

# RADIOLOGIST ASSISTANT – M.S.R.S.

**Program director**  
Brigit Mendoza

## The program

Students receive didactic and clinical mentoring on neonatal, pediatric, adult, and geriatric populations. Courses combine discussion, projects, case studies, and web-based learning. Students are responsible for finding their own clinical site as well as a radiologist mentor. This is an online program; however, students must be on campus during orientation, the first Autumn, Winter, and Spring Quarters, and during the final Spring Quarter.

## Mission

The mission of the Radiologist Assistant Program is to provide students with sound clinical, didactic, and moral foundation so that they can impact patient care in a positive and meaningful manner.

## Vision

The Radiologist Assistant Program at Loma Linda University seeks to be one of the premier radiologist assistant programs in the nation, providing a diverse and safe learning environment that contributes to and promotes Loma Linda University values and standards.

## Purpose

The purpose of the Radiologist Assistant Program is to educate students to competently function as radiologist assistants in a variety of imaging environments.

## Program learning outcomes

By the end of this program, the graduate should be able to:

1. Perform procedures and clinical activities of the profession.
2. Engage in activities that advance the profession.
3. Impact health-care delivery.
4. Maintain recognized educational standards of the profession.
5. Employ proper ethics within the profession.

## Admissions

Admission is based on a selective process. In addition to Loma Linda University (<http://llucatalog.llu.edu/about-university/admission-policies-information/#admissionrequirements>) and School of Allied Health Professions admissions requirements (<http://llucatalog.llu.edu/allied-health-professions/#generalregulation>), the applicant must also complete the following requirements:

- Bachelor's degree from an accredited college or university. The degree can be in administration or science.
- Current certification in medical radiography from the American Registry of Radiologic Technologists.
- A minimum of two years of full-time, consecutive radiography work experience.
- Current CPR certification. Must complete ACLS certification prior to applying for boards.

- A course in statistics completed within the past five years. It does not have to be completed at the time of application, but must be completed prior to starting the program.
- A course in research methods completed within the past five years. It does not have to be completed at the time of application, but must be completed prior to starting the program.

## Program requirements

### First Year

#### Autumn Quarter

RELT 423	Loma Linda Perspectives	2
RTRA 521	Radiology Procedures and Image Evaluation I	3
RTRA 525	Fluoroscopy and Radiation Protection	1
RTRA 526	Radiology Reporting	1
RTRA 531	Pharmacology for RAs I	2
RTRA 534	Pathophysiology	2
RTRA 771	Clinical Internship I	2

#### Winter Quarter

AHCJ 402	Pathology I	4
RTRA 510	Cross-Sectional Anatomy I	1
RTRA 522	Radiology Procedures and Image Evaluation II	3
RTRA 532	Pharmacology for RAs II	2
RTRA 541	Patient Assessment I	2
RTRA 772	Clinical Internship II	5

#### Spring Quarter

AHCJ 403	Pathology II	3
RTRA 511	Cross-sectional Anatomy II	1
RTRA 523	Radiology Procedures and Image Evaluation III	3
RTRA 542	Patient Assessment II	2
RTRA 546	Topics for the Radiologist Assistant	2
RTRA 773	Clinical Internship III	6

### Second Year

#### Summer Quarter

RTRA 524	Radiology Procedures and Image Evaluation IV	3
RTRA 543	Clinical Management and Education	2
RTRA 774	Clinical Internship IV	6

#### Autumn Quarter

AHCJ 566	Theoretical Foundations of Leadership	3
RTRA 519	Medical-Legal Issues in Radiology	1
RTRA 775	Clinical Internship V	6
REL_5__	Graduate-level Religion	3

#### Winter Quarter

RTRA 518	Radiobiology and Health Physics	2
RTRA 588	Comprehensive Review I	1
RTRA 776	Clinical Internship VI	6
RTRS 621	Capstone Project I	3

#### Spring Quarter

RTRA 589	Comprehensive Review II	1
RTRA 614 <sup>1</sup>	Professional Portfolio	1
RTRA 777	Clinical Internship VII	6
RTRS 622	Capstone Project II	3

**Total Units:**

**94**

<sup>1</sup> Fulfills service learning requirement

## Normal time to complete the program

Two (2) years (seven [7] academic quarters) – based on full-time enrollment

## Courses

### RTRA 510. Cross-Sectional Anatomy I. 1 Unit.

Identifies normal and abnormal anatomy in two-dimensional as well as three-dimensional planes. Relates cross-sectional view of anatomy and pathology to radiology procedures.

