Program Number _____ Program Name _____

Date / /20

Radiation Therapy 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 Radiation Therapy Curriculum (2014) published by the American Society of Radiologic Technologists.

Professional Curriculum	Program Course(s)
Clinical Practice	
Essentials of Clinical Practice	
Patient Assessment, Care and Education	
Simulation	
Treatment Planning	
Treatment Delivery	
Quality Assurance and Quality Management	
Ethics in Radiation Therapy Practice	
Ethical Theories and Principles	
Provider/Patient Relationship	
Ethical Decision-making in Health Care Dilemmas	
Health Care Policy	
Role of the Radiation Therapist in Patient Care	
Imaging and Processing in Radiation Oncology	
Basic Principles of Digital Imaging	
Image Acquisition (simulation, portal imaging, onboard image guidance)	
Principles of Imaging	
Computed Tomography Equipment in Radiation Oncology	
Image Acquisition Errors	
Software (Default) Image Processing	
Fundamental Principles of Exposure	
Image Evaluation	
Display	

Professional Curriculum	Program Course(s)
Imaging and Processing in Radiation Oncology (cont'd)	
Imaging Equipment	
Other Imaging Modalities	
Introductory Law in Radiation Therapy	
Sources of Law	
Intentional Torts	
Negligence	
The Lawsuit	
Components of Informed Consent, Patient Rights, and Standard of Care	
Safety Issues	
Documentation and Record Maintenance	
Risk Management	
Role of the Code of Ethics, Scope of Practice and Practice Standards	
Medical Terminology	
Introduction to the Origin of Medical Terminology	
The Word-building Process	
Medical Abbreviations and Symbols	
Operational Issues in Radiation Therapy	
Continuous Quality Improvement	
Human Resources	
Accreditation	
Insurance and Billing	
Departmental Budget	
Orientation to Radiation Therapy	
Policies and Procedures of the Educational Program	
The Health Science Professions	
Hospital and Health Care Organizations	

Professional Curriculum			Program Course(s)
Orientation to Radiation Therapy (cont'd)			
Introduction to Radiation Therapy Practice			
Professional Organizations			
Professional and Community Commitment			
Professional Development			
Pathophysiology			
General Pathology			
Introduction to Human Disease			
Theories of Disease Causation			
Basic Principles and Mechanisms of Disease			
Common Diagnostic Tests and Procedures			
Disorders of Nutrition			
Body Systems and Disorders, Including:			
Auditory	Genetic	Musculoskeletal	
Cardiovascular	Hematopoietic	Ocular	
Central Nervous	Immune	Reproductive	
Digestive	Integumentary	Respiratory	
Endocrine	Mental Health	Urinary	
Neoplasia			
Introduction			
Nomenclature			
Carcinogenesis			
Diagnosis			
Grading and Staging			
Prognostic Factors			
Malignancies, Including:			
Breast	Head and Neck	Musculoskeletal	
Central Nervous	Hematopoietic	Reproductive	
Digestive	Integumentary	Respiratory	
Endocrine	Lymphatic	Urinary	
Principles and Practice of Radiation Therapy I			
Cancer Perspectives			
Treatment Determination for Overall Cancer Management			
Radiation Therapy Treatment			
Radiation Therapy Equipment			

Professional Curriculum			Program Course(s)
Principles and Practice of Radiation Therapy I (cont'd)			
Treatment Delivery Accessories			
Tumor Localization			
Pretreatment Verification Protocol			
Treatment Delivery Protocol			
Principles and Practice of Radiation Therapy II			
Radiation Therapy Treatment of Neoplastic Disease Originating in the following sites:			
Breast	Genitourinary	Lymphoreticular	
Central Nervous	Head and Neck	Musculoskeletal	
Endocrine	Hematopoietic	Reproductive	
Gastrointestinal	Integumentary	Respiratory	
Pediatric neoplasms	AIDS-related neoplasms	Benign neoplasms	
Metastatic and Palliative Treatment Applications			
Emergency Treatment Applications			
Quality Management			
Introduction			
General Principles			
Clinical Aspects QI Checks			
QA, QC for Treatment, Simulation/Localization and Verification			
Particle Accelerators			
Brachytherapy			
Medical Dosimetry and Treatment Planning			
Quality Assurance and Maintenance Issues			
Radiation Biology			
Introduction			
Biophysical Events			
Radiation Effects			
Radiosensitivity and Response			
Biologic Principles of Radiation Therapy			
Radiation Physics			
Units of Measurement			
General Principles			
Structure of the Atom			
Structure of Matter			

