

# **Radiation Technology**



# A.S. in Medical Radiography

#### Are you interested in working with people and technology? Why not consider a career in Medical Radiography?

The Medical Radiographer, also known as a Radiologic Technologist or X-ray Tech, is responsible for imaging body structures, such as bones and soft tissue. The Radiographer's job is to position the patient, determine exposure factors, manipulate medical imaging equipment, evaluate radiographic image quality, provide patient comfort, and oversee patient and medical team radiation protection. Radiologic Technologists also assist in procedures that visualize the gastrointestinal and urinary tracks using radiographic contrast and fluoroscopy. Radiographers can specialize in Computed Tomography (CT), Imaging Informatics, Magnetic Resonance Imaging, Mammography, Nuclear Imaging, Diagnostic Medical Sonography, Radiation Therapy, and Radiologist Assistant. Radiographers participate in fast-paced work challenges in a variety of healthcare settings, and must possess the ability to be accurate and calm under pressure. Radiographers must be good with working with patients. Radiographers exhibit professional service which is focused on providing excellent patient care.

#### Associate of Science in Medical Radiography Program

The A.S. in Medical Radiography Program is a 21-month/40-hour-perweek full-time program, beginning every September, where students complete academic instruction and gain over 1,850 clinical hours of Radiography experience. Students are enrolled for 48 weeks the first year and 56 weeks the second year. Breaks are given between quarters, which follows the standard Loma Linda University academic calendar. It is a full-time program with no arrangements for part-time or evening status.

Instruction incorporates a variety of learning styles. Students will be exposed to lectures, active learning activities, hands-on positioning lab, live imaging lab, group projects, speeches, papers, and online assignments. Students gain practical experience in digital radiography and computed tomography (CT). Students also experience rotations in the other radiologic technology specialties.

Students complete this program with a well-rounded Associate's degree, education to be a Medical Radiographer, and qualification to sit for the AART board exam in Radiography. The LLU program in Medical Radiographer holds a first-time ARRT board pass rate of over 90%. These numbers are based on average cohort sizes of between 27 and 33 students. Our one-year job placement rate is over 90%, even in this tough job market. Our employer graduate satisfaction rates are over 90%.

#### Goals and Student Learning Outcomes

While in the Program, students will demonstrate clinical competence by performing radiographic exams of diagnostic quality, and applying patient care and practices for radiographic procedures. Students will communicate effectively by being able to clearly explain radiographic procedures to patients and often family members, effectively communicate and work with the healthcare team, and demonstrate appropriate communication for diverse populations. Students will develop critical thinking and problem-solving skills so that they can appropriately adjust procedures, and critique images to determine diagnostic acceptability. Students will demonstrate the values and professional development, model professional behavior, and examine the core values and reflect on personal application. Students will also apply knowledge in interdisciplinary situations.

#### **Clinical Training and Essential Job Functions**

We have clinical sites located in Loma Linda, Redlands, San Bernardino, Hemet, Palm Springs, Riverside, Apple Valley, Murrieta, Los Angeles, and the Imperial Valley. Students are expected to provide their own transportation during and throughout the program. Some clinical sites may involve a 60-mile drive from Loma Linda University. Students are responsible for all costs and availability of transportation. Students are assigned to their clinical site at the beginning of the program in a just and equitable way, mostly based on clinical site-student fit.

#### Application Window

Applications are accepted between October 1 to February 15, with a priority deadline of January 15. There is no waiting list. Thirtytwo seats are available.

#### **Interview & Application Requirements**

Applicants must complete a minimum of 42 quarter units (28 semester units) with a cumulative GPA of 2.5 or higher, and a prerequisite GPA of 2.5 or higher, submit official transcripts, 8 hours career observation, three references, an interview video, and an admissions essay, as well as complete 20 hours of volunteer work. All elements of the application plus a 5 minute interview video must be received by February 15, to be considered. More information is available on our website.