### RTRA 511. Cross-sectional Anatomy II. 1 Unit.

Identifies normal and abnormal anatomy in two-dimensional as well as three-dimensional planes. Relates cross-sectional view of anatomy and pathology to radiology procedures.

### RTRA 518. Radiobiology and Health Physics. 2 Units.

Reviews the effects of ionizing and nonionizing radiation and fundamental concepts of radiation protection. Promotes the conscientious operation of radiologic and fluoroscopic devices. Provides a complement to guided practice in operating the fluoroscopic device during clinical mentoring. Procedures and techniques to optimize image quality while reducing radiation exposure to patients, operator, and ancillary personnel.

### RTRA 519. Medical-Legal Issues in Radiology. 1 Unit.

Introduction to the legal system as it pertains to radiation sciences. Concepts such as malpractice, litigation, informed consent, assault, and battery.

### RTRA 521. Radiology Procedures and Image Evaluation I. 3 Units.

Provides a framework for various imaging procedures and the role of the radiologist assistant in the radiology department. Provides the framework for systematic observation of static, digital, X-sectional, and dynamic diagnostic images for the purpose of evaluating the presence of abnormalities, anomalies, and pathological conditions.

### RTRA 522. Radiology Procedures and Image Evaluation II. 3 Units.

Provides a framework for various imaging procedures and the role of the radiologist assistant in the radiology department. Provides the framework for systematic observation of static, digital, X-sectional, and dynamic diagnostic images for the purpose of evaluating the presence of abnormalities, anomalies, and pathological conditions.

### RTRA 523. Radiology Procedures and Image Evaluation III. 3 Units.

Provides a framework for various imaging procedures and the role of the radiologist assistant in the radiology department. Provides the framework for systematic observation of static, digital, X-sectional, and dynamic diagnostic images for the purpose of evaluating the presence of abnormalities, anomalies, and pathological conditions.

### RTRA 524. Radiology Procedures and Image Evaluation IV. 3 Units.

Provides a framework for various imaging procedures and the role of the radiologist assistant in the radiology department. Provides the framework for systematic observation of static, digital, X-sectional, and dynamic diagnostic images for the purpose of evaluating the presence of abnormalities, anomalies, and pathological conditions.

### RTRA 525. Fluoroscopy and Radiation Protection. 1 Unit.

Focuses on the quality assurance and management aspects of fluoroscopy. Includes the following topics: fluoroscopic radiation exposure and protection techniques, technical management, operation of fluoroscopic equipment, and quality control.

### RTRA 526. Radiology Reporting. 1 Unit.

Student develops and organizes an imaging report for procedures performed under the supervision of a radiologist. Topics include learning to report, style guidelines, and the American College of Radiology guidelines for communication.

### RTRA 531. Pharmacology for RAs I. 2 Units.

Surveys pharmacological agents currently used in medicine, including their kinetics, dynamics, and therapeutics. Places special emphasis on pharmaceuticals commonly used by and given to radiology patients, including contrast media, antineoplastic agents, and radioactive isotopes.

### RTRA 532. Pharmacology for RAs II. 2 Units.

Surveys pharmacological agents currently used in medicine, including their kinetics, dynamics, and therapeutics. Places special emphasis on pharmaceuticals commonly used by and given to radiology patients, including contrast media, antineoplastic agents, and radioactive isotopes.

### RTRA 534. Pathophysiology. 2 Units.

Covers the structures and function of human biology. Assists with developing skills of interpreting laboratory data and increasing understanding of the pathophysiology behind patient care.

