TEXAS STATE®

RADIATION THERAPY BACCALAUREATE DEGREE STUDENT HANDBOOK

Student Guide, Program Policies, and Information

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August 2022

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THE STUDENT HANDBOOK

This handbook is prepared for use by students in the Bachelor of Science Degree Program in Radiation Therapy and contains information specific about the Radiation Therapy Program. For general Texas State University (TXSTATE) policies, see the TXSTATE student handbook and catalog. The catalog is published every two years.

JRCERT NOTICE TO STUDENTS

Students should be informed that issues involving the quality in education, regarding this program may be addressed with the Joint Review Committee on Education in Radiologic Technology (JRCERT).

JRCERT
20 N. WACKER DR., SUITE 2850
CHICAGO, IL 60606-3182
(312) 704-5300
WWW.JRCERT.ORG

PROGRAM POLICY (2.75)

Allegations submitted to the JRCERT regarding non-compliance with education standards will be reviewed and resolved within 30 days of receipt. A record of all complaints and their resolution will be maintained by the program.

STATEMENT OF NON-DISCRIMINATION

Pursuant to Section 504 of the Rehabilitation Act of 1973, Texas State University will provide services and training, without discrimination, to any qualified individual with a disability who meets the academic and technical standards requisite to admission and/or participation in the Radiation Therapy Program.

This handbook contains extremely important information! It is your responsibility to become familiar with the contents, and to refer to it when needed!

ACKNOWLEDGMENT OF 2022 EDITION OF THE RADIATION THERAPY PROGRAM STUDENT HANDBOOK

My signature below indicates that I have read and understand the contents of this handbook. I agree to abide by the policies and procedures outlined and understand that I am responsible for adhering to them.

Student Signature: _____ Date: _____

INTRODUCTION

The structural elements of radiation therapy as a health profession in the contemporary health care delivery system in the United States include the following:

- A cognitive base within a baccalaureate degree level curricula.
- A scope of practice.
- A professional credential.
- A code of ethics.
- Clinical practice autonomy.
- Self-governance.

The history of these elements combines in a complex structure that can be traced across historical time spans and contemporary functional boundaries. For example, in the history of radiography, radiation therapy was at one time a responsibility of the radiographer. This is no longer true today.

The curriculum of the discipline contains elements of physics, psychology, patient care and pathology among others that cross horizontally through several medical specialties. The professional curriculum incorporates didactic and clinical elements and basic sciences that are reflective of contemporary practice in radiation therapy. Content and structured learning experiences develop attitudes and outcomes that prepare graduates to demonstrate a commitment to patient care and continued personal and professional development (ASRT Radiation Therapy Professional Curriculum, 2019).

This program holds as its central core, the Standards for an Accredited Educational Program in Radiologic Sciences, developed and published by the Joint Review Committee on Education in Radiologic Technology (JRCERT). The JRCERT is dedicated to excellence in education, to quality and safety of patient care. Students, faculty, and administrators associated with the Radiation Therapy Program shall recognize that the program shares this commitment and strives to meet and exceed the standards (included in this student handbook).

The Joint Review Committee on Education assures quality in education through the accreditation of educational programs in radiation and imaging sciences. Students shall understand that the **Standards** are directed at the assessment of outcomes for the program and the student. Using these Standards, the goals are to protect the student and the public, and to identify outcomes by which a program establishes and evaluates assessment policies and procedures for continuous improvement. The student has the right to report program infractions of these standards to the JRCERT (contact information provided on the first page of handbook).

RADIATION THERAPY PROGRAM STANDARDS
Revised in 2022 Based on the JRCERT Accreditation Standards

Standard One: Accountability, Fair Practices, and Public Information

The sponsoring institution and program promote accountability and fair practices in relation to students, faculty, and the public. Policies and procedures of the sponsoring institution and program must support the rights of students and faculty, be well-defined, written, and readily available.

Standard Two: Institutional Commitment and Resources

The sponsoring institution demonstrates a sound financial commitment to the program by assuring sufficient academic, fiscal, personnel, and physical resources to achieve the program's mission.

Standard Three: Faculty and Staff

The sponsoring institution provides the program adequate and qualified faculty that enable the program to meet its mission and promote student learning.

Standard Four: Curriculum and Academic Practices

The program's curriculum and academic practices prepare students for professional practice.

Standard Five: Health and Safety

The sponsoring institution and program have policies and procedures that promote the health, safety, and optimal use of radiation for students, patients, and the public.

Standard Six: Programmatic Effectiveness and Assessment: Using Data for Sustained Improvement

The extent of a program's effectiveness is linked to the ability to meet its mission, goals, and student learning outcomes. A systematic, ongoing assessment process provides credible evidence that enables analysis and critical discussions to foster ongoing program improvement.

Accreditation:

The Texas State University Radiation Therapy Program has established accreditation by the Joint Review Committee on Education in Radiologic Technology (JRCERT). The Standards for an Accredited Education Program in Radiological Science may be available by writing to the JRCERT. www.JRCERT.org

MISSION AND GOALS

UNIVERSITY MISSION

Approved by the President's cabinet on October 3, 2016 and revised on December 19, 2016

Texas State University is a doctoral-granting, student-centered institution dedicated to excellence and innovation in teaching; research, including creative expression, and service. The university strives to create new knowledge, to embrace a diversity of people and ideas, to foster cultural and economic development, and to prepare its graduates to participate fully and freely as citizens of Texas, the nation, and the world.

UNIVERSITY GOALS

Based on the 2017 – 2023 Texas State University Plan

Goal 1:
Promote the success of all students.
Goal 2:
Offer high quality academic and educational programming.
Goal 3:
Achieve significant progress in research and creative activity as measured by national standards.
Goal 4:
Provide the necessary services, resources, and infrastructure to support the university's strategic direction.

COLLEGE MISSION

http://www.health.txstate.edu/About/Vision-and-Mission.html

The College of Health Professions educates and prepares healthcare professionals with innovative teaching, evidence-based practice and principles, and a commitment to life-long learning in a student-centered environment. The College excels in teaching, clinical practice, scholarship, and service while responding to the diverse healthcare needs of the State of Texas, the nation, and the global community. The College unites faculty, students, communities, and consumers in coalitions to expand the body of knowledge in healthcare practice and management.

PROGRAM MISSION

http://www.health.txstate.edu/rtt/about/mission.html
To accomplish our vision, the Radiation Therapy Program educates and prepares students with a university level academic foundation, and a high degree of clinical competence to meet the present needs of radiation therapy in Texas and the nation.

PROGRAM VISION

In support of the College of Health Profession's mission, the Radiation Therapy Program will be the program of first choice for students seeking a baccalaureate degree in radiation therapy.

PROGRAM GOALS

The mission is supported by the seven general goals related to student learning and program effectiveness in alignment with the institutional goals. These are stratified and supported by the specific objectives, strategies, and measurable outcomes making up the program's outcome assessment plan.

GOAL 1: The program will produce students with a strong critical thinking ability.

GOAL 2: The program will produce clinically competent radiation therapists.

GOAL 3: The program will produce students with superior communication skills.

GOAL 4: The program will produce graduates who exhibit a high degree of professionalism.

GOAL 5: The program will maintain a level of definitive educational quality improvement.

GOAL 6: The program will retain and support knowledgeable, professional faculty.

GOAL 7: The program will maintain acceptable student enrollment and graduates.

DESCRIPTION OF THE PROFESSION

Radiation therapy is the art and science of treatment delivery to individuals to restore, improve and enhance performance, diminish or eradicate pathology, facilitate adaptation to the diagnosis of malignant disease and to promote and maintain health. Since the major focus of radiation therapy is the delivery of prescribed dosages of radiation to individuals from radiation sources, the radiation therapist's concern is with those factors that influence radiation dose delivery, individual well-being, and responsiveness to treatment as well as those factors that serve as barriers or impediments to treatment delivery.

The practice of radiation therapy is performed by competent radiation therapists who deliver care to the patient in the therapeutic setting and are responsible for the simulation, treatment planning and administration of a prescribed course of radiation therapy. Radiation therapists assume direct responsibility for the well-being of the patient preparatory to, during, and following the delivery of daily treatment. Additional related settings where radiation therapists practice include education, management, industry, and research.

CERTIFICATION

The initials R.T.(T)(ARRT) indicate registered technologist in radiation therapy and certification as a radiation therapist by the American Registry of Radiologic Technologists. Upon completion of a course of study in radiation therapy, individuals may apply to take the national certification examination. The American Registry of Radiologic Technologists (ARRT) is the recognized certifying agency for radiation therapy.

Those who successfully complete the certification examination in radiation therapy may use the credential R.T.(T) following their name; the R.T. signifies registered technologist and the (T) indicates radiation therapist. To maintain ARRT certification and a level of expertise and

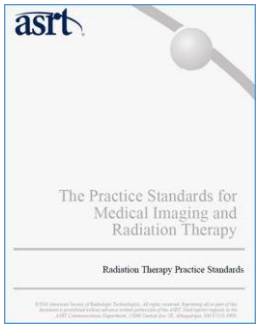
awareness of changes and advances in practice, radiation therapists must complete 24 hours of appropriate continuing education every two years.

LICENSURE IN TEXAS

http://www.tmb.state.tx.us/page/licensing-full-medical-radiologic-technologist

All graduates who pass the American Registry of Radiologic Technologists (ARRT) certification examination are qualified to obtain a Texas license to practice radiation therapy in Texas. Students may apply for a temporary license from the Texas Medical Board, Medical Radiologic Technologist Program after graduation. Graduates are strongly encouraged to complete the registry examination as soon as possible.

Graduates are eligible to apply for a permanent license upon passing the registry examination. Please know in accordance with law passed by the 84th Legislature (SB 202), all Medical Radiologic Technologist, Limited Medical Radiologic Technologist, and Non-Certified Radiologic Technician applicants who apply after August 31, 2019, will also now be required to successfully pass the Jurisprudence (JP) exam. A temporary license is effective for 12 months and is non-renewable. Working graduates who have not obtained a permanent license by the end of 12 months are no longer eligible for employment until successfully completing the registry examination and obtaining a permanent license.



RADIATION THERAPY PRACTICE STANDARDS

(Adopted from the ASRT Effective June 20, 2021)

https://www.asrt.org/main/standards-and-regulations

These practice standards serve as a guide for the medical imaging and radiation therapy profession. These standards define the practice and establish general criteria to determine compliance. Practice standards are authoritative statements established by the profession, through evidentiary documentation, for evaluating the quality of practice, service and education provided by individuals within the profession.

Practice standards can be used by individual facilities to develop job descriptions and practice parameters. Those outside the profession can use the standards as an overview of the role and responsibilities of individuals within the profession.

The medical imaging and radiation therapy professional and any individual who is legally authorized to perform medical imaging or radiation therapy must be educationally prepared and clinically competent as a prerequisite to professional practice. The individual should, consistent with all applicable legal requirements and restrictions, exercise individual thought, judgment and discretion in the performance of the procedure. Federal and state statutes, regulations, accreditation standards and institutional policies could dictate practice parameters and may supersede these standards.

The ASRT Practice Standards are divided into five sections: introduction, scope of practice, standards, glossary, and advisory opinion statements.

Introduction. The introduction defines the practice and the minimum qualifications for the education and certification of individuals in addition to an overview of the specific practice.

Scope of Practice. The scope of practice delineates the parameters of the specific practice.

Standards. The standards incorporate patient assessment and management with procedural analysis, performance and evaluation. The standards define the activities of the individual responsible for the care of patients and delivery of medical imaging and radiation therapy procedures; in the technical areas of performance, such as equipment and material assessment safety standards and total quality management; and in the areas of education, interpersonal relationships, self-assessment and ethical behavior.

Glossary. The glossary defines terms used in the practice standards document.

Advisory Opinion Statements. The advisory opinions provide explanations of the practice standards and are intended for clarification and guidance for specific practice issues.

The standards are numbered and followed by a term or set of terms that describes the standards. The next statement is the expected performance of the individual when performing the procedure or treatment. A rationale follows and explains why an individual should adhere to the particular standard of performance.

Criteria – used to evaluate an individual's performance. Each standard is divided into two parts: the general criteria and the specific criteria. Both should be used when evaluating performance.

General Criteria – written in a style that applies to medical imaging and radiation therapy professionals and should be used for the appropriate area of practice.

Specific Criteria – meet the needs of the individuals in the various areas of professional performance. Although many areas of performance within medical imaging and radiation therapy are similar, others are not. The specific criteria were developed with these differences in mind.

Introduction to Radiation Therapy Practice Standards

Definition

The practice of radiation therapy is performed by health care professionals responsible for the administration of high doses of ionizing radiation for the purpose of treating pathologies, primarily cancer. A radiation therapist acquires and analyzes data in preparation for patient treatment, uses various imaging technologies to localize the treatment area, participates in treatment planning and performs radiation therapy procedures as prescribed and supervised by a radiation oncologist.

Radiation therapists are the primary liaison between patients and other members of the radiation oncology team. They also provide a link to other health care providers, such as social workers and dietitians. Radiation therapists must remain sensitive to the needs of the patient through good communication, patient assessment, patient monitoring and patient care skills. Radiation therapy often involves daily treatments extending over several weeks using highly sophisticated equipment. It requires thorough initial planning as well as constant patient care and monitoring.

Furthermore, these standards apply to health care employees who are legally authorized to perform medical imaging or radiation therapy and who are educationally prepared and clinically competent as identified by these standards.

The complex nature of disease processes involves multiple imaging modalities. Medical imaging and radiation therapy professionals are vital members of a multidisciplinary team that forms a core of highly trained health care professionals, who each bring expertise to the area of patient care. They play a critical role in the delivery of health services as new modalities emerge and the need for medical imaging and radiation therapy procedures increases.

Medical imaging and radiation therapy integrates scientific knowledge, technical competence, and patient interaction skills to provide safe and accurate procedures with the highest regard to all aspects of patient care. A medical imaging and radiation therapy professional recognizes elements unique to each patient, which is essential for the successful completion of the procedure.

Medical imaging and radiation therapy professionals are the primary liaison between patients, licensed practitioners, and other members of the support team. These professionals must remain sensitive to the needs of the patient through good communication, patient assessment, patient monitoring and patient care skills. As members of the health care team, medical imaging and radiation therapy professionals participate in quality improvement processes and continually assess their professional performance.

Medical imaging and radiation therapy professionals think critically and use independent, professional, and ethical judgment in all aspects of their work. They engage in continuing education to include their area of practice to enhance patient care, safety, public education, knowledge, and technical competence.

Education and Certification

The individual must be educationally prepared and clinically competent as a prerequisite to professional practice. Only medical imaging and radiation therapy professionals who have

completed the appropriate education and training as outlined in these standards should perform medical imaging and radiation therapy procedures.

Medical imaging and radiation therapy professionals performing multiple modality hybrid imaging should be registered by certification agencies recognized by the ASRT and be educationally prepared and clinically competent in the specific modality(ies) they are responsible to perform. Medical imaging and radiation therapy professionals performing diagnostic procedures in more than one imaging modality will adhere to the general and specific criteria for each area of practice.

To maintain certification(s), medical imaging and radiation therapy professionals must complete appropriate continuing education requirements to sustain their expertise and awareness of changes and advances in practice.

Overview

An interdisciplinary team of radiation oncologists, radiation therapists, medical dosimetrists, medical physicists and other support staff plays a critical role in the delivery of health services as new modalities emerge and the need for radiation therapy treatment procedures evolve. A comprehensive procedure list for the radiation therapist is impractical because clinical activities vary by the practice needs and expertise of the radiation therapist. As radiation therapists gain more experience, knowledge and clinical competence, the clinical activities for the radiation therapist may evolve.

State statute, regulation or lawful community custom may dictate practice parameters. *Wherever there is a conflict between these standards and state or local statutes or regulations, the state or local statutes or regulations supersede these standards*. A radiation therapist should, within the boundaries of all applicable legal requirements and restrictions, exercise individual thought, judgment, and discretion in the performance of the procedure.

Standard One – Assessment

The medical imaging and radiation therapy professional collects pertinent data about the patient, procedure, equipment, and work environment.

Rationale

Information about the patient's health status is essential in providing appropriate imaging and therapeutic services. The planning and provision of safe and effective medical services relies on the collection of pertinent information about equipment, procedures, and the work environment.