# alliedhealth.llu.edu

#### Program prerequisites:

- Freshmen English: One-year sequence in college
- Oral Communication or Interpersonal Communication: One quarter/semester in college
- Introduction to Computers: One quarter/semester in college; or 1 year of HS
- Medical Terminology: One quarter/semester in college
- Human Anatomy and Physiology: Must include two sections, both with a lab
- Introduction to Chemistry or Introduction to Physics: One year of high school, or one quarter/ semester at the college level Physics preferred.
- Mathematics: Two years of high school math such as Algebra I & II, Geometry, and Trigonometry; or quarter/semester college equivalent of Int. Algebra. Intermediate Algebra.
- Social Sciences: General Psychology or General Sociology in college
- Religious Studies: Required <u>ONLY IF</u> student attended an SDA college (1 unit of religion for every 12 unites earned at an SDA college). This prereq does not apply to public school students.
- Electives: Students may take any non-remedial college course to make up the required 42 quarter-units (28 semester units). Recommended courses include: Spanish, Cultural Anthropology, Nutrition, Physical Education, and Critical Thinking. Additional courses could include: Psychology, Sociology, Chemistry, Computers, Physics, Statistics, Language, Philosophy, History, Art/Music Appreciation, Geology, Political Science, and Economics. Applicants interested in going on to complete a BSRS or BSHA can request additional advisement on elective courses that will apply both to the ASMR and the BSRS/BSHA.

# **Program Requirements**

Applicants are required to complete a background check and possess a current Health Care Provider CPR card offered by the American Heart Association upon admission into the program. To remain in the program students must maintain a 2.5 GPA, pass three program milestones, and adhere to the Program's professional code of conduct. Students at some clinical sites may need a drug test.

# **Career Observation and Volunteer Service**

Applicants must complete 8 hours of career observation by February 15. Not all applicants will receive an interview. It is recommended that career observation still be completed in order to determine for yourself if this is the career for you. Applicants must also volunteer 20+ hours and show documentation of service. Volunteer hours must be completed in the last 10 years.

## **Financial Information**

Tuition and fees are subject to change each year. Students should be prepared to be responsible for all tuition fees, books, living expenses, and transportation. Financial aid is available. Loan application can begin before being accepted. For financial aid information call 909-558-4509.

## Housing

Students under the age of 21 who are in undergraduate programs are required to live on campus, unless they are married or living with their parents. A student who desires to live off-campus but who does not meet the necessary qualifications must file a petition with the Dean for Students Affairs in advance of registration by calling 909-558-4510.

## Accreditation

Loma Linda University is regionally accredited by the Western Association of Schools and Colleges, Accrediting Commission for Senior Colleges and Universities. The A.S. in Medical Radiography at Loma Linda University holds a specialty accreditation by the Joint Review Committee on Education in Radiologic Technology, 20 North Wacker Drive, Suite 2850, Chicago, IL 60606-3182, 312-704-5300. The program is also approved by the Radiologic Health Branch (RHB) of the state of California, Department of Public Health, MS 7610, P.O. Box 997414, Sacramento, CA 95899-7414, 916-327-5106.

## Eligibility for ARRT Certification

Eligibility for the ARRT certification exam may be affected if the applicant has a prior felony or misdemeanor conviction. Prior to applying to this program the applicant should contact the ARRT at 651-687-0048 to determine if eligibility will be granted.

