

# RADIATION TECHNOLOGY/ MEDICAL RADIOGRAPHY (RTMR)

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## Courses

### RTMR 095. Survey of Radiation Sciences. 1 Unit.

Develops students' interest in and knowledge of the radiation sciences by exploring each of the specialties in the field, such as radiography, CT, MRI, nuclear medicine, diagnostic medical sonography, cardiac sonography, radiation therapy, dosimetry, cardiovascular imaging, imaging informatics, radiologist assistant, mammography, radiology education, and radiology administration. Students develop a career and an education plan.

### RTMR 202. Clinical Orientation. 1 Unit.

Provides a clinical orientation to the functions of radiologic technologists, with orientation to the clinical environment conducted at affiliated clinical sites.

### RTMR 221. Radiologic Patient Care. 2 Units.

Addresses patient care during radiographic procedures. Emphasizes patient care in the ER and OR, and during contrast procedures. Topics include radiographic professional organizations, ARRT code of ethics, personal balance and health, critical thinking and problem solving, pharmacology, medical abbreviations, spirituality in health care, challenging patient situations, and immobilization techniques.

### RTMR 224. Legal Issues in Medical Radiography. 1 Unit.

Presents an overview of legal issues in radiologic technology. Topics include: standards of care, patient rights, informed consent, civil liability, legal doctrines, documentation, confidentiality, scope of practice, and ethical theories.

### RTMR 246. Professional Communication & Presentation. 2 Units.

Provides an understanding of the professional communication and presentation skills needed to succeed as an entry-level radiographer. Topics include personality assessments, interpersonal communication, conflict resolution, moral courage, patient communication, and professionalism. Addresses radiologic technology accreditation and University-required student learning outcomes in oral, written, and health-care team communication.

### RTMR 247. Languages for Radiographers. 1 Unit.

Introduces radiography students to the words, phrases, and medical terminology most often used in radiographic patient care situations for the common languages of patients.

### RTMR 253. Medical Radiography Procedures I. 3 Units.

Introduces various radiographic procedures, including anatomy, patient positioning, geometric factors, exposure techniques, image evaluation and patient shielding.

### RTMR 253L. Medical Radiography Procedures Laboratory I. 1 Unit.

Applies principles of patient positioning in a laboratory setting. Students practice optimum positioning practices on classmates. Anatomy covered includes: chest, upper extremity, lower extremity, bony thorax, and shoulder girdle.

### RTMR 254. Medical Radiography Procedures II. 3 Units.

Introduces students to various radiographic procedures, which include anatomy, patient positioning, geometric factors, exposure techniques, image evaluation and patient shielding. Prerequisite: RTMR 253.

### RTMR 254L. Medical Radiography Procedures Laboratory II. 1 Unit.

Applies principles of patient positioning in a laboratory setting. Students practice optimum positioning practices on classmates and volunteers. Anatomy covered includes: abdomen, spine, skull, and pelvis.

### RTMR 255. Medical Radiography Procedures III. 3 Units.

Introduces students to various radiographic procedures, which include anatomy, patient positioning, geometric factors, exposure techniques, and patient shielding. Corequisite: RTMR 255L.

### RTMR 255L. Medical Radiography Procedures Laboratory III. 1 Unit.

Applies principles of patient positioning and radiographic exposure to the laboratory setting. Uses clinical patient simulation and radiographic phantoms to determine optimal radiographic techniques.

### RTMR 282. Imaging Physics, Radiobiology, and Radiation Protection. 3 Units.

Provides a background for understanding the physics of man-made radiation production. Addresses the interaction of radiation with matter for both radiation protection and the creation of radiographic images. Covers the electrical circuitry of diagnostic x-ray equipment. Addresses fundamental concepts of radiation protection and biological effects of radiation on patients and occupationally exposed personnel. Topics include radiation safety procedures as well as radiation quantities and units.

