RADIATION THERAPY

What can I do with this degree?

Radiation therapists use various forms of high-energy radiation in the treatment of cancer patients and are responsible for the simulation, recording, interpreting, treatment planning, and administration of prescribed courses of radiation therapy. Graduates from Texas State University’s Radiation Therapy program will first develop a theoretical knowledge base, and then will acquire technical skills and practice that will develop and solidify their professional skills in future professional clinical settings.

Radiation Therapy Skills
- Independent thought
- Problem solving skills
- Clear and concise communication skills
- Use specialized equipment
- Good body mechanics and upper body
- Public safety and security
- Sensitivity to the patient’s condition
- Social Perceptiveness
- Precision and attention to detail with administration of x-rays and diagnostic procedures
- Specialized knowledge
- Deductive reasoning

Academic Degrees
- Associate’s degree in Radiation Therapy or Medical Sonography
- Bachelor of Science in Radiation Therapy with a Major in Radiation Therapy

Certifications
- Radiation Therapy Certification through American Registry of Radiologic Technologists (AART)
- Registered Technologist (R.T.)

Areas of Specialization
- Radiation Oncologist
- Biopsy
- Image-guided Radiation Therapy (IGRT)
- Stereotactic Radiosurgery
- Intensity Modulated Radiation Therapy (IMRT)
- Radiation physics
- Brachytherapy
- Computer Tomography (CT)
- Dosimetry
- Proton Therapy
- Fluoroscopy
- Pathology
CAREER PATHS

(Some of the occupations outlined in this brochure may require additional education or training)

**Radiation Therapist:** Radiation therapists administer daily radiation treatment according to their supervising radiation oncologist’s prescription and supervision. They maintain daily records of treatment and activity and ensure that machines are in proper working order.

In addition to completing the degrees listed above, radiation therapists must pass the certification exam by the American Registry of Radiologic Technologists (see below).

**Radiation Oncologist:** These are medical doctors that oversee the care of cancer patients during their radiation therapy treatment. They develop and prescribe each individual patient’s treatment plan, monitor the patient’s progress, and identify and treat any side effects.

This occupation requires a medical degree with four years of residency (specialty) training in radiation oncology, and certification with the American Board of Radiology.

**Medical Radiation Physicist:** These professionals work directly with doctors, overseeing the work of dosimetrists to ensure that complex treatments are administered accurately and fit each individual’s unique needs. Medical physicists are responsible for developing and overseeing quality control of equipment and procedures. They take precise measurements of radiation beams and check safety on a regular basis.

To be a Medical Radiation Physicist, you must complete two- to four years of graduate school and one to two years of clinical training. You must also be certified by the American Board of Radiology or the American Board of Medical Physics.

**Dosimetrists:** Dosimetrists carefully calculate radiation dosages to apply to tumor growth. They develop complex treatment plans to destroy tumors while maintaining healthy normal tissue. They work with the oncologist and medical physicist to develop these plans. Many start as radiation therapists, then undergo intensive training to become dosimetrists. This often requires a one- to two-year dosimetry program. They must also be certified by the Medical Dosimetrist Certification Board.

**Radiation Oncology Nurse:** Nurses are a part of the team in overall care of patients throughout the treatment. They evaluate patients regularly and educate them about treatment, side effects, and other concerns.

Most nurses in radiation therapy have additional accreditation in specialty oncology nursing.

**Possible Work Settings**

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RESOURCES

Texas State University-Student Organizations
CAMCO: Texas State Cancer Advocacy Movement for Colleges and Outreach
http://txstatecamco.hr.txstate.edu/

Professional Organizations
American Registry of Radiologic Technologist, http://www.arrt.org/
American Society of Radiologic Technologists, http://www.asrt.org/
Joint Review Committee on Educational Programs, http://www.jrcert.org/
American Board of Radiology, http://theabr.org/
Radiation Oncology Institute, http://www.roinstitute.org/
Texas Medical Association, http://www.texasmed.org/

Job Search
Occupational Outlook for Radiation Therapists
http://www.bls.gov/ooh/healthcare/radiation-therapists.htm
Radiation Oncology at RadWorking.com
http://www.radworking.com/jobs/oncology-jobs.html
ASTRO Radiation Oncology Career Center
https://www.astro.org/Practice-Management/Career-Center/Index.aspx

Additional Resources
American College of Radiology
http://www.acr.org/
Radiology Info
http://www.radiologyinfo.org/
U.S. Bureau of Labor Statistics
http://www.bls.gov/oes/current/oes291124.htm
Mayo School of Health Sciences – Radiation Therapy Information
http://www.mayo.edu/mshs/careers/radiation-therapy

Career Library Resources
Princeton Review Guide to Careers in Health Professions
Career Opportunities in Health Care (3rd ed.) by Shelly Field
Occupational Outlook Handbook
O*Net http://www.onetonline.org/link/summary/29-1124.00#WorkContext

Information for this handout compiled from:
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