# Curriculum

Curriculum			
Year 1 - Fall	Quarter	Units	
RTMR 202	Clinical Orientation (1 day/week)	1	
RTMR 224	Legal Issues in Radiography	1	
RTMR 246	Professional Communication	2	
RTMR 253	Med Radiography Procedures 1	2	
RTMR 253L	Med Radiography Procedures Lab 1	1	
<b>RTMR 285</b>	Principles of Radiography 1	3	
AHCJ 326	Fundamentals of Health Care	2	
RELT 423	Loma Linda Perspectives	2	14
	Lonia Linaa i enspectives	=	
Year 1 - Winter Quarter			
RTMR 221	Radiologic Patient Care	2	
RTMR 254	Med. Radiography Procedures II	2	
	Med. Radiography Procedures Lab II 1	-	
RTMR 284	Radiation Protection & Biology	2	
RTMR 286	Principles of Radiography II	3	
RTMR 230 RTMR 371	Medical Radiography Affiliation I	5	
KIMK 5/1	(2 days/week)	1	11
	(2 days/week)	<u>1</u>	11
Year 1 - Spri	ng Quarter	Units	
AHCJ 328	Wholeness Portfolio I	1	
RTMR 247	Languages for Radiographers	1	
RTMR 247 RTMR 255	0 0 0 1	2	
	Med. Radiography Procedures III		
	Med. Radiography Procedures Lab III	1	
DTMD 202			
RTMR 283	Radiologic Physics	3	
RTMR 283 RTMR 372	Medical Radiography Affiliation II	-	10
		3 <u>2</u>	10
RTMR 372	Medical Radiography Affiliation II (3 days/week)	2	
RTMR 372 Year 2 - Sum	Medical Radiography Affiliation II (3 days/week) mer Quarter	2 Units	
RTMR 372	Medical Radiography Affiliation II (3 days/week) mer Quarter Medical Radiography Affiliation III	2	
RTMR 372 Year 2 - Sum	Medical Radiography Affiliation II (3 days/week) mer Quarter	2 Units	
RTMR 372 Year 2 - Sum RTMR 373	Medical Radiography Affiliation II (3 days/week) mer Quarter Medical Radiography Affiliation III (5 days/week)	2 Units <u>3</u>	3
RTMR 372 Year 2 - Sum RTMR 373 Year 2 - Fall	Medical Radiography Affiliation II (3 days/week) mer Quarter Medical Radiography Affiliation III (5 days/week) Quarter	2 Units 3 Units	3
RTMR 372 Year 2 - Sum RTMR 373 Year 2 - Fall RTMR 305	Medical Radiography Affiliation II (3 days/week) mer Quarter Medical Radiography Affiliation III (5 days/week) Quarter Introduction to CT 1	2 Units 3 Units 2	3
RTMR 372 Year 2 - Sum RTMR 373 Year 2 - Fall RTMR 305 RTMR 321	Medical Radiography Affiliation II (3 days/week) mer Quarter Medical Radiography Affiliation III (5 days/week) Quarter Introduction to CT 1 Radiographic Image Evaluation	2 Units 3 Units 2 3	3
RTMR 372 Year 2 - Sum RTMR 373 Year 2 - Fall RTMR 305 RTMR 321 RELx	Medical Radiography Affiliation II (3 days/week) mer Quarter Medical Radiography Affiliation III (5 days/week) Quarter Introduction to CT 1 Radiographic Image Evaluation Religion	2 Units 3 Units 2	3
RTMR 372 Year 2 - Sum RTMR 373 Year 2 - Fall RTMR 305 RTMR 321	Medical Radiography Affiliation II (3 days/week) mer Quarter Medical Radiography Affiliation III (5 days/week) Quarter Introduction to CT 1 Radiographic Image Evaluation Religion Medical Radiography Affiliation IV	2 Units 3 Units 2 3 2	3
RTMR 372 Year 2 - Sum RTMR 373 Year 2 - Fall RTMR 305 RTMR 321 RELx	Medical Radiography Affiliation II (3 days/week) mer Quarter Medical Radiography Affiliation III (5 days/week) Quarter Introduction to CT 1 Radiographic Image Evaluation Religion	2 Units 3 Units 2 3	3
RTMR     372       Year 2 - Sum     RTMR     373       Year 2 - Fall     RTMR     305       RTMR     305     RTMR     321       RELx     RTMR     374	Medical Radiography Affiliation II (3 days/week) mer Quarter Medical Radiography Affiliation III (5 days/week) Quarter Introduction to CT 1 Radiographic Image Evaluation Religion Medical Radiography Affiliation IV (4 days/week)	2 Units 3 Units 2 3 2 2	3