The medical imaging and radiation therapy professional:

General Criteria

- Assesses and maintains the integrity of medical supplies.
- Assesses any potential patient limitations for the procedure.
- Assesses factors that may affect the procedure.
- Assesses patient lab values, medication list and risk for allergic reaction(s) prior to procedure and administration of medication.*†
- Confirms that equipment performance, maintenance and operation comply with the manufacturer's specifications.
- Determines that services are performed in a safe environment, minimizing potential hazards.
- Maintains restricted access to controlled areas.
- Obtains and reviews relevant previous procedures and information from all available resources and the release of information as needed.
- Participates in ALARA, patient and personnel safety, risk management and quality management activities.
- Recognizes signs and symptoms of an emergency.
- Verifies appropriateness of the requested or prescribed procedure, in compliance with the clinical indication and protocol.
- Verifies patient identification.
- Verifies that protocol and procedure manuals include recommended criteria and are reviewed and revised.

  Verifies that the patient has consented to the procedure. Verifies the patient's pregnancy status.

Specific Criteria

Radiation Therapy

- Assesses the patient's need for information and reassurance.
- Identifies and/or removes objects that could interfere with prescribed treatment.

- Inspects beam modifying and immobilization devices prior to use.
- Monitors and assesses patients throughout the treatment course and follow-up visits.
- Monitors doses to normal tissues.
- Monitors side effects and reactions to treatment.
- Monitors treatment unit operation during use.
- Recognizes the patient's need for referral to other care providers, such as a social worker, nurse or dietitian.
- Reviews beam shaping devices prior to treatment delivery.
- Reviews treatment protocol criteria and assesses conditions affecting treatment delivery.
- Reviews treatment record prior to treatment or simulation.

Standard Two – Analysis/Determination

The medical imaging and radiation therapy professional analyzes the information obtained during the assessment phase and develops an action plan for completing the procedure.

Rationale

Determining the most appropriate action plan enhances patient safety and comfort, optimizes diagnostic and therapeutic quality and improves efficiency.

The medical imaging and radiation therapy professional:

General Criteria

Consults appropriate medical personnel to determine a modified action plan.

Determines that all procedural requirements are in place to achieve a quality procedure.

- Determines the appropriate type and dose of contrast media to be administered based on established protocols.*†
- Determines the course of action for an emergent situation.
- Determines the need for and selects supplies, accessory equipment, shielding, positioning and immobilization devices.
- Employs professional judgment to adapt procedures to improve diagnostic quality or therapeutic outcomes.
- Evaluates and monitors services, procedures, equipment and the environment to determine if they meet or exceed established guidelines and revises the action plan.
- Selects the most appropriate and efficient action plan after reviewing all pertinent data and assessing the patient's abilities and condition.

Specific Criteria

Radiation Therapy

- Determines when to contact the radiation oncologist or licensed practitioner regarding patient side effects or questions.
- Determines when to withhold treatment until a radiation oncologist is contacted. • Ensures the appropriate imaging technique is chosen for image-guided radiation therapy procedures.
- Participates in decisions about appropriate simulation techniques and treatment positions.
- Reviews doses daily to ensure that treatment does not exceed prescribed dose, normal tissue tolerance or treatment protocol constraints.
- Reviews patient treatment plan and prescription prior to initial treatment delivery. • Reviews patient treatment records prior to each treatment for prescription or treatment procedure changes.
- Reviews treatment record, calculations and/or treatment plan for accuracy prior to treatment delivery.
- Reviews verification images prior to treatment.
- Verifies the mathematical accuracy of the prescription and the daily treatment summary.
- Verifies treatment planning and machine quality assurance has been performed prior to each treatment.

Standard Three – Education

The medical imaging and radiation therapy professional provides information about the procedure and related health issues according to protocol; informs the patient, public and other health care providers about procedures, equipment and facilities; and acquires and maintains current knowledge in practice.

Rationale

Education and communication are necessary to establish a positive relationship and promote safe practices. Advancements in the profession and optimal patient care require additional knowledge and skills through education.

The medical imaging and radiation therapy professional:

General Criteria

- Advocates for and participates in continuing education related to area of practice, to maintain and enhance clinical competency.
- Advocates for and participates in vendor specific applications training to maintain clinical competency.
- Educates the patient, public and other health care providers about procedures, the associated biological effects and radiation protection.
- Elicits confidence and cooperation from the patient, the public and other health care providers by providing timely communication and effective instruction.

- Explains effects and potential side effects of medications.*†
- Maintains credentials and certification related to practice.

Provides accurate explanations and instructions at an appropriate time and at a level the patient and their care providers can understand, addresses questions and concerns regarding the procedure.

- Provides information on certification or accreditation to the patient, other health care providers and the public.
- Provides information to patients, health care providers, students, and the public concerning the role and responsibilities of individuals in the profession.
- Provides pre-, peri- and post-procedure education.
- Refers questions about diagnosis, treatment, or prognosis to a licensed practitioner.

Specific Criteria

Radiation Therapy

- Anticipates a patient's need for information and provides it throughout the treatment course.
- Instructs other health care providers about radiation protection procedures.
- Instructs patient in the maintenance of treatment markings.
- Provides information and instruction on proper skin care, diet and self-care procedures.

Standard Four – Performance

The medical imaging and radiation therapy professional performs the action plan and quality assurance activities.

Rationale

Quality patient services are provided through the safe and accurate performance of a deliberate plan of action. Quality assurance activities provide valid and reliable information regarding the performance of equipment, materials, and processes.

The medical imaging and radiation therapy professional:

General Criteria

Adheres to radiation safety rules and standards.

- Administers contrast media and other medications only when a licensed practitioner is immediately available to ensure proper diagnosis and treatment of adverse events.*†
- Administers first aid or provides life support.†
- Applies principles of aseptic technique.†
- Assesses and monitors the patient's physical, emotional, and mental status.

- Consults with medical physicist or engineer in performing and documenting quality assurance tests.
- Explains to the patient each step of the action plan as it occurs and elicits the cooperation of the patient.
- Immobilizes patient for procedure.
- Implements an action plan.
- Maintains current information on equipment, materials, and processes.
- Modifies the action plan according to changes in the clinical situation.
- Monitors the patient for reactions to medications. *†
- Participates in safety and risk management activities.
- Performs ongoing quality assurance activities and quality control testing.
- Performs procedural timeout.
- Positions patient for anatomic area of interest, respecting patient ability and comfort.
- Uses accessory equipment.
- Uses an integrated team approach.
- When appropriate, uses personnel radiation monitoring device(s) as indicated by the radiation safety officer or designee.
- Works aseptically in the appropriate environment while preparing, compounding, and dispensing sterile and nonsterile medication.*†

Specific Criteria

Radiation Therapy

- Achieves precision patient alignment using imaging and external markings.

Assists the radiation oncologist in determining the optimum treatment field to cover the target volume.

- Calculates monitor units and treatment times.
- Consults with medical physicist and/or engineer in performing and documenting the quality assurance checks.
- Creates and manages simulation and verification images.
- Demonstrates safe handling, storage and disposal of brachytherapy sources.
- Exports data to treatment planning systems.
- Makes the decision to discontinue patient treatment until equipment is operating properly.
- Monitors the patient visually and aurally during treatment.
- Monitors the treatment console during treatment.
- Obtains radiation oncologist's approval of simulation images prior to initiation of treatment.
- Performs clinically indicated treatment imaging and motion management techniques.
- Performs quality assurance checks on simulator, treatment unit and appropriate equipment.

- Prepares or assists in preparing brachytherapy sources and equipment.
- Uses knowledge of biological effects of ionizing radiation on tissue to minimize radiation dose to normal tissues.
- Verifies that only the patient is in the treatment room prior to initiating treatment or any imaging procedures.

Standard Five – Evaluation

The medical imaging and radiation therapy professional determines whether the goals of the action plan have been achieved, evaluates quality assurance results and establishes an appropriate action plan.

Rationale

Careful examination of the procedure is important to determine that expected outcomes have been met. Equipment, materials, and processes depend on ongoing quality assurance activities that evaluate performance based on established guidelines.

The medical imaging and radiation therapy professional:

General Criteria

- Communicates the revised action plan to appropriate team members.
- Completes the evaluation process in a timely, accurate and comprehensive manner.
- Develops a revised action plan to achieve the intended outcome.
- Evaluates images for optimal demonstration of anatomy of interest.
- Evaluates quality assurance results.
- Evaluates the patient, equipment, and procedure to identify variances that might affect the expected outcome.
- Identifies exceptions to the expected outcome.
- Measures the procedure against established policies, protocols, and benchmarks.
- Validates quality assurance testing conditions and results.

Specific Criteria

Radiation Therapy

- Checks treatment calculations and/or treatment plan.
- Compares verification images to simulation images using anatomical landmarks or fiducial markers.
- Evaluates the patient daily for any side effects, reactions, and therapeutic responses.
- Performs treatment chart checks.

- Reviews treatment discrepancies, determines causes and assists with the action plan.
- Reviews verification images for quality and accuracy.
- Verifies the accuracy of the patient setup prior to treatment delivery.
- Verifies treatment console readouts and settings prior to initiating treatment and upon termination of treatment.

Standard Six – Implementation

The medical imaging and radiation therapy professional implements the revised action plan based on quality assurance results.

Rationale

It may be necessary to make changes to the action plan based on quality assurance results to promote safe and effective services.

The medical imaging and radiation therapy professional:

General Criteria

- Adjusts imaging parameters, patient procedure or additional factors to improve the outcome.
- Bases the revised plan on the patient's condition and the most appropriate means of achieving the expected outcome.
- Implements the revised action plan.
- Notifies the appropriate health care provider when immediate clinical response is necessary, based on procedural findings and patient condition.
- Obtains assistance to support the quality assurance action plan.
- Takes action based on patient and procedural variances.

Specific Criteria

Radiation Therapy

- Collaborates with radiation oncologists, medical physicists, and medical dosimetrists to compensate for treatment inaccuracies.
- Establishes congruence between verification images and simulation images, digitally reconstructed radiographs and/or treatment volumes as defined by the radiation oncologist.
- Formulates recommendations for process improvements to minimize treatment discrepancies.
- Implements treatment plan or treatment field changes as directed by the radiation oncologist.
- Reports deviations from the standard or planned treatment.

Standard Seven – Outcomes Measurement

The medical imaging and radiation therapy professional reviews and evaluates the outcome of the procedure according to quality assurance standards.

Rationale

To evaluate the quality of care, the medical imaging and radiation therapy professional compares the actual outcome with the expected outcome. Outcomes assessment is an integral part of the ongoing quality management action plan to enhance services.

The medical imaging and radiation therapy professional:

General Criteria

- Assesses the patient's physical, emotional, and mental status prior to discharge.
- Determines that actual outcomes are within established criteria.
- Evaluates the process and recognizes opportunities for future changes.
- Measures and evaluates the results of the revised action plan.
- Reviews all data for completeness and accuracy.
- Reviews and evaluates quality assurance processes and tools for effectiveness.
- Reviews the implementation process for accuracy and validity.
- Uses evidence-based practice to determine whether the actual outcome is within established criteria.

Specific Criteria

Radiation Therapy

• Monitors patient status during procedures, throughout the treatment course and for follow-up care.

Standard Eight – Documentation

The medical imaging and radiation therapy professional documents information about patient care, procedures, and outcomes.

Rationale

Clear and precise documentation is essential for continuity of care, accuracy of care and quality assurance.

The medical imaging and radiation therapy professional:

General Criteria

- Archives images or data.

- Documents diagnostic, treatment and patient data in the medical record in a timely, accurate and comprehensive manner.
- Documents medication administration in patient's medical record. *†
- Documents procedural timeout.
- Documents unintended outcomes or exceptions from the established criteria.
- Maintains documentation of quality assurance activities, procedures, and results.
- Provides pertinent information to authorized individual(s) involved in the patient's care.
- Records information used for billing and coding procedures.
- Reports any out-of-tolerance deviations to the appropriate personnel.
- Verifies patient consent is documented.

Specific Criteria
Radiation Therapy
- Documents radiation exposure parameters.
- Maintains imaging and treatment records according to institutional policy.
- Reports any treatment discrepancies to appropriate personnel in accordance with departmental, institutional, and regulatory requirements.

Standard Nine – Quality
The medical imaging and radiation therapy professional strives to provide optimal care.

Rationale
Patients expect and deserve optimal care during diagnosis and treatment.
The medical imaging and radiation therapy professional:

General Criteria
- Adheres to standards, policies, statutes, regulations, and established guidelines.
- Anticipates, considers, and responds to the needs of a diverse patient population.
- Applies professional judgment and discretion while performing the procedure.
- Collaborates with others to elevate the quality of care.
- Participates in ongoing quality assurance programs.

Specific Criteria
Radiation Therapy
- Performs procedures in accordance with the NRC and/or in agreement with state regulations.
- Promotes patient safety by performing external beam treatments with a minimum of two registered radiation therapists.

Standard Ten – Self-Assessment
The medical imaging and radiation therapy professional evaluates personal performance.

Rationale
Self-assessment is necessary for personal growth and professional development.

The medical imaging and radiation therapy professional:

General Criteria
- Assesses personal work ethics, behaviors, and attitudes.
- Evaluates performance, applies personal strengths, and recognizes opportunities for educational growth and improvement.
- Recognizes hazards associated with their work environment and takes measures to mitigate them.

Specific Criteria
Radiation Therapy
Refer to general criteria.

Standard Eleven – Collaboration and Collegiality
The medical imaging and radiation therapy professional promotes a positive and collaborative practice atmosphere with other members of the health care team.

Rationale
To provide quality patient care, all members of the health care team must communicate effectively and work together efficiently.

The medical imaging and radiation therapy professional:

General Criteria
- Develops and maintains collaborative partnerships to enhance quality and efficiency.
- Informs and instructs others about radiation safety.
- Promotes understanding of the profession.
- Shares knowledge and expertise with others.

Specific Criteria
Radiation Therapy
Refer to general criteria.

Standard Twelve – Ethics
The medical imaging and radiation therapy professional adheres to the profession's accepted ethical standards.

Rationale
Decisions made and actions taken on behalf of the patient are based on a sound ethical foundation.

The medical imaging and radiation therapy professional:

General Criteria
- Accepts accountability for decisions made and actions taken.
- Acts as a patient advocate.
- Adheres to the established ethical standards of recognized certifying agencies.
- Adheres to the established practice standards of the profession.
- Delivers patient care and service free from bias or discrimination.
- Provides health care services with consideration for a diverse patient population.
- Reports unsafe practices to the radiation safety officer, regulatory agency or other appropriate authority.
- Respects the patient's right to privacy and confidentiality.

Specific Criteria
Radiation Therapy
Refer to general criteria.

Standard Thirteen – Research, Innovation and Professional Advocacy The medical imaging and radiation therapy professional participates in the acquisition and dissemination of knowledge and the advancement of the profession.

Rationale
Participation in professional organizations and scholarly activities such as research, scientific investigation, presentation, and publication advance the profession.

The medical imaging and radiation therapy professional:

General Criteria
- Adopts new best practices.
- Investigates innovative methods for application in practice.

- Monitors changes to federal and state law, regulations and accreditation standards affecting area(s) of practice.
- Participates in data collection.
- Participates in professional advocacy efforts.
- Participates in professional societies and organizations.
- Pursues lifelong learning.
- Reads and evaluates research relevant to the profession.
- Shares information through publication, presentation, and collaboration.

Specific Criteria
Radiation Therapy
Refer to general criteria.

RADIATION THERAPIST SCOPE OF PRACTICE Effective 2020

The scope of practice of the medical imaging and radiation therapy professional includes: • Administering medications enterally, parenterally, through new or existing vascular access or through other routes as prescribed by a licensed practitioner.*†

- Administering medications with an infusion pump or power injector as prescribed by a licensed practitioner.*†
- Applying principles of ALARA to minimize exposure to patient, self and others.
- Applying principles of patient safety during all aspects of patient care.
- Assisting in maintaining medical records, respecting confidentiality and established policy.
- Corroborating a patient's clinical history with procedure and ensuring information is documented and available for use by a licensed practitioner.
- Educating and monitoring students and other health care providers.*
- Evaluating images for proper positioning and determining if additional images will
- improve the procedure or treatment outcome.
- Evaluating images for technical quality and ensuring proper identification is recorded.
- Identifying and responding to emergency situations.
- Identifying, calculating, compounding, preparing and/or administering medications as prescribed by a licensed practitioner.*†
- Performing ongoing quality assurance activities.
- Performing venipuncture as prescribed by a licensed practitioner.*†
- Postprocessing data.
- Preparing patients for procedures.
- Providing education.
- Providing optimal patient care.
- Receiving, relaying and documenting verbal, written and electronic orders in the patient's medical record.
- Selecting the appropriate protocol and optimizing technical factors while maximizing patient safety.
- Starting, maintaining and/or removing intravenous access as prescribed by a licensed practitioner.*†
- Verifying archival storage of data.
- Verifying informed consent for applicable procedures.*

* Excludes limited x-ray machine operator
† Excludes medical dosimetry22

The scope of practice of the radiation therapist also includes:

- Constructing/preparing immobilization, beam directional and beam-modification devices.
- Delivering radiation therapy treatments as prescribed by a radiation oncologist.
- Detecting and reporting significant changes in patients' conditions and determining when to withhold treatment until the radiation oncologist is consulted.
- Monitoring doses to normal tissues within the irradiated volume to ensure tolerance levels are not exceeded.
- Participating in brachytherapy procedures.
- Performing simulation, localization, treatment planning procedures and dosimetric calculations as prescribed by a radiation oncologist.
- Using imaging technologies for the explicit purpose of simulation, treatment planning and treatment delivery as prescribed by a radiation oncologist.

