



## RADIOGRAPHY CURRICULUM ANALYSIS GRID

I. General Information	
Program Name	
JRCERT Program Number	
Date	

**DIRECTIONS:** Determine the course(s) in which each of the following content area 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 Radiography Curriculum (2022) published by the American Society of Radiologic Technologists.

II. Introduction to Medical Imaging and Radiologic Sciences and Health Care	
Professional Curriculum	Program Course(s)
Medical Terminology	
Procedures and Terminology	
Orders, Requests, and Diagnostic Reports	
Health Professions	
Interprofessional Practice and Education	
Evidence-based Practice	
Health Care Environment	

Health Provider Organization	
Accreditation	
Regulatory Agencies	
Radiology Organization	
Professional Credentialing	
Professional Organizations	
Professional Development and Advancement	

<b>III. Ethics and Law in Medical Imaging and Radiologic Sciences</b>	
<b>Professional Curriculum</b>	<b>Program Course(s)</b>
Ethics and Ethical Behavior	
Ethical Dilemmas	
Legal Issues	
Legal Doctrines and Standards	
Patient Consent	

<b>IV. Patient Care and Services in the Medical Imaging and Radiologic Sciences</b>	
<b>Professional Curriculum</b>	<b>Program Course(s)</b>
Health Care Team	

Professionalism in Patient Care	
Patient/Radiographer Interactions	
Safety and Transfer	
Evaluating Patient Needs	
Infection Control	
Medical Emergencies	
Trauma	
Drug Nomenclature	
Drug Classification	
General Pharmacologic Principles	
Six Rights of Drug Safety	
Drug Categories Relevant to Radiography (uses and effects)	
Contrast Agents	
Routes of Drug Administration	
Pharmacology and Venipuncture	
Tubes, Catheters, Lines, and Other Devices	

## V. Human Anatomy and Physiology

Professional Curriculum	Program Course(s)
Anatomical Nomenclature	
Chemical Composition	
Cell Structure and Genetic Control	
Metabolism	
Tissues	
Skeletal System	
Muscular System	
Nervous System	
Sensory System	
Endocrine System	
Digestive System	
Cardiovascular System	
Lymphatic System and Immunity	
Respiratory System	
Urinary System	
Reproductive System	
Introduction to Sectional Anatomy	

## VI. Radiographic Procedures

Professional Curriculum	Program Course(s)
Positioning and Projection Terminology	
General Considerations	
Patient Considerations	
Positioning Considerations for Routine Radiographic Procedures	
Procedural Considerations for Contrast Studies	
Mobile and Surgical Radiography	

## VII. Radiographic Pathology

Professional Curriculum	Program Course(s)
Definitions/Terminology	
Causes of Disease (Process, Examples)	
Radiologic Pathology	
Implications for Practice	

## VIII. Radiation Physics and Instrumentation

Professional Curriculum	Program Course(s)
Structure of the Atom	
Nature of Radiation	
X-Ray Production	
Photon Interactions with Matter	
X-ray Circuit	
Radiographic Equipment	
Diagnostic X-ray Tubes	
Fluoroscopy	
Quality Control of Imaging Equipment and Accessories	

## IX. Image Production

Professional Curriculum	Program Course(s)
Exposure Factors	
Image Acquisition	
Image Acquisition Errors	

Exposure Factor Formulation	
Computer Pre-processing	
Image Display	
Quality Management	
Image Informatics and Archiving	
Teleradiology	
Downtime Procedures	

<b>X. Image Analysis</b>	
<b>Professional Curriculum</b>	<b>Program Course(s)</b>
Image Appearance Standards	
Imaging Standards	
Technical Factors	
Procedural Factors	
Clinical Factors	
Artifacts	
Equipment Malfunction	
Corrective Action	

## XI. Radiation Biology and Health Physics

Professional Curriculum	Program Course(s)
Introduction	
Radiation Energy Transfer	
Radiation Effects	
Radiosensitivity and Response	
Introduction to Health Physics	
Units, Detection, and Measurement	
Surveys, Regulatory/Advisory Agencies, and Regulations	
Personnel Monitoring	
Application	
Patient Protection	
Personnel Protection	

## XII. Clinical Practice

Professional Curriculum	Program Course(s)
Professionalism	
Procedural Performance	
Clinical Competency	



### XIII. Additional Concentrations

Professional Curriculum	Program Course(s)
Bone Densitometry	
Cardiac Interventional	
Computed Tomography	
Magnetic Resonance	
Mammography	
Medical Dosimetry	
Nuclear Medicine/Molecular Imaging	
Radiation Therapy	
Sonography	
Vascular Interventional	

### OPTIONAL CONTENT

### XIV. Basic Principles of Computed Tomography

Professional Curriculum	Program Course(s)
Computed Tomography Scanners	
Components, Operations, and Processes	
Radiation Protection	

## XV. Sectional Anatomy

Professional Curriculum	Program Course(s)
Anatomical Nomenclature	
Head and Brain	
Neck	
Chest and Mediastinum	
Abdomen	
Pelvis	
Musculoskeletal	

## XVI. Artificial Intelligence

Professional Curriculum	Program Course(s)
Terminology and Concepts	
Data and Data Sets	
Applications in Healthcare	
AI in Medical Imaging	
Ethics, Legality, and Liability	
Regulation and Workflow Integration	
Precision Medicine	

## XVII. Advancements in Medical Imaging

Professional Curriculum	Program Course(s)
Imaging Detectors	
Imaging Technologies	
Volumetric Imaging (3D)	
Dynamic Digital Receptors (DDR)	