RTMR 372       Year 2 - Sum       RTMR 373       Year 2 - Fall       RTMR 305       RTMR 3021       RELx       RTMR 374       Year 2- Wintt	Medical Radiography Affiliation II (3 days/week) mer Quarter Medical Radiography Affiliation III (5 days/week) Quarter Introduction to CT 1 Radiographic Image Evaluation Religion Medical Radiography Affiliation IV (4 days/week) er Quarter	2 Units 3 Units 2 3 2 2 Units	3
RTMR 372       Year 2 - Sum       RTMR 373       Year 2 - Fall       RTMR 305       RTMR 321       RELx       RTMR 374       Year 2- Wint       RTMR 306	Medical Radiography Affiliation II (3 days/week) mer Quarter Medical Radiography Affiliation III (5 days/week) Quarter Introduction to CT 1 Radiographic Image Evaluation Religion Medical Radiography Affiliation IV (4 days/week) er Quarter Introduction to CT II	2 Units 3 Units 2 3 2 2 Units 2	3
RTMR     372       Year 2 - Sum     RTMR       RTMR     373       Year 2 - Fall     RTMR       RTMR     321       RELx     RTMR       RTMR     374       Year 2- Wint     RTMR       RTMR     306       RTMR     363	Medical Radiography Affiliation II (3 days/week) mer Quarter Medical Radiography Affiliation III (5 days/week) Quarter Introduction to CT 1 Radiographic Image Evaluation Religion Medical Radiography Affiliation IV (4 days/week) er Quarter Introduction to CT II Comprehensive Review I	2 Units 3 Units 2 3 2 2 Units	3
RTMR 372       Year 2 - Sum       RTMR 373       Year 2 - Fall       RTMR 305       RTMR 321       RELx       RTMR 374       Year 2- Wint       RTMR 306	Medical Radiography Affiliation II (3 days/week) mer Quarter Medical Radiography Affiliation III (5 days/week) Quarter Introduction to CT 1 Radiographic Image Evaluation Religion Medical Radiography Affiliation IV (4 days/week) er Quarter Introduction to CT II Comprehensive Review I Medical Radiography Affiliation V	2 Units 3 Units 2 3 2 2 Units 2 2 2	3
RTMR     372       Year 2 - Sum     RTMR       RTMR     373       Year 2 - Fall     RTMR       RTMR     321       RELx     RTMR       RTMR     374       Year 2- Wint     RTMR       RTMR     306       RTMR     363	Medical Radiography Affiliation II (3 days/week) mer Quarter Medical Radiography Affiliation III (5 days/week) Quarter Introduction to CT 1 Radiographic Image Evaluation Religion Medical Radiography Affiliation IV (4 days/week) er Quarter Introduction to CT II Comprehensive Review I	2 Units 3 Units 2 3 2 2 Units 2	3
RTMR     372       Year 2 - Sum     RTMR       RTMR     373       Year 2 - Fall     RTMR       RTMR     305       RTMR     321       RELx     RTMR       RTMR     374       Year 2 - Wint     RTMR       RTMR     306       RTMR     363       RTMR     375	Medical Radiography Affiliation II (3 days/week) mer Quarter Medical Radiography Affiliation III (5 days/week) Quarter Introduction to CT 1 Radiographic Image Evaluation Religion Medical Radiography Affiliation IV (4 days/week) er Quarter Introduction to CT II Comprehensive Review I Medical Radiography Affiliation V (3 days/week)	2 Units 3 Units 2 3 2 2 Units 2 2 2 2	3 9 6
RTMR 372     Year 2 - Sum     RTMR 373     Year 2 - Fall     RTMR 305     RTMR 321     RELx     RTMR 374     Year 2 - Wint     RTMR 306     RTMR 306     RTMR 306     RTMR 306     RTMR 305     Year 2 - Wint     Strain 375     Year 2 - Spri	Medical Radiography Affiliation II (3 days/week) mer Quarter Medical Radiography Affiliation III (5 days/week) Quarter Introduction to CT 1 Radiographic Image Evaluation Religion Medical Radiography Affiliation IV (4 days/week) er Quarter Introduction to CT II Comprehensive Review I Medical Radiography Affiliation V (3 days/week) mg Quarter	2 Units 3 Units 2 2 2 Units 2 2 2 Units	3 9 6