RADIATION THERAPIST CODE OF ETHICS

Revised and adopted by the ASRT, July 1998

1. The radiation therapist advances the principal objective of the profession to provide services to humanity with full respect for the dignity of mankind.
2. The radiation therapist delivers patient care and service unrestricted by concerns of personal attributes or the nature of the disease or illness, and non-discriminatory with respect to race, color, creed, sex, age, disability, or national origin.
3. The radiation therapist assesses situations; exercises care, discretion, and judgment; assumes responsibility for professional decisions; and acts in the best interest of the patient.
4. The radiation therapist adheres to the tenets and domains of the scope of the scope of practice for radiation therapists.
5. The radiation therapist actively engages in lifelong learning to maintain, improve, and enhance professional competence, and knowledge.

HONOR SOCIETY IN THE RADIOLOGIC AND IMAGING SCIENCES

Texas ΓBA *of Lambda Nu*

National Radiologic and Imaging Sciences Honor Society

Students are encouraged to become members of the Texas State chapter of Gamma Beta Alpha of Lambda Nu Radiation Science National Honor Society.

*To be eligible you must maintain a minimum of a 3.5 GPA and have completed at least 2 semesters within the program. Ask about enrollment in the summer semester.

PROGRAM DESCRIPTION AND POLICIES

The program is a two and one-half year program beginning in the junior year, and consisting of Fall, Spring, Summer, Fall and Spring semesters. Upon completion of the degree, students are eligible to apply for the American Registry of Radiologic Technologists examination. Students are qualified for a Medical Radiologic Technologist License and Certificate from the Texas Medical Board, Medical Radiologic Technologist Program upon passing the examination. Students are accepted to the program during the fall semester of each year.

Admission to TXSTATE does not guarantee admission to the program. Admission to the program is competitive and selective. The academic sequence begins during the fall semester. Enrollment is limited by student/faculty ratios in the clinical components of the program.

Application Material

Each applicant must complete and provide the following by January 15.

1. Radiation Therapy Program application
2. Copy of Texas State University I.D.
3. Official transcripts reflecting all course work
4. Career goal statement
5. Clinical setting evaluations received by department by deadline.
6. Three recommendation forms / personal reference letters in sealed envelope

MINIMUM CRITERIA FOR PROGRAM ADMISSION

1. Admission to Texas State
2. Satisfactory completion of all general education requirements and a minimum overall grade point average of 2.75.
3. Any student who did not complete at least two years of the same foreign language in high school is required to take 6-8 hours of the same foreign language.
4. See Academic Services section of the catalog for course options that satisfy literature components.
5. Applicants must have a Science GPA of 3.0 or higher. No more than 2 attempts on any one science course is permitted (1 repeat). Courses included in the Science GPA computation include:

Bio 1330, 1331, 2430	SOCI 3307
AT 3358 or PSY 4390N	PHYS 1115 or 1125
Chem 1341,1141	PHYS 1315 or 1325
PSY 1300, 2301	Math 2328 or CJ 3377
Math 2417 or Math 2471, Math 2328	PSY 2301
HP 3302	

6. Three letters of reference and a career goal statement.
7. Successful interview of selected candidates with admission committee.
8. 24 hour (3 continuous days) clinical observation with completed evaluation on file by Jan.
9. Students must be able to perform the 13 Technical Standards indicated by the American Disabilities Act (refer to program website or department for more information or see below).
10. Previous misdemeanor or felony convictions will affect admission to the program.

Note: Students who have completed an Associate Degree or Certificate in Radiation Therapy can receive credit toward the Bachelor of Healthcare Administration degree.

Evaluation Process

The Radiation Therapy Program is committed to accepting the best qualified candidates without regard to gender, religion, age, race and other demographic factors. The admissions committee shall be charged with screening applicants, reviewing and evaluating application files, interviewing the applicants, rating and ranking each candidate to establish a new class of a maximum of 18 students.

The applicant evaluation process shall consist of three major parts 1) an application, records and file evaluation 2) a personal interview evaluation 3) the compiling of ratings to formulate a ranking order among the applicant pool. Departmental guidelines and selection criteria shall be provided to each committee member for each process.

American Disabilities Act – Technical Standards

In order to fulfill the requirements of the Radiation Therapy Program, student must be able to:
- Communicate in a clear and concise manner to patients and personnel.
- Read and apply appropriate instructions in patient charts, notes, and records.
- Lift 30 pounds of weight from the floor to shoulder height.
- Move immobile patients from a stretcher to a treatment couch or table.
- Push a patient in a standard wheelchair.
- Have good strength in both upper extremities
- Use good body mechanics to bend, stretch, reach, stoop, kneel, and twist in performance of job duties.
- Reach overhead up to 6 feet off the floor.
- See in dim light.
- Visually monitor patients via video monitors.
- Monitor patients via audio monitors.
- Distinguish equipment and background sounds and hear a variety of pitches.
- Utilize a keyboard to input data.

Critical Dates

January 15 – Application Deadline
February 1 – Interview Signup Sheet Posted
March 6 – (second week of March) Interviews Conducted March
31 – Students Notified

CRIMINAL BACKGROUND CHECK/SCREENING

Background checks, drug screening, as well as proof of immunization are required following initial acceptance into the program. Applicants must successfully clear each of these three requirements to be **fully** accepted and to continue in the program beyond the initial probationary period. Student status is reviewed to meet required criteria and specific background circumstances are considered on an individual basis.

Previous misdemeanor or felony convictions under various titles of the Texas Penal Code may affect eligibility for state license status following graduation and may affect admission consideration to the Radiation Therapy program. A student can be denied continued admission and progression if convicted of any misdemeanor and/or felony offense defined as a crime by statute or common law; or has been convicted of a misdemeanor or felony offense under various titles of the Texas Penal Code.

Texas State University is not required to admit to the program an applicant with a flagged background check who has been given tentative clearance for certain licensures. Students should be aware that such clearance by a state department does not guarantee an applicant's admission or employability.

As a condition for placement in some professional practice sites, **students may be required to meet other requirements set by individual sites** in addition to a background check and/or drug screening. Information on the process of drug screening will be provided by the school/department/program.

To Emphasize:
Placing students in clinical sites in contact with patients and sensitive patient information is of the highest priority. We are extremely careful of the type of person we consider for this program regarding ethics, behavior, and character. You should also know that there are ethical requirements to be eligible to take the national board certification exam as well as the Texas Medical Board for licensure to practice. The program's views are supported by the ethics requirements from the American Registry of Radiological Technologists (ARRT).

ARRT and Program View on Court Dismissals

According to an ARRT Ethics representative the condition of having a charge "dismissed" may have several meanings that does not mean that you were not charged with the activity described. It may mean that you completed requirements to satisfy the court's requirement to "dismiss" the

charge from your record. In our professional view however, charges still present a serious concern regarding your profile as we consider patient safety and professional character.

The radiation therapy program will require the following procedure should students be flagged upon a background check regarding "charges."

1. You will be required to complete the ARRT Pre-Application Ethics review. We must have the results as soon as possible, but not longer than 30 days from the date of our request. Since the ethics review may take up to 3 months, the student is urged to contact them personally explaining your 30 day requirement. You may be allowed to sit in our classes as we begin our semester, however the final admission decision will be based on the ARRT results. You will not be allowed to begin clinical education rotations until your admission is determined.

2. You will be required to consult with the Texas Medical Board, Medical Radiologic Technologist Program. Provide documentation that you will be eligible for licensure.

3. Upon our consultation with the medical institution's ethics department regarding the flags on your profile, should the institution's ethics department refuse to allow you to conduct your clinical education at their site, this will also be a determining factor for your continued admission to the radiation therapy program.

Ethics Requirements

For R.T.s, patients will always be at the heart of the profession—and protecting their best interests and safety should always be the priority. That's why ARRT emphasizes our ethics requirements for certification and registration. Patients and their families want to know that their medical professionals, including technologists, are qualified, responsible, and trustworthy.

Academic Progression

Students enrolled in the Radiation Therapy Program are required to maintain a grade of "C" or better in all coursework. Radiation Therapy courses are offered in a lock-step sequence. Each course is offered only once each academic year; therefore, progress in the program is affected should a student fall out of the sequence due to failure to successfully complete a course. A student who falls out of sequence (whether due to illness, course failure, or other reasons) will be delayed one year to repeat the course. In addition, a student may repeat a radiation therapy course only once. If the student does not earn a grade of at least "C" upon repeating the course, the student cannot continue in the program.

Graduation

To graduate with a Bachelor of Science in Radiation Therapy Degree, a student must successfully fulfill the general education requirements and complete all radiation therapy courses with a "C" or better. The student must meet the requirements for clinical competency as described in the Directed Clinical Learning syllabi. Graduation students must have attained a 2.0 or higher Texas State University GPA with a minimum of a 2.75 GPA in the Radiation Therapy major.

Texas State Radiation Therapy Program Contingency Plan

If extenuating catastrophic circumstances (i.e., mass casualty event, pandemic, natural disaster, etc.) impact Texas State operations, and the radiation therapy program operations, or student access to clinical clinic sites, the radiation program may utilize the following steps to ensure the safety of program students and faculty. The Radiation Therapy Program will ensure that all graduates meet graduation requirements, including ARRT required competencies and successful completion of all coursework with a "C" or better.

Clinical modifications with appropriate notification include:

- Assigned clinical site changes
- Assigned clinical schedule (date and time) changes
- Modifications to student clinical participation expectations
- Extension of clinical course requirements beyond the expected completion date
- Didactic modifications with appropriate notification, include:
    - Class meeting location changes
    - Class meeting schedule (date and time) changes
    - Temporary utilization of distance learning tools and programs for class meetings typically delivered face-to-face
    - Extension of course requirements beyond the expected completion date

The student's education is of utmost importance to the Texas State Radiation Therapy Program. We will do everything in our power to ensure that you graduate on time. However, extenuating catastrophic circumstances may extend the program requirements beyond the expected graduation date.

What you can expect from program officials:

- Timely communication via various reasonable means
- Prioritization of student and faculty safety
- Commitment to student professional development
- Assurance that all program graduates meet graduation requirements

Adopted: May 29, 2021

ASSOCIATED PROGRAM COSTS

In addition to regular university tuition and fees, students should expect to pay program-related expenses. These may include costs related to a background check, CPR certification, uniform, other types of attire required for events, functions; parking fees and travel for clinical experience at sites outside of Round Rock including but not limited to the Austin and San Antonio area, required immunizations, and liability insurance. (For a full breakdown of associated costs please see the Radiation Therapy program website)

TXSTATE and its affiliated clinical facilities are not responsible for any of my medical expenses incurred while enrolled in the Radiation Therapy program. Medical and health insurance is recommended while enrolled in the program.

LIABILITY INSURANCE

It is the policy of the College of Health Professions that no student(s) will participate in a clinical, internship or practicum activity until they are covered by liability insurance. The college will provide liability insurance under a blanket policy prior to their participation in any clinical, internship or practicum activity.

STUDENT LIABILITY REPORTING

1. Students should be informed prior to each clinical/internship enrollment that they must immediately report any adverse event in which they are involved. This should be reported on Adverse Event Report Form to:

a. Their on-site clinical/internship supervisor

b. Their University clinical/internship supervisor

2. The University supervisor must notify the department/program chair and the Dean's office as soon as they are informed of an adverse event and furnish copies of the report from the student and the on-site supervisor to the Dean's office.

3. If the student receives notice of a potential claim against them, the student shall immediately, but not more than 3 days from receipt of such notice, furnish a copy of such notice to their University supervisor who will in turn furnish a copy to the Dean's office immediately.

4. In case of a potential claim against the University, the Dean's office will notify the Texas State University System Office of General Counsel and the insurance carrier, if any, and furnish copies of all documents to both as soon as possible.

HEALTH INSURANCE

You are responsible for any personal injury that occurs at the university or clinical facility. Purchase of Health/Accident Insurance is required. A copy of your insurance information is kept in your student file, it is your responsibility to keep this information current.

IMMUNIZATION REQUIREMENTS

It is a policy of the College of Health Professions that each student must provide a health report completed by a physician and must take certain immunizations before the student can be placed in a clinical or internship assignment. Information on these requirements and forms to be supplied may be obtained through the program office. The University Student Health Center offers immunization for Hepatitis B infection **(mandatory).** The cost includes an initial vaccination, a second immunization one-month later and a final immunization 6 months after the initial vaccination. For additional information contact the Student Health Center. Specific requirements are outlined in the Clinical Section of this handbook.

AIDS POLICY

The institutional policy with regards to students with AIDS follows the general guidelines of the American College Health Association and TXSTATE UPPS 07.09.01 Management of Acquired Immune Deficiency Syndrome (AIDS) on Campus.

Education – Information is provided by the university through the University Student Health Center. Employee pamphlets are available to students upon request

STUDENT RECORDS and RELEASE OF INFORMATION

Students are required to keep personal data current with the RTT Program. Changes in address, phone number and names must be promptly noted in student's files. Changes may be given to the RTT Program Administrative Assistant. The release of information to and about students is in conformance with the Family Education Rights and Privacy Act, amended 1975. Your parents or relatives will not be provided with any information regarding your grades without your written consent.

THE CURRICULUM

Bachelor of Science in Radiation Therapy

Minimum 120 Hours

FRESHMAN YEAR						Effective: FALL 2022		
Fall Semester			**Spring Semester**			**Summer Semester**		
ENG 1310	College Writing I	3hrs	ENG 1320	College Writing II	3hrs	English Lit.[2]	See below	3hrs
HIST 1310	Hist of US to 1877	3hrs	HIST 1320	Hist US 1877 to date	3hrs	PHIL 1305	Phil & Crit Thinking	3hrs
BIO 1330	**Functional Bio**	**3hrs**	**BIO 1331**	**Organismal Bio**	3hrs	**PSY 1300**	**Intro to Psyc**	**3hrs**
COMM 1310	Fund Human Comm	3hrs	**CHEM 1341**	**Gen Chem I**	3hrs			
US 1100[1]	University Seminar	1hrs	**CHEM 1141**	**Gen Chem Lab I**	1hr			
		13 hrs			13 hrs			9 hrs
SOPHOMORE YEAR								
Fall Semester			**Spring Semester**					
BIO 2430	**Hum A & P**	**4hrs**	**AT 3358[5]**	**PathoPharm**	**3hrs**			
POSI 2310	Prin of Amer. Gov	3hrs	POSI 2320	Function of Amer Gov	3hrs			
MATH 2417	**Pre-Calculus**	**4hrs**	**PHYS 1315**	**General Physics I**	**3hrs**			
Fine Arts 2313[3]	see below	3hrs	**PHYS 1115**	**General Phys Lab**	**1hr**			
			HP 3302[4]	**Biostats for HP**	**3hrs**			
		14 hrs			13 hrs			
JUNIOR YEAR								

Fall Semester			**Spring Semester**			**Summer Semester**		
RTT 3314	Cross sectional	3hrs	RTT 3310	RTT Physics I	3hrs	RTT 4189	RT Lit Scholar & Writ	1 hr
RTT 3301	Intro to RTT	3hrs	RTT 3350	Radiobiology	3hrs	RTT 4330	Quality Assurance	3hrs
RTT 3300	Patient Care	3hrs	RTT 4370	Clin. Rad. Onc. I	3hrs	RTT 4220	Directed Clinic III	2hrs
RTT 3220	Directed Clinic I	2hrs	RTT 3221	Directed Clinic II	2hrs	RTT 4120	Clinical Sim Lab 3	1 hr
RTT 3120	Clinical Sim Lab 1	1 hr	RTT 3121	Clinical Sim Lab 2	1 hr			
RTT 3302	Rad. Science	3hrs						
		15 hrs			12hrs			7hrs
SENIOR YEAR								
Fall Semester			**Spring Semester**					
RTT 4371	Clin. Rad.Onc. II	3hrs	RTT 4361	Dosimetry II	3hrs			
RTT 4360	Dosimetry I	3hrs	RTT 4331	Operational Issues	3hrs			
RTT 4310	RTT Physics II	3hrs	RTT 4291	RTT Review	2hr			
RTT 4221	Directed Clinic IV	2hrs	RTT 4191	RTT Seminar	1hr			
RTT 4121	Clinical Sim Lab 4	1 hr	RTT 4222	Directed Clinic V	2hrs			
			RTT 4122	Clinical SimLab 5	1 hr			
		12hrs			12hrs			

[1]All first-year students who have completed less than 15 hours of college credit after high school graduation must take US 1100. Other students who are unsure of their requirements, or is US1100 is waived, the should see the advising center. The student must have 120 hours to graduate.

