

SYLLABUS FOR PH.D. IN RADIODIAGNOSIS

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| <p>1. Basic Sciences</p> | <p>Basic science related to the speciality of Radio-diagnosis, Radiation Physics and Radiation Biology, Units of radiation, radiation measurement, X-Ray equipments .Conventional X-Ray Units, Fluoroscopy units (conventional, Image intensifier), Advanced imaging equipments. US, Doppler, CT, MRI, CR and DR, Mammography machine, Quality assurance, Radiation hazards and radiation protection, Contrast media, Picture archiving and communication system (PACS) and Radiology information, System (RIS) to make a film less department, Recent advances in Radiology, Embryology, Radiological anatomy., Artifacts in Radiology., Radiography, Normal fetal anatomy. FETAL MRI, Physics: - USG, CT, MRI, Doppler, Radiographic procedures., Radiographic measurements., Pathology/Pathophysiology, Role of PET CT in clinical practice.</p> |
| <p>2 Cardiovascular System</p> | <p>Diseases and disorder of cardiovascular system (congenital and acquired conditions) and the role of imaging by conventional radiology, ultrasound, Color-Doppler, CT, MRI, angiography radio nuclide studies</p> |
| <p>3 Respiratory system</p> | <p>Disease of the chest wall, diaphragm, pleura and airway; pulmonary vasculature; Pulmonary; infections; pulmonary neoplasm; diffuse lung disease; mediastinal disease; Chest trauma; post-operative and intensive care imaging.</p> |
| <p>4. Gastrointestinal Tract</p> | <p>Diseases and disorders of mouth, pharynx, salivary glands, esophagus, stomach, small intestine, large intestine, diseases of omentum, peritoneum and mesentery, acute abdomen, abdominal trauma. Diseases and disorders of hepato-biliary-pancreatic system. Conventional and other imaging methods like US, CT, MRI, DSA and isotope studies pertaining to these systems.</p> |
| <p>5. Genitourinary system</p> | <p>Various diseases and disorders of genito-urinary system. These include: congenital inflammatory, traumatic, neoplastic, calculus disease and</p> |

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| | <p>miscellaneous conditions. He/she should also be able to perform and interpret conventional and other diagnostic imaging procedures used to evaluate urinary tract pathology i.e., ultrasound, CT, MRI, angiography.</p> |
| 6.Endocrine Radiology | Imaging of Diseases of endocrine system |
| 7.Mammography and Breast Imaging | Imaging of breast pathologies |
| 8.Pediatric Imaging | Common diseases and disorders of different organ systems covering congenital, inflammatory, traumatic,neoplastic and other miscellaneous conditions, using both conventional and newer imaging methods |
| 9.Central Nervous System Imaging | Includes imaging (using conventional and newer methods) and interpretation of various <i>diseases and disorders of the head, and spine covering congenital, infective, vascular,</i> traumatic and neoplastic conditions. This will also include disease of the eye and ENT and head and neck. |
| 10. Musculoskeletal Imaging | Imaging (Conventional, Ultrasound, CT, MRI, angiography, Radio-isotope studies) and interpretation of disease of muscles, soft tissue, bones and joints including congenital inflammatory, traumatic, metabolic and endocrine, neoplastic and miscellaneous conditions |
| 11.Head and Neck Imaging | Imaging of neck , ENT and EYE |

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| 12. Obstetrics and Gynecology Imaging | Ultrasound evaluation in pregnancy, Chromosomal anomalies, Anomalies of various systems, Fetal biometry, IUGR, Placenta, umbilical cord, liquor, Multiple gestation, Biophysical profile, Obstetric doppler, Fetal MRI, 3 D USG, Fetal interventions, Ectopic pregnancy, Fetal syndromes, Pelvic masses. |
| 13. Interventional Radiology. | Interventional procedures involving Head & neck, Chest, Abdomen, pelvis, upper and lower limbs. |