### RTRA 541. Patient Assessment I. 2 Units.

Assists with skills in interviewing, physical examination, and interpreting laboratory data. Increases understanding of the pathophysiology behind patient care. Emphasizes analysis and interpretation of physiological data to assist in patient assessment and management.

### RTRA 542. Patient Assessment II. 2 Units.

Assists with developing skills in interviewing, physical examination, and interpreting laboratory data. Increases understanding of the pathophysiology behind patient care. Emphasizes analysis and interpretation of physiological data to assist in patient assessment and management.

### RTRA 543. Clinical Management and Education. 2 Units.

Focuses on analyzing and interpreting physiological data to assist in patient assessment and management. Utilizes critical thinking, action plans, and protocols. Includes relationship-centered patient care, effective communication, and patient education. Introduces clinical pathways, multidisciplinary clinical practice, and a focus on quality and coordination of care.

### RTRA 546. Topics for the Radiologist Assistant. 2 Units.

Surveys selected topics in the radiologist assistant scope of practice for credit toward the master's degree in radiologist assistant. Topics may include procedures, projects, or literature reviews.

### RTRA 588. Comprehensive Review I. 1 Unit.

Review of the major content areas covered in the radiologist assistant program. Student evaluation and performance analysis.

### RTRA 589. Comprehensive Review II. 1 Unit.

Reviews major content areas covered in the radiologist assistant program. Includes student evaluation and performance analysis.

### RTRA 614. Professional Portfolio. 1 Unit.

Student develops a portfolio that demonstrates progression toward the student learning outcomes established by Loma Linda University— including wholeness, Christ-centered values, commitment to discovery and lifelong learning, effective communication, embracing and serving a diverse world, and collaboration.

**RTRA 771. Clinical Internship I. 2 Units.**

A twelve-week, one day/week rotation for a total of ninety-six hours of mentored clinical experience. Focuses on a wide variety of competencies that enable students to generate a report stating initial observations of diagnostic images on neonatal, pediatric, adult, and geriatric populations. Students utilize clinical contracts and a clinical portfolio.

**RTRA 772. Clinical Internship II. 5 Units.**

An eleven-week, two-days/week rotation totaling 168 hours of mentored clinical experience. Focuses on a wide variety of competencies that enable students to generate a report stating initial observations of diagnostic images on neonatal, pediatric, adult, and geriatric populations. Students utilize clinical contracts and a clinical portfolio.

**RTRA 773. Clinical Internship III. 6 Units.**

An eleven-week, three days/week rotation totaling 248 hours. A mentored clinical experience during which students complete a wide variety of competencies that prepare them to generate a report stating initial observations of diagnostic images on neonatal, pediatric, adult, and geriatric populations. Students utilize clinical contracts and a clinical portfolio.

**RTRA 774. Clinical Internship IV. 6 Units.**

An eleven-week, three days/week rotation totaling 248 hours of mentored clinical experience. Focuses on a wide variety of competencies that enable students to generate a report stating initial observations of diagnostic images on neonatal, pediatric, adult, and geriatric populations. Students utilize clinical contracts and a clinical portfolio.

**RTRA 775. Clinical Internship V. 6 Units.**

A twelve-week, three days/week rotation totaling 272 hours of mentored clinical experience. Focuses on a wide variety of competencies that enable students to generate a report stating initial observations of diagnostic images on neonatal, pediatric, adult, and geriatric populations. Students utilize clinical contracts and a clinical portfolio.

**RTRA 776. Clinical Internship VI. 6 Units.**

An eleven-week, three days/week rotation totaling 248 hours of mentored clinical experience. Focuses on a wide variety of competencies that enable students to generate a report stating initial observations of diagnostic images on neonatal, pediatric, adult, and geriatric populations. Students utilize clinical contracts and a clinical portfolio.

**RTRA 777. Clinical Internship VII. 6 Units.**

An eleven-week, three days/week rotation totaling 248 hours of mentored clinical experience. Focuses on a wide variety of competencies that enable students to generate a report stating initial observations of diagnostic images on neonatal, pediatric, adult, and geriatric populations. Students utilize clinical contracts and a clinical portfolio.