Professional Curriculum	Program Course(s)
Radiation Physics (cont'd)	
Nature of Radiation	
Electromagnetic Radiation	
Electrostatics	
Magnetism	
Electrodynamics	
Electromagnetism	
Production and Characteristics of Radiation	
Radiation Protection	
Introduction	
Units, Detection and Measurement	
Surveys, Regulatory Agencies and Regulations	
Personnel Monitoring	
Practical Radiation Protection	
Brachytherapy	
Radiation Therapy Patient Care	
Introduction	
Communication in Patient Care	
Patient-family Interactions	
Assessment of Side Effects	
Assessment of Other Physical Needs	
Patient Examination	
Health Safety	
Medications and Their Administration	
Medical Emergencies	
Care of Patients With Tubes	
Brachytherapy Procedures	
Assessment of Nutritional Status	
Physical Activity Considerations	
Patient Transfer	
Patient Education	
Integrative Medicine	

Professional Curriculum			Program Course(s)
Radiation Therapy Physics			
Structure of Matter and Properties of Radiation			
Nuclear Transformations			
Review of Production of X-rays			
Radiation Therapy Treatment Units (External Teletherapy)			
Interaction of Ionizing Radiation			
Measurement of Ionizing Radiation			
Quality of X-ray Beams			
Measurement of Absorbed Dose			
Dose Distribution and Scatter Analysis Overview			
Research Methods and Information Literacy			
Analysis of Research Articles			
Information Literacy Concepts			
Types of Research Projects			
Preparing a Research Project			
Sectional Anatomy			
Anatomic Planes of the Body			
Image Formation and Orientation			
Other Sectional Imaging Modalities			
Topographic and Sectional Anatomy to Include:			
Abdomen	Extremities	Pelvis	
Chest	Head and Neck	Spine	
Treatment Planning			
Isodose Descriptions and General Influencing Factors			
Patient Contours			
Radiobiologic Dosimetric Considerations			
Methods of Dosimetric Calculations			
Prevention of Overdose and Underdose			
Wedge Filters (2-D Compensation)			
Tissue Compensators (2-D and 3-D Compensation)			
Clinical Applications of Treatment Beams and Accessories			
Optimal Treatment Planning Considerations, Evaluation, and Implementation			
3-D Conformal Therapy			
Intensity Modulated Radiation Therapy (IMRT)			

Professional Curriculum	Program Course(s)
Treatment Planning (cont'd)	
Particle Beams and General Dose Distributions	
Stereotactic Radiation Therapy	
Brachytherapy	
Emerging Treatment Methods and Planning	

General Education Content Note: These are not specific courses, but represent content areas.	
General Education Required Content	**Course(s) in which content area is covered.**
Human Anatomy - Structure of Human Systems	
Integumentary	
Skeletal	
Muscular	
Nervous	
Endocrine	
Sensory	
Circulatory	
Respiratory	
Digestive	
Urinary	
Reproductive	
Human Physiology - Functional Integration of Human Systems	
Integumentary	
Skeletal	
Muscular	
Nervous	
Endocrine	
Sensory	
Circulatory	
Respiratory	
Digestive	
Urinary	
Reproductive	
Mathematics	
Real Number System	
Algebra of Sets	
Exponents	
Equations and Inequalities	
Polynomial Functions	
Graphing	

General Education Content Note: These are not specific courses, but represent content areas.	
Radical Expressions	
Operations	
Inverses of Function	
Equations of Lines and Systems of Linear Equations and Elementary Statistics	
Logarithmic and Trigonometric Functions and Their Applications	
Plane Analytic Geometry	
Computer Skill Literacy Demonstration	
Written Communication	
Verbal Communication	
General Physics	
Physical Principles	
Conservation Laws	
Gravitation	
Electricity	
Magnetism	
Wave Motion	
Heat	
Thermodynamics	