

## FELLOWSHIP IN NEURO IMAGING

---

### ABOUT THE UNIVERSITY

Malla Reddy Vishwavidyapeeth is a reputed educational institution located in Hyderabad, Telangana, India. Recognized as a “Deemed to be University under Distinct (Existing) Category,” the university offers multidisciplinary programs across medical, dental, nursing, pharmaceutical sciences, and allied health sciences. The institution emphasizes academic excellence, clinical expertise, innovation, and global collaboration in advancing healthcare education.

---

### PROGRAM OVERVIEW

The Fellowship in Neuro Imaging is a one-year advanced program designed to train healthcare professionals in advanced imaging techniques for diagnosing and managing neurological disorders.

The program focuses on:

- MRI and CT in neuroimaging
- PET imaging and functional neuroimaging (fMRI, MR spectroscopy)
- Diffusion tensor imaging (DTI) and advanced MRI techniques
- Neurovascular imaging including stroke and angiography
- Imaging of tumors, neurodegenerative disorders, and trauma
- Neuroimaging for surgical planning and interventions
- Integration of imaging with clinical neurological care

The program integrates clinical exposure, advanced imaging, and research to develop expertise in neuroimaging.

(Deemed to be University)

---

### PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

Graduates will be able to:

1. Perform and interpret advanced neuroimaging modalities.
  2. Diagnose neurological disorders using imaging techniques.
  3. Integrate imaging findings with clinical neurological care.
  4. Utilize functional imaging for brain mapping and assessment.
  5. Support neurosurgical planning using imaging technologies.
  6. Ensure ethical and safe imaging practices.
  7. Conduct research in neuroimaging.
-

## PROGRAM OUTCOMES (POS)

1. **Imaging Expertise:** Perform MRI, CT, PET, and functional imaging.
2. **Diagnostic Skills:** Identify neurological conditions through imaging.
3. **Functional Imaging Skills:** Apply fMRI, PET, and spectroscopy.
4. **Surgical Planning:** Assist in neurosurgical and interventional planning.
5. **Clinical Integration:** Combine imaging with clinical decision-making.
6. **Safety & Ethics:** Ensure radiation safety and ethical practice.
7. **Research Skills:** Contribute to advancements in neuroimaging.

## COURSE OUTCOMES (COS)

- CO1: Perform and interpret MRI and CT neuroimaging studies.
- CO2: Apply functional imaging techniques like fMRI and PET.
- CO3: Evaluate neurovascular conditions using advanced imaging.
- CO4: Diagnose tumors and neurodegenerative disorders.
- CO5: Utilize imaging for neurosurgical planning.

## PROGRAM-SPECIFIC OUTCOMES (PSOS)

1. Demonstrate expertise in multimodal neuroimaging techniques.
2. Apply advanced imaging for neurological diagnosis and management.
3. Integrate neuroimaging with multidisciplinary neurological care.

**MALLA REDDY**

## PROGRAM DETAILS

- Certificate Awarded by: Malla Reddy Vishwavidyapeeth (Deemed to be University)
- Program Duration: One-Year Fellowship
- Mode of Delivery: Clinical + Theoretical + Hands-on Training

## ELIGIBILITY CRITERIA

- Academic Qualification: MD in Radiology / Neurology / Neurosurgery or equivalent
- Professional Requirement: As per institutional norms

## KEY FEATURES

- Comprehensive training in neuroimaging modalities
  - Hands-on exposure to MRI, CT, PET, and functional imaging
  - Advanced training in DTI, spectroscopy, and brain mapping
  - Integration with neurology and neurosurgery practices
  - Emphasis on clinical correlation and decision-making
  - Research-oriented training approach
- 

## LEARNING OUTCOMES

---

### KNOWLEDGE & UNDERSTANDING

- Understanding of neuroanatomy, neurophysiology, and imaging
- 

### COGNITIVE SKILLS

- Clinical interpretation and neurological decision-making
- 

### PRACTICAL & PROFESSIONAL SKILLS

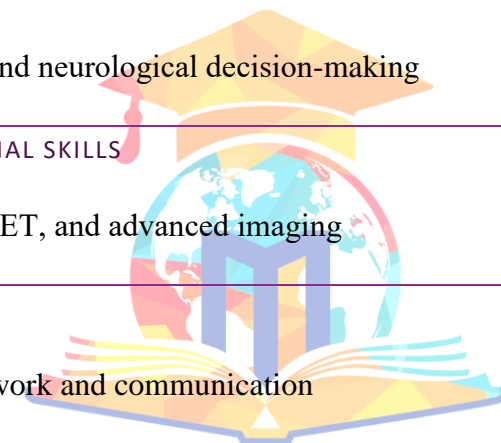
- Performing MRI, CT, PET, and advanced imaging
- 

### TRANSFERABLE SKILLS

- Multidisciplinary teamwork and communication
- 

### SUBJECT-SPECIFIC SKILLS

- Advanced neuroimaging techniques and applications
- 



**MALLA REDDY**  
**VIGNAVIDYAPEETH**  
(Deemed to be University)

---

## CURRICULUM MODULES – THEORY

---

### SEMESTER 1: FUNDAMENTALS OF NEURO IMAGING

- Introduction to Neuro Imaging
  - MRI and CT Principles in Neuroimaging
  - Neurovascular Imaging
  - Neurodegenerative Disease Imaging
  - Brain Tumor Imaging
  - Functional Imaging (fMRI, PET, Spectroscopy)
  - Clinical Rotations
- 

### SEMESTER 2: ADVANCED NEURO IMAGING

- Advanced MRI Techniques (DTI, Spectroscopy)
  - Functional MRI and PET Applications
  - Neurotrauma Imaging
  - Neuroimaging in Epilepsy
  - Neuroimaging for Surgical Planning
  - Emerging Technologies (AI in Imaging)
  - Research Project & Case Studies
- 

#### PRACTICAL COURSEWORK

- Performing and interpreting MRI and CT scans
  - Functional imaging (fMRI, PET, spectroscopy)
  - Neurovascular imaging and angiography
  - Case discussions and clinical decision-making
  - Clinical logbook documentation
  - Research and dissertation work
- 

#### CAREER OUTCOMES

Graduates can pursue careers as:

- Neuro Imaging Specialist
- Neuroradiologist
- Neuro MRI / CT Specialist
- Functional Imaging Expert
- Neurosurgical Imaging Consultant
- Academic and Research Professional

The logo features a stylized blue 'M' with a globe behind it, resting on an open book with colorful pages. The text 'MALLA REDDY VISHWAVIDYAPEETH' is written in blue, with '(Deemed to be University)' in grey below it.

**MALLA REDDY  
VISHWAVIDYAPEETH**  
(Deemed to be University)