[2] Select from ENG 2310, 2320, 2330, 2340, 2359, or 2360

[3] Select from ART 2313, DAN 2313,, MU 2313, or TH 2313							
[4] Students must take 3 hours from HP 3302, PSY 2301, SOCI 3307, MATH 2328 OR CJ 3347.							
[5] Student may substitute with PSY4390N							

REQUIRED TEXTBOOKS

These textbooks are used for more than one course and would only need to be purchased once for use throughout the entire program enrollment. Students are advised to retain all textbooks for certification review purposes.

Directed Clinical Courses — Perez & Brady's Principles and Practice of Radiation Oncology, 7th Edition. (2018). *Wolters Kluwer ISBN-13: 9781496386793; ISBN-10: 1496386795*

RTT 3300 - Patient Care — Principles and Practice of Radiation Therapy, 5th Ed. *Washington/Leaver/Trad ISBN-13: 978-0323596954ISBN-10: 0323596959*

RTT 3301- Intro. R.T. — Principles and Practice of Radiation Therapy, 5th Ed. *Washington/Leaver/Trad ISBN-13: 978-0323596954ISBN-10: 0323596959*

RTT 3302 - Rad Science
- Rad Science for Technologists: Physics, Biology, Prot 11th ed *ISBN-10 : 9780323353779 ISBN-13.: 978-0323353779* *And* Course Pack

RTT 3310 - Physics of RT 1 Radiation Therapy Physics 3rd Edition, William R. Hendee *ISBN-13: 978-0471394938*
The Physics of Radiation Therapy 5th Edition, Faiz M. Kahn *ISBN-13: 978-1451182453*

RTT 3330 - Quality Assur. Principles and Practice of Radiation Therapy, 5th Ed. *Washington/Leaver/ Trad ISBN-13: 978-0323596954ISBN-10: 0323596959*

RTT 3350 – Radiobiology — Basic Clinical Radiobiology, 4th edition *Joiner& Vander Kogel ISBN: 978-0-340-92966-7* *And* Course Pack

RTT 4310 - Physics of RT 2 Radiation Therapy Physics 3rd Edition, William R. Hendee *ISBN-13: 978-0471394938*

The Physics of Radiation Therapy 5th Edition, Faiz M. Kahn
ISBN-13: 978-1451182453

RTT4360 - Dosimetry 1 Principles and Practice of Radiation Therapy, 5th Ed.
RTT4361 - Dosimetry 2 *Washington/Leaver/ Trad ISBN-13: 978-0323596954ISBN-10: 0323596959*

RTT4370 - Clin. Rad.Onc 1 Principles and Practice of Radiation Therapy, 5th Ed.
RTT4371 - Clin. Rad.Onc 2 *Washington/Leaver/ Trad ISBN-13: 978-0323596954ISBN-10: 0323596959*

CARDIOPULMONARY RESUSCITATION
A course in CPR must be completed before the student begins the clinical training (first semester). When the student has completed the CPR course, a copy of the card is to be filed with the student's records. Certification must be valid for the 2 years of the program. Sources for instruction will be the American Red Cross or the American Heart Association (Basic Life Skills Course for Healthcare workers). On-line courses are not permitted, unless accompanied by in-person skills assessment.

HONESTY
Honesty is a necessary trait in all healthcare professionals. It is assumed by the Program that all students practice honest and ethical behavior. Inability to fulfill this assumption regarding academic honesty will result in disciplinary action as outlined in the Texas State student handbook, page 69: Academic Honesty Statement.

PROFESSIONAL DEVELOPMENT
Students are encouraged to join and attend meetings and other activities of the local professional organizations for radiation therapists. Students are also encouraged to join the American Society of Radiologic Technologists and the Texas Society of Radiologic Technologists.

BREAKS AND HOLIDAYS
Students will receive all university holidays and breaks. Additional information in Clinical Education section.

STUDENT ADVISING
Each student shall receive academic advising by the RTT program and the College of Health Profession's Academic Advising Center. All inquiries and problems that relate to academic matters may be addressed in this manner. If you should experience any problems or difficulties that cannot be resolved, you may contact the Associate Dean of the College of Health Professions. The appropriate chain of command will be followed regarding all complaints. In addition, the Texas State Counseling Center is available for

students who wish to seek further assistance. Mediation services and the Students' Legal Advisor's Office are resources also available to assist the student.

SCHOLARSHIPS

Students may obtain financial aid information at Texas State's Financial Aid and Scholarships Office. Scholarships may also be available through the Radiation Therapy Program's endowed scholarship program, the Professional Organizations, from the Lambda Nu National Honor Society in the Radiologic & Imaging Sciences after you become a member, and from the College of Health Professions. Separate application must be made for each.

ABSENCES FROM CLASS, CLINICALS, AND LAB SESSIONS

Students will be held accountable for all assignments and material missed due to absenteeism. Grade penalties for absences will be imposed to emphasize the importance of consistent attendance. Each faculty member will make course policy relating to absenteeism. Absenteeism policy will be included in each course syllabus. Students will be required to make up any / all absences from Directed Clinical Learning Courses.

Students should pay special attention to excessive absences as defined in the course syllabi. As an accredited clinical and professional program, our expectations are for students to be at their assigned classes or clinics as scheduled. As a lock-step program, failure to complete requirements of one course impacts your entire course of study and progression of the curriculum. Your interview for admission served to make these types of policies clear; this student handbook reaffirms these expectations built on policies and procedures.

STUDENT EMPLOYMENT

Students are informed during the admissions interview that the program requirements allow little time for employment after their second semester. The program strives to separate employment from educational tasks and relations. Supervision of the clinical education involves the protection of the student's rights and limits the student's activities to educationally related and valid academic and clinical requirements.

- Students and a supervisor must complete a Student Employment Form (provided from the department). A sample form may be found as appendix D.
- Students may be employed in a clinical radiation oncology facility outside educational hours provided the work does not interfere with the educational program. An employer issued film badge must be worn, students must not wear their Texas State film badge during work hours.
- The student should not be involved in unsupervised treatment of patients.
- The work must be non-compulsory, paid and subject to employee regulations.
- The student employed during training is not covered during hours worked in that employment for liability by Texas State University.

Students must NOT wear their Texas State film badge during work hours.
An EMPLOYER-ISSUED badge must be worn during any/all working hours.

PRE-GRADUATION

The student is awarded the Bachelor of Science Degree in Radiation Therapy upon completion of the program. Graduate fees may be paid during TXSTATE's CATSWEB registration system. The cap and gown must be ordered through TXSTATE's bookstore. The registrar's office is responsible for mailing degrees.

A formal graduation reception is held in May of each year. The reception includes a pinning ceremony to acknowledge the successful completion of all program requirements in anticipation of graduation. **Only graduating students are expected to attend.** Students within the graduating class but lacking a requirement for graduation should refrain from participation until the actual graduating year.

SERVICES FOR THE PHYSICALLY CHALLENGED

The program is in compliance with the University's policy of non-discrimination against otherwise qualified disabled persons (as found in the University's Undergraduate Bulletin). The Program Director and TXSTATE's Disability Service Center are available to students in need of guidance in this area.

ACADEMIC OFFENSES and DUE PROCESS

The RTT Program follows the policies and procedures as outlined in the electronic student handbook found within the Dean of Student's office http://www.dos.txstate.edu/handbook.html in support of a well-established due process procedure. The RTT program will make every effort to address academic offenses within the academic unit first. Cases not resolved may then be referred to the University Honor Code Council.

TEXAS STATE ACADEMIC HONOR CODE

As members of a community dedicated to learning, inquiry and creation, the students, faculty and administration of our university live by the principles in this Honor Code. These principles require all members of this community to be conscientious, respectful and honest.

WE ARE CONSCIENTIOUS. We complete our work on time and make every effort to do it right. We come to class and meetings prepared and are willing to demonstrate it. We hold ourselves to doing what is required, embrace rigor, and shun mediocrity, special requests, and excuses.

WE ARE RESPECTFUL. We act civilly toward one another, and we cooperate with each other. We will strive to create an environment in which people respect and listen to one another, speaking when appropriate, and permitting other people to participate and express their views.

WE ARE HONEST. We do our own work and are honest with one another in all matters. We understand how various acts of dishonesty, like plagiarizing, falsifying data, and giving or receiving assistance to which one is not entitled, conflict as much with academic achievement as with the values of honesty and integrity.

Addressing Acts of Dishonesty
Students accused of dishonest conduct will have their cases heard by the faculty member and the department chair. The student may also appeal the faculty member's decision to the Honor Code Council. Students and faculty will have the option of having an advocate present to insure their rights. Possible actions that may be taken range from exoneration to expulsion.

Academic Offenses
A. Academic work means the preparation of an essay, thesis, report, problem assignment or other projects which are to be submitted for purposes of grade determination.
B. Violation of the Honor Code includes, but is not limited to, cheating on an examination or other academic work, plagiarism, collusion and the abuse of resource materials. Cheating means engaging in any of the following activities:

- Copying from another student's test paper, laboratory report, other report of computer files, data listing or programs.
- During a test, using materials not authorized by person giving the test.
- Collaborating, without authorization, with another person during an examination or in preparing academic work.
- Knowingly, and without authorization, using, buying, selling, stealing, transporting, soliciting, copying, or possessing, in whole or in part, the content of an unadministered test.
- Substituting for another student or permitting another person to substitute for oneself in taking an examination or preparing academic work.
- Bribing another person to obtain an unadministered test or obtain information about an unadministered test.
- Purchasing, or otherwise acquiring and submitting as one's own work any research paper or other writing assignment prepared by an individual or firm. This section does not apply to the typing of the rough or final versions of an assignment by a professional typist.

C. Plagiarism means the appropriation of another's work and the unacknowledged incorporation of that work in one's own written work offered for credit.

D. Collusion means the unauthorized collaboration with another person in preparing written work offered for credit.

E. Abuse of resource materials means the mutilation, destruction, concealment, theft or alteration of materials provided to assist students in the mastery of course materials.

Penalties for Academic Dishonesty
Students who have been found responsible for committing academic dishonesty may be subject to:
A. Academic Penalties

- A requirement to perform additional academic work not required of other students in the course

- A reduction to any level of the grade in the course, or on the examination or other academic work affected by violation of the Honor Code
- A requirement to withdraw from the course with a grade of F or W.

B. Disciplinary Penalties means any penalty that may be imposed in a student disciplinary matter pursuant to The Official Texas State Code of Student Conduct. Procedures in Cases of Academic Dishonesty

A. Initiation of Action
When a member of the faculty reasonably suspects that a student under the faculty member's supervision has violated the Honor Code, the faculty member will follow these procedures. The faculty member's proceedings are informal and are not adversarial. The faculty member may consult with his or her chair regarding the matter.

B. Faculty Disposition
The faculty member will summon the student orally or in writing to a private, personal conference. At the meeting the faculty member will explain to the student both the suspected code violation and the evidence that supports the suspicion that the violation occurred. The faculty member may rely on documents and other written statements. If the faculty member relies on documents or written statements, the faculty member will provide the student with copies of such documents.
The faculty member will give the student at least three calendar days to respond to the suspected code violation. The student may respond in writing or in person at a subsequent meeting with the faculty member, as determined by the student. The student may be represented by legal counsel at any meeting.
If the student fails to respond in the time that the faculty member provides, the faculty member may proceed to determine the matter as provided below.
The faculty member, after considering the evidence and the student's response, will determine whether the student violated the Honor Code and will notify the student of his or her determination and of any academic penalty assessed. The faculty member will also advise the student that the student may accept or reject either the faculty member's determination or any academic penalty.
a. If the faculty member is not convinced that the student violated the Honor Code, the matter will end.
b. If the faculty member is convinced that the student violated the Honor Code, the faculty member may assess an academic penalty as defined in Section 2.04.
c. In addition to an academic penalty, a faculty member may recommend additional disciplinary action.

On the Honor Code Review Form, the faculty member shall:
a. note his or her determination and any academic penalty;
b. note any additional disciplinary penalty recommended;
c. give the student an opportunity to indicate the student's acceptance or rejection of the faculty member's determination;
d. sign and date the form; and

e. deliver the form to the Coordinator of Student Justice with copies to the student and faculty member's dean.

C. Convening the Honor Code Council

The dean of the college will convene the Honor Code Council if (1) the faculty member recommends an additional disciplinary penalty; (2) the student rejects the faculty member's determination; or (3) the student has a record of a previous violation of the Honor Code. When the Honor Code Council convenes, it will give the student notice of the reported code violation, notice of the evidence that it has to support that violation, and an opportunity to respond, according to these procedures.

a. Reviewing Academic Penalties. When the Honor Code Council reviews an academic penalty, it will ask the faculty member to submit, in writing, the documentation and evidence that supports the suspected offense, as well as any mitigating evidence. The Council will then provide the student with a copy of the faculty member's materials and an opportunity to respond to those materials within a reasonable time determined by the Council. The Council may request additional written materials from either party. The Council will consider all material submitted and make its recommendation as provided below.

b. Reviewing Disciplinary Recommendations. When reviewing a recommendation for a disciplinary penalty, the Council will follow the applicable procedures for hearings in Section 03.05 of the Code of Student Conduct. These procedures include notice to the student of the charges and evidence of an Honor Code violation and an opportunity to respond to the charges and evidence at a hearing.

c. Reviewing Cases Involving Both Academic Penalties and Disciplinary Recommendations. When reviewing cases that involve both an academic penalty and a recommendation for a disciplinary penalty, the Council will review the academic penalty under the procedures in subsection “a” above, and will review the disciplinary recommendation under the procedures in subsection “b” above.

After conducting its review, the Council will submit its findings and recommendations to the dean of the college where the alleged violation occurred. The dean will make a determination as to whether the student violated the Honor Code and, if so, as to whether to impose any academic or disciplinary penalty on the student.

a. If the Dean is not convinced that the student violated the Honor Code, the matter will end and the dean will remit the student's work to the faculty member for evaluation and grade assignment with supervision from the dean or the dean's representative.

b. If the Dean is convinced that the student violated the Honor Code, the dean may assess an academic penalty, a disciplinary penalty, or both.

Appeal

Within five days of receiving the dean's written decision, the student may appeal in writing to the

Provost and Vice President for Student Affairs. As provided in the Rules and Regulations of the Board of Regents, Texas State University System (Chapter VI, Section 5.36), the Provost will hear appeals of academic decisions and the Vice President for Student Affairs will hear appeals of disciplinary decisions. The Provost and Vice President for Student Affairs will render their decisions on the appeals within a reasonable time and will inform all parties, including the student and the faculty member, of their decisions. To appeal, the student should send written appeals to both officials. In both cases, grounds for appeal are limited to allegations that: Proper due process procedures were not followed. However, deviance from prescribed procedures will not necessarily invalidate a decision or proceeding unless they caused significant prejudice to the student. The penalties assessed are not commensurate with the code violation committed; or The university has violated a right guaranteed the student by the Constitution or laws of the United States or the state of Texas.

ACADEMIC STUDENT STANDING POLICIES

1. Student Disciplinary Procedures involving both academic and non-academic misconduct have been defined in the Texas State student handbook. This is applicable to every student enrolled at the university in addition to the professional behavior described in the clinical education section of this handbook. Applicable policies can also be found in the university's web page. The procedures are based on due process and are constructed to protect both the student and the university.
2. Permanent records are kept by the Records and Registration office. These are confidential between the student and the university. Students may request transcripts of their permanent academic records at any time by providing an authorizing signature for the release of records.
3. Grades are assigned according to the university's grading system on a four point scale (detailed in the undergraduate catalog and student handbook along with definitions and policies for pass/fail, incomplete, withdrawal and credit by examination).
4. Academic policies relating to student standing at the university are found in the undergraduate catalog and student handbook.

<u>The following provisions and definitions apply to the Radiation Therapy Program.</u>

Student standing in the Radiation Therapy Program is defined as "good standing," "probation," or "dismissed."

