

Appendix A

Mapping the ARRT Exam Specifications for Radiation Protection to this Text*

ARRT Radiation Protection Examination Specifications	Relevant Chapters in <i>Radiation Protection in Diagnostic Imaging</i>
1. Biological Aspects of Radiation Protection A. Radiosensitivity B. Somatic Effects C. Acute Radiation Syndromes D. Embryonic and Fetal Effects E. Genetic Impact F. Photon Interaction with Matter	Chapter 1 (A, including all subtopics) Chapter 2 (F, including all subtopics) Chapter 4 (A–E, including all subtopics)
2. Minimizing Patient Exposure A. Exposure Factors B. Shielding C. Beam Restriction D. Filtration E. Exposure Reduction F. Image Receptors G. Grids H. Fluoroscopy	Chapter 7 (A–F, including all subtopics) Chapter 8 (H, including all subtopics) Chapter 9 (A–H for digital radiography) Chapter 10 (All topics relating to CT) Chapter 15 (Quality control in minimizing radiation exposure to patients and personnel)
3. Personnel Protection A. Sources of Radiation Exposure B. Basic Methods of Protection C. Protective Devices D. Special Considerations (Portable and Fluoroscopy) E. Guidelines for Portable and Fluoroscopy Units (NCRP #102 and 21 CFR)	Chapter 1 (A) Chapter 3 (A) Chapter 6 (B) Chapter 14 (B and C) Chapter 13 (D and E)

ARRT Radiation Protection Examination Specifications	Relevant Chapters in <i>Radiation Protection in Diagnostic Imaging</i>
4. Radiation Exposure and Monitoring	Chapter 3 (A)
A. Units of Measurement	Chapter 13 (B)
B. Dosimeters	Chapter 5 (B)
C. NCRP Recommendations for Personnel Monitoring (NCRP # 116)	Chapter 12 (A) Chapter 13 (C)
<p>*The textbook <i>Radiation Protection in Diagnostic X-Ray Imaging</i> includes several chapters covering topics beyond those prescribed by the ARRT Radiation Protection Examination Specifications. These chapters (and associated topics) include more recent topics on radiation protection that should be a part of a Radiation Protection course of study, as follows:</p> <ul style="list-style-type: none">• Chapter 6: Radiation Protection Organizations• Chapter 9: Dose in Digital Radiography• Chapter 10: Radiation Dose in Computed Tomography (CT)• Chapter 11: Image Quality Assessment Tools for Dose Optimization in Digital Radiography• Chapter 12: Diagnostic Reference Levels• Chapter 15: Radiation Protection through Quality Control	