

# **Nuclear Medicine Internship**

# **Advanced Focussed Areas for Interns in Nuclear Medicine Internships**

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#### • Fundamentals of Nuclear Medicine

- Introduction to Nuclear Medicine
- Radioactive Decay and Radiation Physics
- Radiopharmaceuticals and Tracers
- o Imaging Techniques: PET, SPECT, and Gamma Cameras
- Applications of Nuclear Medicine in Diagnosis
- Therapeutic Applications of Nuclear Medicine
- Ethics and Safety in Nuclear Medicine
- Future Directions in Nuclear Medicine

## • Imaging Techniques and Diagnostics

- Principles of Positron Emission Tomography (PET)
- Single Photon Emission Computed Tomography (SPECT)
- Hybrid Imaging Techniques: PET/CT, SPECT/CT
- Quantitative Imaging and Analysis
- Radiopharmaceuticals in Imaging
- Case Studies in Nuclear Imaging
- Future Trends in Imaging Technologies
- Integration of Imaging Data with Other Modalities
- Regulatory Aspects of Nuclear Imaging
- Clinical Applications of Nuclear Imaging

#### • Radiopharmaceuticals and Radiochemistry

- Synthesis and Labeling of Radiopharmaceuticals
- Quality Control and Assurance
- o Pharmacokinetics and Biodistribution
- Radiation Dosimetry and Safety
- o Case Studies in Radiopharmaceutical Development
- Future Trends in Radiopharmaceuticals
- Challenges in Radiopharmaceutical Production
- Regulatory Considerations in Radiopharmaceuticals
- Ethical Considerations in Radiochemistry
- o Impact of Radiopharmaceuticals on Patient Care
- Therapeutic Applications in Oncology and Beyond

- Radionuclide Therapy in Cancer Treatment
- o Targeted Radionuclide Therapy and Radioligands
- o Bone Metastases Treatment and Pain Palliation
- Neuroendocrine Tumors and Peptide Receptor Radionuclide Therapy (PRRT)
- Non-Oncological Applications of Nuclear Medicine
- Case Studies in Nuclear Medicine Therapy
- Future Directions in Radionuclide Therapy
- o Challenges in Translational Research
- Clinical Trials and Regulatory Approvals
- Impact of Nuclear Medicine on Patient Outcomes

## • Future Directions and Emerging Trends

- Innovations in Nuclear Medicine and Radiopharmacy
- o Role of Nuclear Medicine in Precision Medicine
- Emerging Applications in Biomedical Research
- o Global Trends in Nuclear Medicine Research
- Future of Nuclear Medicine in Healthcare and Industry
- Ethics and Regulation in Nuclear Medicine Research
- Future Research Priorities in Nuclear Medicine
- Impact of Nuclear Medicine on Society
- Public Engagement and Education in Nuclear Sciences
- o Integration of Nuclear Medicine with AI and Data Science

## Contact Via Whatsapp on +91-7993084748 for Fee Details