### RTMR 283. Radiologic Physics. 3 Units.

Provides a background for understanding the physics of man-made radiation production. Addresses the interaction of radiation with matter for both radiation protection and the creation of radiographic images. Covers the electrical circuitry of diagnostic x-ray equipment.

### RTMR 284. Radiation Protection and Biology. 2 Units.

Addresses the fundamental concepts of radiation protection and biological effects of radiation on patients and occupationally exposed personnel. Topics include: radiation safety procedures, radiation quantities and units, legal exposure standards, and radiation monitoring.

### RTMR 285. Principles of Radiography I. 3 Units.

Introduces the principles of radiographic theory and technique. Covers the physical factors involved in image exposure and processing, auxiliary equipment used in producing the radiographic exposure, and techniques for obtaining the optimum image under any situation. Weekly laboratory sessions required.

### RTMR 286. Principles of Radiography II. 2 Units.

Provides advanced instruction in the principles of radiographic theory and technique. Examines the role of image-intensified fluoroscopy in radiology. Weekly laboratory sessions required.

### RTMR 305. Introduction to Computed Tomography I. 2 Units.

Introduces an overview of cross-sectional anatomy. Identifies normal anatomy in two- and three-dimensional planes. Addresses the structural and physiological functions of body systems.

### RTMR 306. Introduction to Computed Tomography II. 2 Units.

Introduces basic principles, physics, imaging parameters, radiological effects, management, and patient protocol of computed tomography (CT).

### RTMR 324. Radiographic Image Evaluation and Pathology. 3 Units.

Expands upon the fundamental image evaluation knowledge acquired in RTMR 253, 254, and 255. Advances understanding of image evaluation with reference to pathology, radiographic anatomy, patient positioning, geometric factors, exposure techniques, and patient shielding.

**RTMR 325. Radiologic Pathology. 1 Unit.**

Reviews the pathologic processes most commonly viewed by radiographers using radiologic imaging methods. Prerequisite: RTMR 253, RTMR 254, RTMR 255.

**RTMR 344. Professional Development and Service Learning. 3 Units.**

Overview of radiologic specialties. Examines state and national radiography organizations and continuing education requirements. Reviews professional values and codes of ethics.

**RTMR 363. Comprehensive Review I. 2 Units.**

Reviews major content areas emphasized on certification examinations. Student evaluation and performance analysis. Time provided to make class presentations, organize study materials, and take simulated registry examinations.

**RTMR 365. Comprehensive Review II. 3 Units.**

Continues review of major content areas emphasized on certification examinations. Student evaluation and performance analysis. Time provided to make class presentations, organize study materials, and take simulated registry examinations.

**RTMR 365L. Comprehensive Laboratory Review II. 1 Unit.**

Reviews concepts and procedures included on certificate examinations as well as emphasizing performance of those procedures. Prerequisite or concurrent: RTMR 365.

**RTMR 371. Medical Radiography Affiliation I. 5 Units.**

The first of six affiliation courses that total eighteen months of clinical experience. Students gain hands-on experience in basic patient care, radiographic procedures and positioning, radiation protection, radiographic exposure and techniques, critical thinking and problem solving, and patient and health care team communication. The combined six-part affiliation sequence fulfills state requirements for clinical hours in medical radiography.

**RTMR 372. Medical Radiography Affiliation II. 7 Units.**

Continues RTMR 371.

**RTMR 373. Medical Radiography Affiliation III. 12 Units.**

Continues RTMR 371 and 372.

**RTMR 374. Medical Radiography Affiliation IV. 7 Units.**

Continues RTMR 371, 372, and 373.

**RTMR 375. Medical Radiography Affiliation V. 7 Units.**

Continues RTMR 371, 372, 373, and 374.

**RTMR 384. Topics in Medical Radiography. 1-3 Units.**

Lecture and discussion of a current topic in medical radiography bearing on the theory or practice of one aspect of the discipline. Specific content varies from quarter to quarter.

**RTMR 386. Medical Radiography Affiliation VI. 10 Units.**

Continues RTMR 371, 372, 373, 374, and 375.