Good Standing A student in "good standing" has no deficiencies and will be able to continue the sequence of courses in the curriculum. When all the requirements of the Radiation Therapy Program and the university are satisfied, the student will graduate. To remain in good standing, students must exhibit compliance with policies of the university and the Radiation Therapy Program. In addition to academic achievement, student's performance must demonstrate satisfactory progress in clinical skill development and professional attributes, as evaluated by program officials.

Probation All new students are classified as "on probation" for the first two semesters in the program (New Student Probation Period). Students are advised that a grade of "D" in any course during this probation period will result in an automatic dismissal from the program. A student may be classified as "on probation" in the Radiation Therapy Program, even if not on probation with the university.

A student will be placed on probation during the program if:

- The semester or cumulative grade point average falls below 2.75
- The student receives a letter grade of "D" for any course.
- The student performance indicates unsatisfactory progress in developing clinical skills and professional attributes.

A student who receives a letter grade of "D" for any course must arrange personal consultation with the course instructor. The student will be provided consultation with clear remediation instructions and guidelines. The instructor will complete a consultation form that describes the deficiency and provides a clear recommended plan of action. Both instructor and students will provide signatures of understanding. The failure to complete the recommended plan of action within the time frame designated will result in automatic dismissal.

A student on probation may not continue with any course within the curriculum, may not continue to the next clinical course, may not graduate in the major until the deficiency has been corrected. Each course is specifically sequenced and provided once each year. Students that are required to repeat a course will be considered on probation during the 12-month lapse period.

Do not just go away and disappear, faculty will not go looking for you. It is the student's responsibility to make consultation arrangements.

Assuring Clinical Competence After a Probation Period

Clinical competence at the point of graduation is a program responsibility. It is recognized that the level of clinical achievement and competence will decrease within the 12-month lapse period. The demonstration of competence 12 months prior to graduation is not a valid indicator of current skill. Students must show competence and demonstrate sustained skill levels from an acceptable time frame prior to graduation to the point of graduating. The following procedure will serve as a mechanism by which the student will be evaluated for current clinical competence and skill. The student returning from a 12-month probation period must:

- Repeat the last clinical course taken regardless of course grade.
- Demonstrate clinical competence by repeating selected competency examinations. The clinical coordinator will be responsible for making the selections from the Program Mandatory Treatment and Simulation checklist.
- Demonstrate an acceptable level of competence, equal to or higher than the level achieved prior to the probation period.

The student requiring a 12-month lapse period must also repeat a clinical course.

Dismissal

A student may be "dismissed" from the Radiation Therapy Program, irrespective of status with the university, if:

- The student receives a course grade of "D" during the New Student Probation Period.
- The student receives a course grade of "F".
- The student receives a "D" and fails to arrange a personal consultation with the course instructor within 30 days.
- The student is not in compliance with the recommended plan of action set forth to clear probation (within the time period indicated).
- The student receives a second course grade of "D" or lower after repeating a course.

Additionally, while most actions involving dismissal would occur following a probationary period, the Student Review Board may dismiss a student from the major in radiation therapy, without having previously been placed on probation, under the following conditions:

i. Academic ineligibility as per university policy defined in the student handbook, under "Minimum Academic Standards."

ii. Academic offenses/dishonesty defined in the TXSTATE student handbook.

iii. Non-academic misconduct as defined in the TXSTATE student handbook under, "Conduct Required" and "Conduct Prohibited." The Radiation Therapy Program stipulates a "Code of Professional Conduct," defines professional behavior and non-professional behavior in the Clinical Policies and Procedures section of this handbook.

iv. Non-academic misconduct while enrolled in the Professional Curriculum including but not limited to:

Patient Safety Is Our Number One Priority*

- Attending a clinical education site under the influence of drugs or alcohol.
- Contributing to the injury of a patient, staff member or fellow student.
- Failure to comply with any radiation protection standards.
- Breach of patient confidentiality or privacy.
- **Dishonesty in reporting of clinical hours or absences.**
- **Falsifying records or program documents.**
- **Excessive absenteeism or tardiness.**

- **Failure to report any medical condition and/or any required medication or treatment that may pose a risk of injury to the patient by disrupting clear concentration and good judgment.**
- Failure to follow doctor's orders related to any medical condition that may pose a risk to patients.
- Gross disrespect or insubordination toward program officials and/or instructors.
- Failure to comply with policies and procedures of any clinical education site

5. Reinstatement: Program officials may reinstate a student under the following provisions.
   a. Students declared academically ineligible by the university and dismissed will follow university policies for reinstatement. If approved, the student will be placed on probation for one semester. Following that semester, if the student is returned to good standing, he/she may reapply for admission to the major and be considered for acceptance along with the other applicants. The student is not guaranteed readmission.
   b. Students dismissed for academic or non-academic misconduct by the university may petition for readmission according to the university policies published in the TXSTATE student handbook and TXSTATE web page. A student readmitted by this mechanism may reapply to the Radiation Therapy Program and be considered for acceptance along with the other applicants. The student is not guaranteed readmission.
   c. Students dismissed from the Radiation Therapy Program, but in good standing with the university may reapply to the program for a subsequent class. The student will be required to discuss the successful remedy of the problem leading to dismissal with the Program Admissions Committee during the student selection interviewing process. The student is not guaranteed readmission.
6. Change of Grade: Students who wish to protest a grade earned in a course should first discuss the grade with the instructor. If no resolution is reached, the student may appeal the grade to the program chair. If no satisfactory conclusion can be reached at this level, the student may appeal to the college dean whose decision is final. This corresponds with the university policy. Appeals must be made no later than five working days after the decision or after having received the grade. All supporting documentation, including written arguments when requested, shall be filed no later than five working days after notice of appeal is given.
7. Graduation Requirements: Candidates for the bachelor in science degree in radiation therapy must accomplish the following prior to graduation.
   a. Fulfill the general education requirements
   b. Be a student in good standing.
   c. Complete the courses prescribed by the Undergraduate Curriculum Committee for the degree of radiation therapy with a cumulative grade point average of at least a 2.75. Grades below "C" in individual courses are unacceptable and must be repeated.
   d. Meet the requirements for clinical competency as described in the Directed Clinical Learning syllabi.

8. Transfer of credits earned at colleges and universities accredited by an acceptable regional accreditation agency will be governed by university rules as presented in the undergraduate catalog and/or by established articulation agreements for the major.
9. Student Withdrawal and Reentry:
    a. Withdrawal from a course is usually not possible without affecting status in the major. The curriculum is rigorous and strictly sequenced. If a student would withdraw from a course, he/she would be unable to proceed into the next semester or summer session and would have to appeal to the Student Review Board to be allowed to retake the course at a later time as members of future classes would be affected.
    b. Withdrawal from the major should be considered carefully prior to any action being taken. The student is strongly urged to talk with the College of Health Professions Advisor as well as the program chair. Program officials will make every attempt to deal with the student's concerns and facilitate continuance. A statement in writing is required by the Program Chair if the student determines to withdraw.
    c. Reentry and Readmission: Students who feel they must withdraw from the major once accepted, are encouraged to speak to program officials prior to withdrawal. Students are not guaranteed placement should they wish to reenter. They must reapply to the major and be considered for placement by the Admissions Committee.
10. A leave of absence approval is required of any student who will miss more than two consecutive weeks of training while in the professional phase of the major. A student must submit a request in writing for such a leave and speak with the Program Chair. The Program Chair will develop a plan for a return after leave of absence. Approval of the plan must be granted by program officials.

PROGRAM FACULTY

PROGRAM CHAIR (DIRECTOR)

The Program Chair is responsible for the overall administration of the program. The director organizes, administers, reviews, develops, and assures program effectiveness. This individual assumes responsibility for the direction of the Radiation Therapy Program, maintains compliance with the Standards for an Accredited Educational Program in Radiologic Sciences, develops and implements the program's strategic plan. The chair assures that administration, faculty, and clinical staff support the fulfillment of the program's missions and goals.

THE PROGRAM CLINICAL COORDINATOR

The Program Clinical Coordinator is responsible for the overall coordination and evaluation of the clinical education process for the radiation therapy students in the clinical education centers. The individual assumes responsibility for uniform standard clinical education for the students enrolled in the program, the development of detailed clinical objectives and assignments, and implementation of clinical policies. The Program Clinical Coordinator also has didactic responsibilities and must be effective in methodologies providing classroom instruction. This individual is instrumental in the development of clinical policies.

CLINICAL EDUCATION SUPERVISOR

Each clinical facility has at least one Clinical Education Supervisor. In addition to their responsibilities for the day-to-day operation of the department at the clinical site, these individuals are responsible for the supervision of the student's clinical education. This includes directly supervising the students through appropriate clinical site work centers and assuring that they are assigned to qualified radiation therapists as well as advising and counseling students.

CLINICAL INSTRUCTOR

Each clinical facility has permanently employed radiation therapists working as clinical staff, qualified full-time radiation therapists may serve as clinical instructors. In addition to their responsibilities for the day-to-day operation of the department at the clinical site, these individuals are responsible for the supervision of the student's clinical education. This includes supervising the students through appropriate clinical site work centers, evaluating students on a regularly scheduled basis, assisting, advising and counseling students. Any/all registered radiation therapists regardless of employment status is responsible for the DIRECT supervision of students.

DIDACTIC PROGRAM FACULTY

The Didactic Program Faculty is responsible for conducting courses in cooperation with the Program Chair and the designated curriculum. This individual submits course outlines and objectives, evaluates students and reports progress. The faculty assures that teaching strategies support the fulfillment of the program's missions and goals and course content corresponds with a currently recognized and accepted curriculum.

EVALUATION AND ASSESSMENT

Students are strongly urged to participate in evaluation exercises to assist the program officials in outcome assessment and improvement of the program.

COURSE AND FACULTY EVALUATIONS

Evaluation of courses and instructors by the students will be carried out in accordance with university policy.

EVALUATION OF CLINICAL INSTRUCTORS

Students will evaluate clinical instructors at the end of each clinical rotation.

POST-GRAUDUATE EVALUATIONS

An evaluation form / post-graduate survey will be sent to graduates and their employers one year and three years following graduation.

OUTCOMES ASSESSMENT

Outcome assessment will be conducted on a continuous basis. The program officials will gather information for analysis. Outcome measures that do not meet benchmarks will signal a need for revision which will be addressed by the program officials and Advisory Committee.

ACCREDITATION REVIEW

The Advisory Committee and program officials will analyze an evaluation of this program by the JRCERT. This evaluation will be instrumental in directing change for improvement.

DEVELOPING CLINICAL PROFICIENCIES

A systematic step by step approach provides clinical skills development. The sequence involves:

Academic Preparation – completed initially on campus with general studies such as physics, anatomy and physiology. Preparation continues during the clinical semesters with other courses such as patient care, radiobiology and pathology.

Observation – Your initial activities at the clinical site will consist of observing qualified radiation therapists at work.

Assisting Qualified Worker – Once you feel comfortable in the treatment room you are assigned, you will be given an opportunity to assist the supervising radiation therapist in delivering treatments.

Performance Evaluation –students will receive an evaluation for each clinical rotation. All professional staff having the opportunity to work with you will be asked to provide input in the written evaluation.

The student will review the evaluation with the Program Clinical Coordinator. The student will, upon request, have an opportunity to meet with the specific evaluators. This process is intended to promote open discussion of the student's clinical progress. Frequent feedback to the student is a vital part of their professional growth.

Each student will be requested to complete a general evaluation of the clinical instructors at the end of each clinical site assignment. This will provide valuable feedback to the appropriate personnel at the affiliate site.

Clinical Competency Evaluation - The student must perform a number of clinical competency examinations after they have observed and assisted the corresponding procedure listed on their checklist. In the course of their clinical education, the student will operate as many units as is feasible and necessary to achieve the required clinical competencies.

A competency checklist/evaluation for each category and or a course grade is used to assess student performance. Students must meet clinical competencies in all categories to be eligible for program completion.

Performance Maintenance – Once you pass the Competency Evaluation for a particular treatment or technique you need additional practice to maintain and master the skill. The student at this point should be able to demonstrate an understanding of treatment rational.

Student preparation by way of a prepared case study for each competency evaluation may serve as a tool for a quick review of each treatment technique.

The student may be required to repeat an examination if factors lead to the conclusion that the student has allowed him / herself to become less proficient.

Grading Procedures for Directed Clinical Learning Courses

The teaching instruments used for grading consist of:

- Case studies
- Clinical competency completion
- Checklist completion
- An affective evaluation

The clinical learning evaluation is composed of technical skills and professional attributes, a grade is obtained based on the appropriate numerical conversion chart for the course. The clinical competency is assessed as either pass or fail.

The Program Clinical Coordinator has the prerogative to alter the clinical grade if the student's behavior and attitude is not in compliance with the professional conduct guidelines listed or if other clinical policies are not adhered to.

HEALTH AND SAFETY POLICIES

TXSTATE and its affiliated clinical facilities are not responsible for any medical expenses incurred by a student enrolled in the program.

1. Student health service is available to students on campus who meet requirements and pay the segregated fee at registration.
2. All applicants are apprised of the "Radiation Therapist Scope of Practice" found on page 26. They are to consider whether the functions of the position of radiation therapists and radiation therapy student are within their abilities, with or without accommodation.
3. If it is determined that the student requires reasonable accommodation to perform the "Practice Standards," the clinical education site and the university will make every effort to provide such accommodation.
4. Should a student become injured during the clinical education, he/she may be permitted to be treated on an emergency basis at the clinical site, with expenses billed to his/her insurance carrier. An incident report must be completed at the clinical education site.
5. Students will become informed of precautions to be taken in caring for patients during the Patient Care course. **Universal precautions/standard precaution measures** are to be strictly adhered to for safety of students, staff and patients.
6. Students are expected to follow the policies and procedures set forth by each clinic site regarding precautions for certain communicable diseases such as COVID-19. **While the program will attempt to assign students who are not vaccinated to a clinical site, there is no guarantee that the program will be able to find a clinical site, thus failure to**

obtain the COVID-19 vaccine could prevent you from completing your clinical requirements for this program, and subsequently delay or prevent graduation.

7. If a student should be exposed to patient body fluid by a needle stick, OSHA recommendations will be followed, and the student will be seen by the clinical education site personnel. An incident report must be completed at the clinical site.

8. Policy on Reporting Exposure to Communicable Diseases:
   In the interest of protecting radiotherapy patients from exposure to communicable disease, the Radiation Therapy Program requests that students contracting such diseases inform the Program Clinical Coordinator. Upon such notification, the Clinical Coordinator will advise the student on the appropriate steps to take to avoid patient exposure. All such information given by students to program officials will be held in strict confidence and will not be used against the student.

9. If the student is exposed to a communicable disease at the clinical education site; e.g., by a needle stick, the student MUST report the exposure to the Clinical Education Supervisor who will inform the Program Clinical Coordinator and Medical Advisor. The student will be seen by the clinical education site personnel. **An incident report** must be completed at the clinical site.

Magnetic Resonance Imaging (MRI) Safe Practice Checklist

All students are to undergo an MRI screening process to ensure their safety in the MR environment. The checklist is found in the appendices, Appendix E. The checklist will be filed in the student's office records.

ALARA POLICIES

Radiation Safety:

- General radiation safety measures will be provided in the Introduction to Radiation Therapy course prior to any clinical education.
- Students will be provided a radiation dosimeter that will be worn while in the controlled area.
- Students, staff and visitors are not allowed in treatment rooms during the treatment.
- Monthly radiation exposure personnel monitoring reports will be reviewed and filed in the radiation therapy program office.

Radiation Exposure Safety Investigation Levels:

ALARA investigation threshold levels are taken from personnel monthly dosimetry readings based on annual regulatory limits. The following provides measurement levels at which prescribed actions are to be taken.

If a measurement point is below Level I, no action will be required. Should the value be between Level I and II, the Clinical Education Coordinator will:

- Review the circumstance through a personal interview with the student

It is at Clinical Education Coordinator's discretion to take additional steps to investigate and/or take action based on the known circumstances. Any value which exceeds Investigation Level II requires further investigation and immediate action. Upon notice of the badge reading the Clinical Coordinator will:

- Inform the Program Director
- Interview the student to ensure dosimetry badge was not irradiated or exposed causing a reading while it was not worn such as left in the dryer, dropped in the room, or lost for a period of time.
- Interview the department supervisor at the clinical facility.
- Complete a full Student Consultation Report documenting the findings, contributory factors, and the action plan for improvement with all required signatures.
- If reading accurately reports personnel exposure due to student negligence, student is subject to dismissal from the program.

