

Program Number _____ Program Name _____

Date / /20



Magnetic Resonance Curriculum Analysis

DIRECTIONS: Determine the course(s) in which each of the following content areas is covered and enter the course number(s) and/or title(s). For guidance in what should be covered for each content area, please refer to the Magnetic Resonance Curriculum (2015) developed in collaboration by the American Society of Radiologic Technologists (ASRT), Association of Educators in Imaging and Radiologic Sciences (AEIRS), and the Section for Magnetic Resonance Technologists (SMRT) of the International Society for Magnetic Resonance in Medicine (ISMRM).

| Professional Curriculum | Program Course(s) |
|---|-------------------|
| Clinical Practice and Patient Management | |
| Clinical Practice | |
| Procedural Performance | |
| Infection Control | |
| Medical Emergencies | |
| Tubes, Catheters, Lines and Infusion Devices | |
| Imaging Procedures | |
| ARRT Clinical Experience Requirements | |
| Computers in Imaging and Medical Informatics | |
| Computer Fundamentals | |
| Health Care Informatics | |
| Regulations, Laws, and Standards | |
| Decision-Making | |
| Health Care Informatics Applications | |
| Digital Imaging | |
| Ethics and Law in the Imaging Sciences | |
| Ethics and Ethical Behavior | |
| Ethical Considerations in Health Care | |
| Legal Issues | |
| Protected Health Information | |
| Compliance | |

| Professional Curriculum | Program Course(s) |
|--|--------------------------|
| Fundamentals of Imaging Science and Health Care | |
| The Health Science Professions | |
| The Health Care Continuum | |
| Hospital Organization | |
| Radiology Organization | |
| Accreditation | |
| Continuing Education Requirements | |
| Regulatory Agencies | |
| Professional Credentialing | |
| Professional Organizations | |
| Professional Development and Advancement | |
| MR Imaging Procedures | |
| Preprocedural Considerations | |
| Considerations for Routine MR Procedures | |
| Imaging Considerations | |
| Positioning and Procedural Considerations for Adult and Pediatric Patients | |
| Procedural Considerations for Contrast Studies | |
| Procedural Considerations for Special Studies | |
| MR Parameters, Imaging Options, and Quality Assurance | |
| MR Imaging Parameter and Sequence Selections | |
| Imaging Options | |
| Quality Assurance | |
| MR Pathology | |
| Central Nervous System | |
| Head and Neck | |
| Thorax | |
| Abdomen | |
| Pelvis | |
| Musculoskeletal | |
| General Vascular Disorders | |

| Professional Curriculum | Program Course(s) |
|---|--------------------------|
| MR Instrumentation and Imaging | |
| Magnetism | |
| Magnets | |
| Shim Systems | |
| Radiofrequency Systems | |
| Gradient Systems | |
| Ancillary Equipment | |
| Operational Flow | |
| Scanning System Maintenance | |
| MR Pulse Sequences, Image Formation and Image Contrast | |
| Intrinsic Contrast Characteristics (Tissue Characteristics) | |
| Extrinsic Contrast Characteristics (User-selection Parameters for Image Contrast) | |
| Pulse Sequences | |
| Image Contrast Characteristics | |
| MR Contrast Media | |
| MR Image Formation | |
| Postprocessing | |
| MR Safety | |
| Introduction | |
| Static Magnetic Field | |
| Radio Frequency (RF) Magnetic Field | |
| Gradient Magnetic Fields | |
| Patient and Personnel Safety Screening in MR (Technologist Responsibilities) | |
| Equipment Safety Screening in MR Environment (Technologist Responsibilities) | |
| Monitoring of Ancillary Equipment | |
| Emergencies in the MR Environment Requiring Technologist Action | |
| Safety in MR Contrast Administration | |

| Professional Curriculum | Program Course(s) |
|--|--------------------------|
| Pharmacology and Drug Administration | |
| Drug Nomenclature | |
| Method of Drug Classification | |
| General Pharmacologic Principles | |
| Six Rights of Drug Safety | |
| Drug Categories of Relevance to MRI (Adverse Effects, Uses and Impacts on Medical Imaging) | |
| Classification of Contrast Agents | |
| Routes of Drug Administration | |
| Intravenous Drug Therapy | |
| MR Contrast Administration | |
| Current Practice Status | |
| Physical Principles of Magnetic Resonance Imaging | |
| History of MR | |
| Matter | |
| Nuclear Magnetism | |
| MR Signal Production | |
| MR Signal Induction/Sampling/Conversion | |
| MR Image Contrast Characteristics | |
| Introduction to MR Image Formation | |
| Imaging Planes | |
| K-Space and Image Formation | |
| Sectional Anatomy | |
| Head and Brain | |
| Neck | |
| Chest and Mediastinum | |
| Abdomen | |
| Pelvis | |
| Musculoskeletal | |