RTMR     372       Year 2 - Sum     RTMR       RTMR     373       Year 2 - Fall     RTMR       RTMR     305       RTMR     321       RELx     RTMR       RTMR     374       Year 2- Wint     RTMR       RTMR     363       RTMR     375       Year 2 - Spri       RTMR     342	Medical Radiography Affiliation II (3 days/week) mer Quarter Medical Radiography Affiliation III (5 days/week) Quarter Introduction to CT 1 Radiographic Image Evaluation Religion Medical Radiography Affiliation IV (4 days/week) er Quarter Introduction to CT II Comprehensive Review I Medical Radiography Affiliation V (3 days/week) mg Quarter Professional Development	2 Units 3 Units 2 3 2 2 Units 2 2 2 Units 3	3 9 6
RTMR 372     Year 2 - Sum     RTMR 373     Year 2 - Fall     RTMR 305     RTMR 321     RELx     RTMR 374     Year 2- Wint     RTMR 363     RTMR 375     Year 2 - Spri     RTMR 342     RTMR 365	Medical Radiography Affiliation II (3 days/week) mer Quarter Medical Radiography Affiliation III (5 days/week) Quarter Introduction to CT 1 Radiographic Image Evaluation Religion Medical Radiography Affiliation IV (4 days/week) er Quarter Introduction to CT II Comprehensive Review I Medical Radiography Affiliation V (3 days/week) mg Quarter Professional Development Comprehensive Review II	2 Units 3 Units 2 2 2 Units 2 2 2 Units	3 9 6
RTMR     372       Year 2 - Sum     RTMR       RTMR     373       Year 2 - Fall     RTMR       RTMR     305       RTMR     321       RELx     RTMR       RTMR     374       Year 2- Wint     RTMR       RTMR     363       RTMR     375       Year 2 - Spri       RTMR     342	Medical Radiography Affiliation II (3 days/week) mer Quarter Medical Radiography Affiliation III (5 days/week) Quarter Introduction to CT 1 Radiographic Image Evaluation Religion Medical Radiography Affiliation IV (4 days/week) er Quarter Introduction to CT II Comprehensive Review I Medical Radiography Affiliation V (3 days/week) mg Quarter Professional Development Comprehensive Review II Medical Radiography Affiliation VI	2 Units 3 Units 2 3 2 2 Units 2 2 2 Units 3 2	3 9 6
RTMR 372     Year 2 - Sum     RTMR 373     Year 2 - Fall     RTMR 305     RTMR 321     RELx     RTMR 374     Year 2- Wint     RTMR 363     RTMR 375     Year 2 - Spri     RTMR 342     RTMR 365	Medical Radiography Affiliation II (3 days/week) mer Quarter Medical Radiography Affiliation III (5 days/week) Quarter Introduction to CT 1 Radiographic Image Evaluation Religion Medical Radiography Affiliation IV (4 days/week) er Quarter Introduction to CT II Comprehensive Review I Medical Radiography Affiliation V (3 days/week) mg Quarter Professional Development Comprehensive Review II	2 Units 3 Units 2 3 2 2 Units 2 2 2 Units 3	3 9 6

#### PROGRAM TOTAL 60

updated 08/25/15

## **Program Director:**

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http://www.llu.edu/allied-health/sahp/radtech/as.htm



# LLU at a Glance

Founded in 1905 >> A Seventh-day Adventist institution integrating health, science, and Christian faith >> Offers over 200 programs in the health sciences >> Houses eight schools: Allied Health Professions, Behavorial Health, Dentistry, Medicine, Nursing, Pharmacy, Public Health, and Religion >> About 4,000 students
>> Over 1,300 faculty >> 2,000 professional researchers >> \$46 million dollars in private and public grants generated each year >> Many service learning opportunities

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