Texas State Radiation Therapy Program Radiation Exposure Safety Investigation Levels (millirem)

Maximum Annual Occupational Dose Limits			10% of Occupational Limit	2.5% of Limit	5% of Limit	**Exposure Investigation Thresholds**	
Annualized Values (millirem)			Annual	Quarterly		**Monthly**	
Regulatory Limit	Level 1	Level 2	Texas State	Level 1	Level 2	Level 1	Level 2
5000	1250	2500	**500**	125	250	31	63
15000	3750	7500	**1500**	375	750	94	188
50000	12500	25000	**5000**	1250	2500	313	625
50000	12500	25000	**5000**	1250	2500	313	625

All female students shall read and sign the additional instructions concerning Prenatal Radiation Exposure. The signed copy of verification will be filed in the student's academic file, copies of these may be found in Appendix B and C.

Student Pregnancy

Overview:
A student who is pregnant or suspects she is pregnant may or may not inform the program officials. If she chooses to inform the program officials of her pregnancy, it must be in writing and indicate the expected date of delivery. The pregnant student also has the right to revoke her declaration at any time; however, the withdrawal of declaration must also be in writing.
Students should understand that a pregnancy during the two years of the Radiation Therapy core curriculum would have an impact on the timing of their education and the timing of graduation.

- Courses are only offered once each year and an extended leave for pregnancy will require extensive make up work of up to a year to maintain the proper sequence of courses.
- There are potential risks to an embryo or fetus secondary to radiation exposure that may require counseling and alteration of the clinical education experience.

The following policy has been adopted to guide the program and its students in the event of a student pregnancy.

a. All students will be made aware of risks and hazards of prenatal radiation exposure during course work at TXSTATE.
b. The U.S. Nuclear Regulatory Commission Regulatory Guide 8.13 regarding "Possible Health Risks to Children of Women Who are Exposed to Radiation During Pregnancy" can be found in appendix A. Female students are to read this document and complete the required forms.

Written Notice of Voluntary Declaration

c. The definition of "Declared Pregnant Woman" means that she has **voluntarily** informed the Program Director and Radiation Safety Officer (at each site) **in writing** of her pregnancy and the estimated date of conception. Upon becoming a "Declared Pregnant Woman," the student will be issued a fetal monitoring film badge in addition to the normal employee film badge, and the record of the baby's radiation dose will be kept separately from that of the worker.
d. **Disclosure of pregnancy is voluntary.** The student who becomes pregnant during the clinical education is strongly "urged" to notify the Program Clinical Coordinator immediately. Despite any appearance to the contrary, the pregnancy is not officially recognized by the program until the female student **declares** herself pregnant **in writing.**
e. It is in the best interest of the student and her fetus for the student to be promptly advised in methods to reduce radiation exposure.
f. A counseling session will be set up with the Radiation Therapy Program Radiation Safety Officer upon the student's notification, to review radiation exposure risks and any additional monitoring practices which may be initiated.
g. The student may decide to continue the clinical education during the pregnancy or to take a leave of absence.
h. Should the student decide to leave the program during pregnancy and delivery, the student would be readmitted to the program at the first available opening after delivery.

Option for Student Continuance in the Program Without Modification

i. If the student remains in the program, she will be strongly urged not to participate in brachytherapy or fluoroscopy during the pregnancy. Competency and experience in this area may be made up following delivery.
j. The student maintains the option of voluntarily continuing the normal course of the curriculum during the pregnancy. The request to continue the program curriculum without modification must be **in writing.**
k. If radiation monitoring shows exposure levels approaching unacceptable limits [ALARA maximum annual limit to fetus = 500mrem], appropriate action will be taken to maintain safe exposure levels.

Licensees are required to attempt to prevent pregnant workers from exceeding ~ 55 millirem during any one month. The desire is to avoid a large dose to the fetus during the 8th to the 15th weeks of the pregnancy as this is the period during which it is most sensitive to potential radiation-induced effects.

l. If delivery occurs during a semester, all course work and required clinical experience must be acquired before the student is eligible for graduation and the ARRT registry examination.
m. **It is the student's responsibility** to seek and secure a plan acceptable and approved by the Program Clinical Coordinator and Program Chair prior to the delivery date. The university cannot guarantee normal program completion time if a pregnancy occurs during the program.
n. The program will not modify the clinical or didactic education required to graduate. The program will however work with the student by modifying their clinical schedule in the effort to accommodate a normal delivery and successful completion of the program.

Option for Written Withdrawal of Declaration

o. The student maintains the option of voluntarily withdrawing the declaration of pregnancy. The withdrawal of declaration must be **in writing**.

CLINICAL EDUCATION

HIPPA POLICY

The Health Insurance Portability and Accountability Act was enacted nationally to protect individuals' rights to privacy and confidentiality. The Texas State Radiation Therapy Program is committed to maintenance of confidentiality based on our ethical, legal, and moral responsibilities to protect the rights of patients. Students are oriented and educated in the general implications of HIPAA for patient care via several courses throughout the curriculum. Students first received instruction and orientation to the policy and procedures during the students first semester in RTT 3300 Patient Care and RTT 3301 Introduction to Radiation Therapy. Other course work during all clinical courses, quality insurance, operational issues may also include applications and implications of following or failing to follow HIPPA policy.

It is also the responsibility of clinical faculty of each clinical education site to orient students to the implications of HIPAA for that site as well as specific policies and procedures pertinent to their site during each clinical experience.

As a student engaged in clinical education experiences throughout the radiation therapy curriculum, there are many opportunities to access patient information both verbally and through written and/or electronic records, on a need-to-know basis. This is termed a "clinical privilege." Inherent with this is a responsibility to maintain the confidentiality of this information and prevent disclosure of this information to others who do not need to know nor should know this information.

Patient information used in case studies and other instructional materials must be de-identified (see section 164.514 of HIPAA). The following specific identifiers of individual patients or of relatives, employers or household members of patients must be removed:

- Names
- All geographic subdivisions smaller than a state
- All elements of dates (except year) for birth date, admission date, discharge date, date of death and all ages over 89 and all elements of dates (including year) indicative of such age
- Telephone and fax numbers
- E-mail addresses
- Social security numbers
- Medical record numbers
- Health plan beneficiary numbers
- Vehicle identifiers and license plate numbers
- Device identifiers and serial numbers
- Photographs or any comparable images

Students can maintain confidentiality by doing the following:

- Hold in confidence any information about patient and families that comes to your attention. Refrain from public hallway, cafeteria, or elevator conversations about patient care.
- Do not use any social networking/electronic media to disclose, discuss or post about patient issues or staff/workplace issues.
- Access only those records or parts of records that your clinical instructor indicates are pertinent for performance of your clinical responsibilities.
- Refrain from reviewing any Medical Record that does not pertain to your clinical responsibilities or has not been assigned by your clinical instructor.
- Refer any requests for patient information from unauthorized sources (e.g., insurance companies, friends, etc.) to your clinical instructor or his/her supervisor.
- Do not photocopy any part of a medical record without seeking written permission and following institutional policies for doing so.
- Communicate any questions about confidentiality with your clinical instructor and seek help in finding out how it is best maintained.
- Learn and follow the procedures established at your facility to meet HIPAA requirements.

Students may need clinical information in order receive class credit, but under no circumstances are they allowed to transmit identifiable patient information into their personal E-mail accounts. The patients' protected health information is the property of the cancer center. Under both State and Federal regulations, the cancer center is required to protect such information. Once this information has left the network, the cancer center is no longer in control of that information and it could be disseminated without their knowledge or the patient's written authorization.

If such actions are committed, the student would lose their access to the electronic medical record. If the student needs the clinical information per class requirements, they must first redact all the patient identifiers, i.e., names, date of birth, MRN/account #, address, phone number, names of relatives, etc., any name, date or number that could identify the patient. They may then use the information as needed for their class requirements.

THE MOST COMMON HIPAA VIOLATIONS:

1. Failure to adhere to the authorization expiration date. If an expiration date is set by the patient, confidential records cannot be released after that date. Most Practice Management Systems (PMS) provide for locks or alerts when the expiry date has passed; just turning that feature on may be a quick fix.

2. Failure to promptly release information to patients. A patient has the right to receive electronic copies of medical records on demand.

3. Improper disposal of patient records. Patient records must be shredded before disposal or electronic records wiped from any systems that may have contained it.

4. Insider snooping. No one, including family members and co-workers, can access a patient's medical records without proper authorization. Password protection, tracking systems and clearance levels must be utilized to prevent unauthorized access. Even basic network setups provide for much of these safeguards if they're set up properly.

5. Missing patient signature. HIPAA forms must include the patient's signature to be valid. If you set these forms up electronically, which many PMS' allow you to do then these fields can be required before the form is accepted by the system.

6. Releasing information to an undesignated party. Only the person(s) listed on the authorization form may receive patient information.

7. Releasing unauthorized health information. A patient has the right to release only part(s) of their medical record. Any part of the medical record that has not been authorized by the patient cannot be released.

8. Releasing the wrong patient's information. Controls must be in place to avoid releasing information for the wrong patient. This often occurs when patients have the same or similar name.

9. Right to revoke clause. All forms signed by the patient must include a Right to Revoke clause or the form is invalid.

10. Unprotected storage of private health information. Private patient information cannot be stored on unprotected devices such as smartphones, laptops, thumbnail drives or any other unprotected mobile or portable device.

Appendix F will be signed and dated as acknowledgment of this information.

CLINICAL ROTATIONS

The Program Clinical Coordinator will assign students to clinical sites. The schedule will reflect equal experience for all students enrolled in the program.

Area rotations (linear accelerator, nursing, dosimetry) will be determined by the Program Clinical Coordinator with input and approval by the Clinical Education Supervisor of all affiliate clinical sites to ensure balance of experience for the students in all major areas. Students are not expected to be in attendance of didactic classes and clinical rotations more than 40 hours in a week's time.

All attendance sheets submitted must correspond with rotation schedule assignment. **The Program Clinical Coordinator must directly approve any change in the clinical schedule for all students**. Deviation from the assigned schedule OF ANY FORM will constitute a failure to comply with program policy constituting non-academic misconduct and grounds for dismissal without review. See page 15.

Nonadherence to the clinical attendance sign in procedure will result in no credit being given to clinical assignments done during that time. That time would have to be made up in accordance with review by the appropriate program official.

Anticipated tardiness should be reported whenever possible so that the clinical site supervisor knows the reasons for the delay.

Students are not allowed to leave the clinical department without permission of the Clinical Education Supervisor.

The student will be excused for a period as arranged through the RTT Program Director, Program Clinical Coordinator, and/or Clinical Education Supervisor in the event of death of an immediate family member. The student must promptly inform the RTT Program Director or Clinical Education Supervisor of the need for time off so that the appropriate arrangements can be made.

CLINICAL OBJECTIVES AND ASSIGNMENTS

The clinical experience of the student is a planned part of the educational program. The clinical experience of the student is governed by sound clinical objectives and the progress of the student is evaluated and the results in the overall evaluation of the students.

Clinical Instructors will be provided specific objectives of learning included in the Clinical Staff Guidelines at the beginning of the rotation. The student will review all objectives and assignments with the clinical instructor at the beginning of each clinical rotation.
The clinical assignments will be primarily monitored and graded by the Clinical Instructor as defined in this handbook. The clinical instructor must be of permanent full-time employment status at the clinical institution. While direct supervision is required by any/all registered radiation therapists, **temporarily employed or locum staff may not grade student clinical assignments.** Specific requirements for each rotation will vary according to the clinical site department in which the student is assigned. Each student will be assigned to work with a registered radiation therapist or other professional depending on the area rotation.

STUDENT SUPERVISION

All clinical experience in Radiation Therapy shall be under direct supervision. The Joint Review Committee on Education in Radiologic Technology defines direct supervision as "a registered radiation therapist being present while any treatment is being administered". The supervising radiation therapist must check all student activities (e.g. set-ups, calculations, etc.) before the treatment is given. Students must not accept responsibility for administering radiation therapy
treatment.

JOINT REVIEW COMMITTEE OF EDUCATION FOR RADIOLOGIC TECHNOLOGY
STANDARD FOUR

JRCERT Standard Five – regarding health and safety, objective 5.4 is written as follows. Objective 5.4 assures that all radiation therapy procedures are performed under the **direct supervision** of a qualified practitioner.

Explanation: Direct supervision assures patient safety and proper educational practices. All radiation procedures require direct supervision. The JRCERT defines direct supervision as student supervision by a qualified practitioner (e.g., registered radiation therapist, credentialed medical physicist, licensed radiation oncologist) during all aspects of the procedure. Students must always be directly supervised.

Ex:

The site visit team reported that on occasion, students are permitted to assist patients on/off the treatment table or change a treatment device without the appropriate direct supervision. **Qualified practitioners are outside of the treatment room and observing students via electronic monitoring devices and are not physically present during all aspects of the procedure.** The JRCERT does not consider supervision of students over electronic monitoring devices as direct supervision.

PROFESSIONAL BEHAVIOR

As a representative of Texas State University, the Radiation Therapy Program, the assigned clinical institution, and the entire profession of Radiation Therapy, it is of paramount importance that the student maintains the highest standards of professionalism.
You are expected to:

- Treat all persons with whom you have contact, with kindness, courtesy and respect.
- Maintain confidentiality of medical records.
- Respect patient privacy.
- Attempt to establish rapport with fellow students, technologists, patients and other personnel.
- Maintain a cooperative and uncomplaining attitude.

In addition, the student will adhere to the following policies while at the clinical facility:

1. Smoking, smokeless tobacco, eating, drinking, or chewing gum are permitted only in designated areas.
2. Smoking while in uniform projects an image that is unsatisfactory to the College of Health Professions. Students are requested not to smoke while wearing a TXSTATE Radiation Therapy uniform.
3. **Students will not leave their assigned area at any time without permission.**
4. Students will not remain in the clinical department after clinical hours.
5. When not actively engaged in clinical work or other duties, students will remain in their clinical work area and not congregate in offices, halls, or other rooms.
6. Personal telephone calls are not encouraged. No one will be called from the working area except in an emergency. No one will leave a patient unattended to talk on the telephone.
7. Electronic devices, and cellular phones, are **not permitted** in patient care areas.
8. Students will wear the TXSTATE uniform only during assigned clinical hours. Students shall not wear the TXSTATE Radiation Therapy uniform during employment or any other publicly identifiable function.

You are expected to treat patients with kindness, courtesy and respect. When you get your patients from the waiting / reception area, introduce yourself and try to establish rapport. Once the patient has changed into a gown, make sure that the patient is properly gowned or covered up.

Professional behavior is not limited to contact with any single group of people. It is reflected in attitude and in communication with physicians, supervisors, co-workers as well as patients. Examples of non-professional behaviors are:

- Gossip
- Disclosure of medical information with patients or relatives
- Discussions of inappropriate subject matter within hearing of patients, visitor, etc.
- Consumption of food in patient area including chewing gum
- Excessive noise
- Dirty jokes
- Loitering

Students are responsible for their own actions and must not engage in any activities considered non-professional or non-conducive to proper patient care. Unprofessional conduct in the classroom, laboratory, clinical setting, professional meetings, etc. will not be tolerated and may result in a recommendation for dismissal from the Program.

The TXSTATE Code of Student Conduct is applicable to every student enrolled at the university in addition the professional behavior described. Disciplinary procedures are outlined in the university student handbook, The Texas State Student Handbook.

Serious infractions can result in immediate dismissal from the RTT Program. Any student under the influence of intoxicating drugs or liquor in the classroom, laboratory, or clinical area will be recommended for immediate dismissal from the Program.

If a student senses a problem in the clinical environment involving him or herself, contact the Clinical Education Supervisor immediately.

CODE OF PROFESSIONAL CONDUCT

A student enrolled in the Radiation Therapy Technology Program at TXSTATE is expected to:

1. Appear and conduct oneself in a professionally acceptable manner.

2. Be cognizant of and adhere to the chain of command.

3. Show respect for and be mutually supportive of fellow students, faculty and staff regardless of race, religion, gender, nationality, or economic status.

4. Identify truthfully and accurately one's credentials and professional status.

5. Refrain from performing any professional service that requires competence that one does not possess, or which is prohibited by law unless the situation morally dictates otherwise.

6. Accept responsibility for relating incompetence and unethical conduct to the proper program official.

7. Regard as strictly confidential all information concerning each patient and refrain from discussing this information with any unauthorized individual, including the patient.

PERSONNEL MONITORING

The Radiation Therapy Program will furnish a film badge to all students spending time in areas where ionizing radiation is in use. Outlined below are the guidelines to be used by personnel regarding disbursement, care, and monitoring of film badges.

