnosis and treatment of all diseases of the abdomen and pelvis with special emphasis on the following areas: hepatobiliary diseases, oncology, trauma, pre and post operative evaluations, diverse vascular Doppler studies as well as other areas of abdominal and pelvic disease
CSO03	Demonstrate ability for nonvascular image-guided interventions of the neck, chest, abdomen and pelvis.

Program structure

Duration of the course	6 months
Theory	4 hours per week
Practical and Clinics	6 hours per week
Contact hours	42 hours per week
E-learning hours	4 hours per week

Weekly Schedule

Sr. No.	Week schedule	Sub-Topic	Contact Hours
1	Monday	Basics of cross-sectional radiology	2
2	Tuesday	USG procedures	2
3	Wednesday	Case discussions	2
4	Thursday	Journal club	2
5	Friday	Seminars	2
6	Saturday	Review of literatures, review of interesting cases. Webinars and publications	2
		Total hours per week	12

Attendance

After completing 6 months of course with 80% minimum attendance is required to appear for the University exam.

Syllabus / Course contents

The syllabus includes exposure to the cross-sectional imaging including:

- CT of the chest, abdomen, and pelvis
- PET-CT
- MRI of the abdomen, and pelvis for cancer diagnosis and staging
- MRI of hepatobiliary pathologies
- MRCP interpretation
- Dynamic MR imaging for liver, biliary and pancreatic diseases
- CT of the chest, abdomen, pelvis, lower extremities, and upper extremities
- Non-contrast MRI for the evaluation of acute abdomino-pelvic pain
- CTA for pulmonary embolus detection
- CTA for mesenteric/bowel ischemia
- CT/MR Enterography
- USG and Doppler studies of abdomen
- CT In Head & Neck
- MRI In Brain & Spine
- CT & MRI In Musculoskeletal system
- Advanced quantitative imaging of liver disease ,including spectroscopy and elastography(in future)
- Whole body MRI to evaluate patients with prostate cancer and multiple myeloma

Teaching - Learning methods and Academic Activities

Teaching - Learning method	Academic Activities
Experiential learning	Case presentation
Integrated/Inter-disciplinary learning	Scientific society meetings/ Clinical Meet, Grand round
Participatory learning	Journal club, Seminar and interactive lectures
Problem-solving methodologies	Clinical Audit
Self-directed learning	Research work, Portfolio
Patient-centric and Evidence-based learning	Case presentation
Project-based learning	Research work
Any other : Visits to institutes	Visits to other institution of excellence Visit to laboratories, diagnostic facilities, affiliated clinical units and other areas.

Scheme of Examination

Internal Assessment (Frequency, Pattern-Theory and Practical)

Formative assessment: -Assessment of academic activities like journal club, seminar, case presentation, clinical meets and clinical audits, etc

Internal Assessment: Theory 100 Marks and Practical Examination of 50 marks

Theory paper will consist of 10 long essays

University Examination (Pattern-Theory and Practical)

The final Examination: Theory 50 Marks with 5 LAQs and Practical Examination of 50 marks.

Duration of Theory Papers: 1 1/2 hours

Practical Examination: -

OSCE (Objective Structured Clinical Examination) 3 Stations with one observation station	10 marks
Practical Skills Demonstration	20 Marks
Viva Voce: Discuss case scenarios, complex concepts, clarity of subject, case-based discussions, etc.	10 Marks
Portfolio	10 Marks
Total	50 Marks

Eligibility to appear for University Examination

Minimum 80% attendance

Minimum 40% marks in Internal Assessment examination

Logbook submission

Criteria for pass

Minimum 50 % marks in Theory

Minimum 50 % marks in Practical.

Declaration of Results

Declared by the Yenepoya (Deemed to be University)/ Yenepoya Medical College

Logbook/Portfolio (if applicable)

Portfolio should record the learning experiences with reflections and which must be countersigned by the course director

Recommended books

Haaga	CT and MRI of the Whole Body	Elsevier
Lee and Sagel	Computed Body Tomography with MR Correlation	Wolters Kluwer
David Sutton	Text book of Radiology and Imaging	Churchill Livingstone
Grainger	Diagnostic Radiology 3 rd edition Vol– I, Vol – II and Vol - III	Churchill Livingstone

Any other information

During the training program, patient safety is of paramount importance, therefore, skills are to be learnt initially on the models in the simulation laboratory and on large animals, later to be performed under supervision followed by performing independently.

ANNEXURE**Blueprint for Theory and Practical Examination****Question paper layout for theory examinations****Portfolio/ Logbook template (if applicable)****Any other Checklists/Formats for assessment**