The company providing and monitoring the OSL Whole Body badges effective as of January 16, 2023 is identified below:

PL Medical
117 West Dudley Town Rd
Bloomfield CT 06002
800-874-0120
www.plmedical.com

1. An individual's personnel monitoring badge reading will be accessed immediately when it is suspected that he/she might have received a single exposure greater than 100mRem or an accumulated exposure greater than 300mRem in one week.

2. A record of the individual's radiation status will be kept by the clinical coordinator or administrative assistant and will comply with the 10 CFR 19 and 20. The personnel

exposure readings will be available in the Radiation Therapy office. Yearly totals will be kept in the student academic file and are available by calling the administrative assistant at 512-245-9081.

3. At no time will a personnel monitoring be exposed to radiation unless worn by the individual to whom it is issued. Any infraction of this rule may result in the loss of that person's privilege to work with the radioactive material and /or ionizing radiation at any clinical site.

4. Collection and distribution of the personnel monitoring badges will be the responsibility of the administrative assistant in the Radiation Therapy program.

5. However, it is the responsibility of each student to assure that a personnel monitoring device is worn at the appropriate body placement during clinical assignments.

6. Pregnant workers are urged to inform the Clinical Coordinator so a separate waist level badge can be provided to estimate fetal exposure.

7. **All female students shall read and sign the additional instructions concerning Prenatal Radiation Exposure. The signed copy of verification will be filed in the student's academic file, copies of these may be found in Appendix B and C.**

8. The estimate of radiation exposure made from the monitoring devices will only be correct if the following rules are observed.
   a. The film badge shall be always worn while student is in a clinical setting.

   b. Wear the badge at collar level outside a lead apron. Pregnant workers should request an additional badge to be worn at waist level inside any lead aprons.

   c. Leave the badge in a safe place so it is not exposed to heat, moisture, or other potentially damaging environments.

   d. Never wear a film badge issued to another person.

   e. The personnel monitoring badges issued to you is your responsibility. Turn it in at the right time and take care of it.

   f. Do not tamper with the badge (by removing or disassembling any part).

   g. Report the loss of a badge **immediately** to the clinical coordinator.

   h. Report any other incident relative to the wearing of the badge to the Clinical Coordinator. Examples include accidental exposure when the badge was not worn or accidental exposure to the badge in the wash.

i. The badge is the property of TXSTATE's Radiation Therapy program and will be returned to TXSTATE upon completion or termination from the radiation therapy program.

j. OSL badges are initially provided by Texas State University to monitor radiation dose during clinical experience. If you, damage or lose the OSL badge, it will need to be replaced prior to returning to clinic at your cost. The current cost is $6.00, but price is subject to change. Personnel monitoring is required in radiation areas.

k. The TXSTATE badge shall not be worn in any clinical setting that is not part of the directed clinical learning experience at TXSTATE.

l. Flagrant violations of this policy may result in reprimand, suspension, or a failing grade in Directed Clinical Learning for that semester.

9. The Radiation Therapy Program Radiation Safety Officer will be consulted in the event of a question or concern regarding a student's exposure.

CRITERIA FOR CLINICAL SITE AFFILIATIONS AND STAFF

Facility

Copy of organizational chart.

1. Assures the institution's organizational and administrative structures support the program's missions and needs of the student.
2. Provides accessible learning resources to support the achievement of student learning outcomes.

Library with publications.

3. Assures that available student services are readily accessible to all students.

Adequate parking, emergency care.

4. Assures the health and safety of students associated with educational activities are safeguarded through documented policies.

Radiation Protection Policy and Procedure.

5. Assures that Nuclear Regulatory Commission regulations regarding the declared pregnant student (declared pregnant worker) are published and made known to accepted and enrolled female students (Provided at TXSTATE).
6. Assures that students utilize equipment and accessories and employ techniques and procedures in accordance with accepted equipment use and radiation safety practices to minimize radiation exposure to patients, selves and others.

Policy of student behavior in clinic.

7. Assures radiation therapy procedures performed by students are under the direct supervision of a qualified practitioner.

Department Policy, Clinical supervisors' workshop.

8. Assures all learning environments are in compliance with applicable state and federal safety laws.

Staff Credentials

9. Assurance of academic and professional qualifications.

Assurance that the Job description of clinical educational supervisor and clinical instructors are included in department job description.

Related duties are included in annual performance evaluation.
Assurance that Radiation therapists hold RTT and Licensure credentials.
Medical Advisors – diplomat of the American Board of Radiology or equivalent in the appropriate discipline and possesses a current license to practice medicine.

Personnel

10. Provides an adequate number of faculty to meet all educational, program, administrative and accreditation requirements.
Ratio of 1 FTE clinical educational instructor to 1 student.

IMMUNIZATIONS

Each student entering the clinical environment is required to have the following immunizations according to Texas Department of Health Services:

1. Poliomyelitis (OPV or IPV)
2. MMR (measles, mumps, rubella)
3. TDaP (diphtheria, tetanus, pertussis), Td booster required every 10 years.
4. Annual TB (tuberculosis) skin test (PPD), initial two-step for baseline assessment.
5. Varicella (Hx of chickenpox or immunization)
6. Annual Flu Shot (H1N1)
7. Hepatitis B series.
8. Meningococcal Vaccine

DRESS CODE

The following is the required dress code for all radiation therapy students during clinical rotations. Deviation from dress code may result in dismissal from clinical sight and will be considered an unexcused absence.

Program issued scrubs, name badge, and closed-toed shoes.

Personal hygiene and a professional presentation are always critically important. Students should have at least two uniforms to assure a neat and clean image.

Students must wear the uniform during any/all clinical attendance. Participating in departmental non-uniform days is not allowed. This includes Blue Jean Days, Dress Down Days and other similar type occasions.

In addition:

1. Shoes and clothing are to be neat, clean, and pressed always.
2. Clean and CLOSED-toed shoes must always be worn.
3. Students must maintain good oral hygiene. No chewing gum allowed.
4. Appropriate undergarments will be worn and not visible at any time.

5. Neat and clean hair styles. Hair longer than shoulder length should be fastened in some way.
6. Facial hair must be neatly trimmed.
7. Cosmetics are to be subtle and conservative, and perfume or cologne are not permitted
8. Fingernails must be neatly trimmed. If fingernail polish is worn, it must be in light natural colors. **No artificial nails allowed.**
9. Multiple rings, earrings and bracelets are not permitted. All jewelry must be free of sharp surfaces that could scratch a patient. Jewelry should be limited to one or two rings, a watch, and small earrings.
10. Body piercing jewelry is prohibited. Tongue rings or studs are not permitted.
11. Tattoos will not be visible and must be covered.

At no time are student uniforms to be worn while the student is working as an employee or volunteer of a clinical facility.

ABSENCES

The guidelines support the following program objectives:

Objective 2.2: The program will provide learning activities that promote the synthesis of theory, use of current technology, competent clinical practice, and professional values.

Objective 2.3.5: Students will demonstrate initiative, punctuality and responsibility in their attendance and work ethic during clinical training.

Attendance is mandatory for all clinical assignments.
Any clinical time that is missed must be made up by the end of the semester, at the discretion of the clinical coordinator, or an incomplete grade will be given for the course. If the clinical time missed is not made up by the beginning of the next scheduled session a failing grade will replace the incomplete.

ABSENCES

Illness absences of more than 4 consecutive clinical days will require written physician permission to return to the clinical facility and will require additional clinical education hours to be made up at that clinical facility. Additional requirements for returning to the clinical education experience may be imposed by a specific clinical site. The student is expected to adhere to those requirements.

Scheduled sick leave (doctor or dentist appointments, etc.) should be planned with the Program Clinical Coordinator as far in advanced as possible. A minimum of one week notice in writing is required. This request must be approved by the Program Clinical Coordinator.

If extenuating circumstances occur, (for example: surgery, car accidents, death in family) the Program Clinical Coordinator will decide on an individual basis. Advance notification, whenever possible should be made to both the Clinical Education Supervisor and the Program Clinical Coordinator.

Excused Absences: Illness, Quarantine, Funeral of Immediate Family Member, Religious Holiday

Unexcused Absences (include but not limited to): Unverified absence/tardy, Overslept, Car Troubles, Vacation, Family Emergencies, Personal Business

Unexcused absences will not be tolerated. If you are unable to report to your assigned work center, contact the Clinical Education Supervisor and the Program Clinical Coordinator as early as possible. Deviation from notification procedures will result in a deduction from your final clinical grade.

TARDINESS
Time missed being tardy should be made up at the end of the assigned shift on the **same day**. This will be recorded as a tardy. Three (3) tardies within one semester will result in the deduction of your final clinical grade.

INCLEMENT WEATHER
In cases of bad weather or severe weather conditions, the student must use his or her own judgment when deciding whether to attend clinical. The student will inform the Clinical Education Supervisor and Clinical Coordinator as soon as possible if not attending. If schools in the area are canceled, your absence will be excused.

Students attempting to verify the existence of a Campus Closing should listen to local radio or television broadcasts for information. Absence of a student during a legitimate Campus Closing will not be reflected in the personal time that is allotted each student. Failure to report to the department as scheduled when unfavorable weather conditions exist but a Campus Closing has not been issued, may result in the student being required to make up hours. However, if a Campus Closing has been issued, students are not to report to the clinic. Students may phone the school directly to check on Campus Closing, you may call 512.245.2111 or check http://www.txstate.edu/.

Students may also check the Texas State Weather Alert System for information about campus closings for San Marcos and Round Rock and follow that directive. Phone: (512) 245-2424.

HOLIDAY CLOSURES
Students do not report to clinical sites on any holidays observed by the campus. Students are advised that professional liability insurance is void when the institution is not in session.

FUNERAL LEAVE:
Students who have a death in the immediate family will be given three (3) days funeral leave, documented as an excused absence. Immediate family includes - mother, father, grandparents, and siblings (in-law and step-), and children (biological, step-, adoptive, and foster). A Funeral

Director's letter or other documentation deemed acceptable by clinical supervisor is required for verification within one week of the last day of funeral leave.

CLINICAL GRIEVANCE POLICIES

STUDENTS

It is the policy of Texas State University's Radiation Therapy Program to work with students in finding fair and equitable solutions to problems, including any student grievance, appeal, question, misunderstanding or discrimination. Students are urged to take problems concerning clinical education to their Clinical Education Supervisor.

1. The student should first take their problem or question to their CES. Usually, the Instructor will have direct knowledge about the subject and is best qualified to resolve the situation.

2. If the student and CES are unable to find a solution or answer within 5 class days, the student may then bring the matter to the attention of the Program Clinical Coordinator. The student should feel free to discuss the matter fully.

3. Should a satisfactory and impartial solution not result from step #2 within 5 class days, the student may pursue the matter through the Program Director.

4. Should a satisfactory and impartial solution not result from step #3 within 5 class days, the student may pursue the matter through the Dean's Office of the College of Health Professions.

5. Should a satisfactory and impartial solution not result from step #4 within 5 class days, the student may pursue the matter through the University Office of Student Affairs. Under the direction of the Dean of Students and Vice President for Student Affairs, the Director of Student Justice shall be primarily responsible for the administration of the student justice system. The Assistant Director of Residence Life/Designee will work closely with the Director of Student Justice in resolving minor disciplinary problems.

6. The student should find a satisfactory means towards resolution from step #5 within 5 days.

   Student Disciplinary Procedures involving both academic and non-academic misconduct have been defined in the 2004-2005 Texas State student handbook.

   See also *Student Advising.*

CLINICAL SITE REQUEST TO REMOVE STUDENT

In the event that the clinical site requests that a student be removed from the facility permanently, two subsequent courses of action may take place:

1. If the situation is based on a problem specific to the facility and would not prevent the student from completing the program, the university may assign a student to another facility.

If that facility is willing to accept the student with full disclosure, the student will be allowed to complete the program. The student will not be allowed a second transfer unless the facility is no longer functioning, or policies at the facility change so that students are no longer accepted.

2. If the situation is based on unacceptable, intolerable, or illegal actions by a student which violate the clinical policies set forth in this handbook, or which violate any local, state, or federal laws, the student will be removed from the clinical site and released from the program. Under these circumstances, a student will not be allowed to reenter the program at any time in the future.

Appendices

Appendix A

UNITED STATES NUCLEAR REGULATORY COMMISSION

Regulatory Guide 8.13 - Instruction Concerning Prenatal Radiation Exposure

(Draft was issued as DG-8014)

Revision 3
June 1999

Availability Notice

A. INTRODUCTION
The Code of Federal Regulations in 10 CFR Part 19, "Notices, Instructions and Reports to Workers: Inspection and Investigations," in Section 19.12, "Instructions to Workers," requires instruction in "the health protection problems associated with exposure to radiation and/or radioactive material, in precautions or procedures to minimize exposure, and in the purposes and functions of protective devices employed." The instructions must be "commensurate with potential radiological health protection problems present in the work place."

The Nuclear Regulatory Commission's (NRC's) regulations on radiation protection are specified in 10 CFR Part 20, "Standards for Protection Against Radiation"; and Section 20.1208, "Dose to an Embryo/Fetus," requires licensees to "ensure that the dose to an embryo/fetus during the entire pregnancy, due to occupational exposure of a declared pregnant woman, does not exceed 0.5 rem (5 mSv)." Section 20.1208 also requires licensees to "make efforts to avoid substantial variation above a uniform monthly exposure rate to a declared pregnant woman." A declared pregnant woman is defined in 10 CFR 20.1003 as a woman who has voluntarily informed her employer, in writing, of her pregnancy and the estimated date of conception.

This regulatory guide is intended to provide information to pregnant women, and other personnel, to help them make decisions regarding radiation exposure during pregnancy. This Regulatory Guide 8.13 supplements Regulatory Guide 8.29 , "Instruction Concerning Risks from Occupational Radiation Exposure" (Ref. 1), which contains a broad discussion of the risks from exposure to ionizing radiation.

Other sections of the NRC's regulations also specify requirements for monitoring external and internal occupational dose to a declared pregnant woman. In 10 CFR 20.1502, "Conditions Requiring Individual Monitoring of External and Internal Occupational Dose," licensees are required to monitor the occupational dose to a declared pregnant woman, using an individual monitoring device, if it is likely that the declared pregnant woman will receive, from external sources, a deep dose equivalent in excess of 0.1 rem (1 mSv). According to Paragraph (e) of 10 CFR

20.2106, "Records of Individual Monitoring Results," the licensee must maintain records of dose to an embryo/fetus if monitoring was required, and the records of dose to the embryo/fetus must be kept with the records of dose to the declared pregnant woman. The declaration of pregnancy must be kept on file but may be maintained separately from the dose records. The licensee must retain the required form or record until the Commission terminates each pertinent license requiring the record.

The information collections in this regulatory guide are covered by the requirements of 10 CFR Parts 19 or 20, which were approved by the Office of Management and Budget, approval numbers 3150-0044 and 3150-0014, respectively. The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

B. DISCUSSION

As discussed in Regulatory Guide 8.29 (Ref. 1) , exposure to any level of radiation is assumed to carry with it a certain amount of risk. In the absence of scientific certainty regarding the relationship between low dose exposure and health effects, and as a conservative assumption for radiation protection purposes, the scientific community generally assumes that any exposure to ionizing radiation may cause undesirable biological effects and that the likelihood of these effects increases as the dose increases. At the occupational dose limit for the whole body of 5 rem (50 mSv) per year, the risk is believed to be very low.

The magnitude of risk of childhood cancer following in utero exposure is uncertain in that both negative and positive studies have been reported. The data from these studies "are consistent with a lifetime cancer risk resulting from exposure during gestation which is two to three times that for the adult" (NCRP Report No. 116, Ref. 2). The NRC has reviewed the available scientific literature and has concluded that the 0.5 rem (5 mSv) limit specified in 10 CFR 20.1208 provides an adequate margin of protection for the embryo/fetus. This dose limit reflects the desire to limit the total lifetime risk of leukemia and other cancers associated with radiation exposure during pregnancy.

In order for a pregnant worker to take advantage of the lower exposure limit and dose monitoring provisions specified in 10 CFR Part 20, the woman must declare her pregnancy in writing to the licensee. A form letter for declaring pregnancy is provided in this guide or the licensee may use its own form letter for declaring pregnancy. A separate written declaration should be submitted for each pregnancy.

C. REGULATORY POSITION

1. Who Should Receive Instruction

Female workers who require training under 10 CFR 19.12 should be provided with the information contained in this guide. In addition to the information contained in Regulatory Guide 8.29 (Ref. 1), this information may be included as part of the training required under 10 CFR 19.12.

2. Providing Instruction

The occupational worker may be given a copy of this guide with its Appendix, an explanation of the contents of the guide, and an opportunity to ask questions and request additional information. The information in this guide and Appendix should also be provided to any worker or supervisor who may be affected by a declaration of pregnancy or who may have to take some action in response to such a declaration.

Classroom instruction may supplement the written information. If the licensee provides classroom instruction, the instructor should have some knowledge of the biological effects of radiation to be able to answer questions that may go beyond the information provided in this guide. Videotaped presentations may be used for classroom instruction. Regardless of whether the licensee provides classroom training, the licensee should give workers the opportunity to ask questions about information contained in this Regulatory Guide 8.13. The licensee may take credit for instruction that the worker has received within the past year at other licensed facilities or in other courses or training.

3. Licensee's Policy on Declared Pregnant Women

The instruction provided should describe the licensee's specific policy on declared pregnant women, including how those policies may affect a woman's work situation. In particular, the instruction should include a description of the licensee's policies, if any, that may affect the declared pregnant woman's work situation after she has filed a written declaration of pregnancy consistent with 10 CFR 20.1208.

The instruction should also identify who to contact for additional information as well as identify who should receive the written declaration of pregnancy. The recipient of the woman's declaration may be identified by name (e.g., John Smith), position (e.g., immediate supervisor, the radiation safety officer), or department (e.g., the personnel department).

4. Duration of Lower Dose Limits for the Embryo/Fetus

The lower dose limit for the embryo/fetus should remain in effect until the woman withdraws the declaration in writing or the woman is no longer pregnant. If a declaration of pregnancy is withdrawn, the dose limit for the embryo/fetus would apply only to the time from the estimated date of conception until the time the declaration is withdrawn. If the declaration is not withdrawn, the written declaration may be considered expired one year after submission.

5. Substantial Variations Above a Uniform Monthly Dose Rate

According to 10 CFR 20.1208(b), "The licensee shall make efforts to avoid substantial variation above a uniform monthly exposure rate to a declared pregnant woman so as to satisfy the limit in paragraph (a) of this section," that is, 0.5 rem (5 mSv) to the embryo/fetus. The National Council on Radiation Protection and Measurements (NCRP) recommends a monthly equivalent dose limit of 0.05 rem (0.5 mSv) to the embryo/fetus once the pregnancy is known (Ref. 2). In view of the NCRP recommendation, any monthly dose of less than 0.1 rem (1 mSv) may be considered as not a substantial variation above a uniform monthly dose rate and as such will not require licensee justification. However, a monthly dose greater than 0.1 rem (1 mSv) should be justified by the licensee.

D. IMPLEMENTATION

The purpose of this section is to provide information to licensees and applicants regarding the NRC staff's plans for using this regulatory guide.

Unless a licensee or an applicant proposes an acceptable alternative method for complying with the specified portions of the NRC's regulations, the methods described in this guide will be used by the NRC staff in the evaluation of instructions to workers on the radiation exposure of pregnant women.

REFERENCES

1. USNRC, "Instruction Concerning Risks from Occupational Radiation Exposure," Regulatory Guide 8.29, Revision 1 , February 1996.

2. National Council on Radiation Protection and Measurements, Limitation of Exposure to Ionizing Radiation, NCRP Report No. 116, Bethesda, MD, 1993.

APPENDIX: QUESTIONS AND ANSWERS CONCERNING PRENATAL RADIATION EXPOSURE

1. Why am I receiving this information?

The NRC's regulations (in 10 CFR 19.12, "Instructions to Workers") require that licensees instruct individuals working with licensed radioactive materials in radiation protection as appropriate for the situation. The instruction below describes information that occupational workers and their supervisors should know about the radiation exposure of the embryo/fetus of pregnant women.

The regulations allow a pregnant woman to decide whether she wants to formally declare her pregnancy to take advantage of lower dose limits for the embryo/fetus. This instruction provides information to help women make an informed decision whether to declare a pregnancy.

2. If I become pregnant, am I required to declare my pregnancy?

No. The choice whether to declare your pregnancy is completely voluntary. If you choose to declare your pregnancy, you must do so in writing and a lower radiation dose limit will apply to your embryo/fetus. If you choose not to declare your pregnancy, you and your embryo/fetus will continue to be subject to the same radiation dose limits that apply to other occupational workers.

3. If I declare my pregnancy in writing, what happens?

If you choose to declare your pregnancy in writing, the licensee must take measures to limit the dose to your embryo/fetus to 0.5 rem (5 millisievert) during the entire pregnancy. This is one-tenth of the dose that an occupational worker may receive in a year. If you have already received a dose exceeding 0.5 rem (5 mSv) in the period between conception and the declaration of your pregnancy, an additional dose of 0.05 rem (0.5 mSv) is allowed during the remainder of the pregnancy. In addition, 10 CFR 20.1208, "Dose to an Embryo/Fetus," requires licensees to make efforts to avoid substantial variation above a uniform monthly dose rate so that all the 0.5 rem (5 mSv) allowed dose does not occur in a short period during the pregnancy.

This may mean that, if you declare your pregnancy, the licensee may not permit you to do some of your normal job functions if those functions would have allowed you to receive more than 0.5 rem, and you may not be able to have some emergency response responsibilities.

4. Why do the regulations have a lower dose limit for the embryo/fetus of a declared pregnant woman than for a pregnant worker who has not declared?

A lower dose limit for the embryo/fetus of a declared pregnant woman is based on a consideration of greater sensitivity to radiation of the embryo/fetus and the involuntary nature of

the exposure. Several scientific advisory groups have recommended (References 1 and 2) that the dose to the embryo/fetus be limited to a fraction of the occupational dose limit.

5. What are the potentially harmful effects of radiation exposure to my embryo/fetus?

The occurrence and severity of health effects caused by ionizing radiation are dependent upon the type and total dose of radiation received, as well as the time period over which the exposure was received. See Regulatory Guide 8.29, "Instruction Concerning Risks from Occupational Exposure" (Ref. 3), for more information. The main concern is embryo/fetal susceptibility to the harmful effects of radiation such as cancer.

6. Are there any risks of genetic defects?

Although radiation injury has been induced experimentally in rodents and insects, and in the experiments was transmitted and became manifest as hereditary disorders in their offspring, radiation has not been identified as a cause of such effect in humans. Therefore, the risk of genetic effects attributable to radiation exposure is speculative. For example, no genetic effects have been documented in any of the Japanese atomic bomb survivors, their children, or their grandchildren.

7. What if I decide that I do not want any radiation exposure at all during my pregnancy?

You may ask your employer for a job that does not involve any exposure at all to occupational radiation dose, but your employer is not obligated to provide you with a job involving no radiation exposure. Even if you receive no occupational exposure at all, your embryo/fetus will receive some radiation dose (on average 75 mrem (0.75 mSv)) during your pregnancy from natural background radiation.

The NRC has reviewed the available scientific literature and concluded that the 0.5 rem (5 mSv) limit provides an adequate margin of protection for the embryo/fetus. This dose limit reflects the desire to limit the total lifetime risk of leukemia and other cancers. If this dose limit is exceeded, the total lifetime risk of cancer to the embryo/fetus may increase incrementally. However, the decision on what level of risk to accept is yours. More detailed information on potential risk to the embryo/fetus from radiation exposure can be found in References 2-10.

8. What effect will formally declaring my pregnancy have on my job status?

Only the licensee can tell you what effect a written declaration of pregnancy will have on your job status. As part of your radiation safety training, the licensee should tell you the company's policies with respect to the job status of declared pregnant women. In addition, before you declare your pregnancy, you may want to talk to your supervisor or your radiation safety officer and ask what a declaration of pregnancy would mean specifically for you and your job status.

In many cases you can continue in your present job with no change and still meet the dose limit for the embryo/fetus. For example, most commercial power reactor workers (approximately 93%) receive, in 12 months, occupational radiation doses that are less than 0.5 rem (5 mSv) (Ref. 11). The licensee may also consider the likelihood of increased radiation exposures from accidents and abnormal events before making a decision to allow you to continue in your present job.

If your current work might cause the dose to your embryo/fetus to exceed 0.5 rem (5 mSv), the licensee has various options. It is possible that the licensee can and will make a reasonable accommodation that will allow you to continue performing your current job, for example, by having another qualified employee do a small part of the job that accounts for some of your radiation exposure.

9. What information must I provide in my written declaration of pregnancy?

You should provide, in writing, your name, a declaration that you are pregnant, the estimated date of conception (only the month and year need be given), and the date that you give the letter to the licensee. A form letter that you can use is included at the end of these questions and answers. You may use that letter, use a form letter the licensee has provided to you, or write your own letter.

10.To declare my pregnancy, do I have to have documented medical proof that I am pregnant?

NRC regulations do not require that you provide medical proof of your pregnancy. However, NRC regulations do not preclude the licensee from requesting medical documentation of your pregnancy, especially if a change in your duties is necessary in order to comply with the 0.5 rem (5 mSv) dose limit.

11.Can I tell the licensee orally rather than in writing that I am pregnant?

No. The regulations require that the declaration must be in writing.

12.If I have not declared my pregnancy in writing, but the licensee suspects that I am pregnant, do the lower dose limits apply?

No. The lower dose limits for pregnant women apply only if you have declared your pregnancy in writing. The
United States Supreme Court has ruled (in United Automobile Workers International Union v. Johnson Controls, Inc., 1991) that "Decisions about the welfare of future children must be left to the parents who conceive, bear, support, and raise them rather than to the employers who hire those parents" (Reference 7). The Supreme Court also ruled that your employer may not restrict you from a specific job "because of concerns about the next generation." Thus, the lower limits apply only if you choose to declare your pregnancy in writing.

13.If I am planning to become pregnant but am not yet pregnant and I inform the licensee of that in writing, do the lower dose limits apply?

No. The requirement for lower limits applies only if you declare in writing that you are already pregnant.

14.What if I have a miscarriage or find out that I am not pregnant?

If you have declared your pregnancy in writing, you should promptly inform the licensee in writing that you are no longer pregnant. However, if you have not formally declared your pregnancy in writing, you need not inform the licensee of your nonpregnant status.

15.How long is the lower dose limit in effect?

The dose to the embryo/fetus must be limited until you withdraw your declaration in writing or you inform the licensee in writing that you are no longer pregnant. If the declaration is not withdrawn, the written declaration may be considered expired one year after submission.

16.If I have declared my pregnancy in writing, can I revoke my declaration of pregnancy even if I am still pregnant?

Yes, you may. The choice is entirely yours. If you revoke your declaration of pregnancy, the lower dose limit for the embryo/fetus no longer applies.

17.What if I work under contract at a licensed facility?

The regulations state that you should formally declare your pregnancy to the licensee in writing. The licensee has the responsibility to limit the dose to the embryo/fetus.

18.Where can I get additional information?

The references to this Appendix contain helpful information, especially Reference 3, NRC's Regulatory Guide 8.29, "Instruction Concerning Risks from Occupational Radiation Exposure," for general information on radiation risks. The licensee should be able to give this document to you.

For information on legal aspects, see Reference 7, "The Rock and the Hard Place: Employer Liability to Fertile or Pregnant Employees and Their Unborn Children--What Can the Employer Do?" which is an article in the journal Radiation Protection Management.

You may telephone the NRC Headquarters at (301) 415-7000. Legal questions should be directed to the Office of the General Counsel, and technical questions should be directed to the Division of Industrial and Medical Nuclear Safety.

You may also telephone the NRC Regional Offices at the following numbers: Region I, (610) 337-5000; Region II, (404) 562-4400; Region III, (630) 829-9500; and Region IV, (817) 860-8100. Legal questions should be directed to the Regional Counsel, and technical questions should be directed to the Division of Nuclear Materials Safety.

REFERENCES FOR APPENDIX

National Council on Radiation Protection and Measurements, Limitation of Exposure to Ionizing Radiation, NCRP Report No. 116, Bethesda, MD, 1993.

International Commission on Radiological Protection, 1990 Recommendations of the International Commission on Radiological Protection, ICRP Publication 60, Ann. ICRP 21: No. 1-3, Pergamon Press, Oxford, UK, 1991.

USNRC, "Instruction Concerning Risks from Occupational Radiation Exposure," Regulatory Guide 8.29, Revision 1, February 1996.(1) (Electronically available at http://www.nrc.gov/reading-rm/doc-collections/reg-guides/) Committee on the Biological Effects of Ionizing Radiations, National Research Council, Health Effects of Exposure to Low Levels of Ionizing Radiation (BEIR V), National Academy Press, Washington, DC, 1990.

United Nations Scientific Committee on the Effects of Atomic Radiation, Sources and Effects of Ionizing Radiation, United Nations, New York, 1993.

R. Doll and R. Wakeford, "Risk of Childhood Cancer from Fetal Irradiation," The British Journal of Radiology, 70, 130-139, 1997.

David Wiedis, Donald E. Jose, and Timm O. Phoebe, "The Rock and the Hard Place: Employer Liability to Fertile or Pregnant Employees and Their Unborn Children--What Can the Employer Do?" Radiation Protection Management, 11, 41-49, January/February 1994.

National Council on Radiation Protection and Measurements, Considerations Regarding the Unintended Radiation Exposure of the Embryo, Fetus, or Nursing Child, NCRP Commentary No. 9, Bethesda, MD, 1994. National Council on Radiation Protection and Measurements, Risk Estimates for Radiation Protection, NCRP Report No. 115, Bethesda, MD, 1993.

National Radiological Protection Board, Advice on Exposure to Ionising Radiation During Pregnancy, National Radiological Protection Board, Chilton, Didcot, UK, 1998.

M.L. Thomas and D. Hagemeyer, "Occupational Radiation Exposure at Commercial Nuclear Power Reactors and Other Facilities, 1996," Twenty-Ninth Annual Report, NUREG-0713, Vol. 18, USNRC, 1998.(2)

REGULATORY ANALYSIS

A separate regulatory analysis was not prepared for this regulatory guide. A regulatory analysis prepared for 10 CFR Part 20, "Standards for Protection Against Radiation" (56 FR 23360), provides the regulatory basis for this guide and examines the costs and benefits of the rule as implemented by the guide. A copy of the "Regulatory Analysis for the Revision of 10 CFR Part 20" (PNL-6712, November 1988) is available for inspection and copying for a fee at the NRC Public Document Room, 2120 L Street NW, Washington, DC, as an enclosure to Part 20 (56 FR 23360).

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1. Single copies of regulatory guides, both active and draft, and draft NUREG documents may be obtained free of charge by writing the Reproduction and Distribution Services Section, OCIO, USNRC, Washington, DC 205550001, or by fax to (301)415-2289, or by email to (DISTRIBUTION@NRC.GOV). Active guides may also be purchased from the National Technical Information Service on a standing order basis. Details on this service may be obtained by writing NTIS, 5285 Port Royal Road, Springfield, VA 22161. Copies of active and draft guides are available for inspection or copying for a fee from the NRC Public Document Room at 2120 L Street NW., Washington, DC; the PDR's mailing address is Mail Stop LL-6, Washington, DC 20555; telephone (202)634-3273; fax (202)634-3343.

2. Copies are available at current rates from the U.S. Government Printing Office, P.O. Box 37082, Washington, DC 20402-9328 (telephone (202)512-1800); or from the National Technical Information Service by writing NTIS at
5285 Port Royal Road, Springfield, VA 22161. Copies are available for inspection or copying for a fee from the NRC Public Document Room at 2120 L Street NW., Washington, DC; the PDR's mailing address is Mail Stop LL-6, Washington, DC 20555; telephone (202)634-3273; fax (202)634-3343.

Appendix B

FORM LETTER FOR DECLARING PREGNANCY

This form letter is provided for your convenience. To make your written declaration of pregnancy, you may fill in the blanks in this form letter, you may use a form letter the licensee has provided to you, or you may write your own letter.

DECLARATION OF PREGNANCY

To: _____

In accordance with the NRC's regulations at 10 CFR 20.1208, "Dose to an Embryo/Fetus," I am declaring that I am pregnant. I believe I became pregnant in_____ (only the month and year need be provided).

I understand the radiation dose to my embryo/fetus during my entire pregnancy will not be allowed to exceed 0.5 rem (5 millisievert) (unless that dose has already been exceeded between the time of conception and submitting this letter). I also understand that meeting the lower dose limit may require a change in job or job responsibilities during my pregnancy.

_____
(Your Name Printed)

_____
(Your Signature)

_____
(Date)

Appendix C

TEXAS STATE UNIVERSITY
RADIATION THERAPY PROGRAM
Verification of Understanding of Prenatal Exposure

My signature verifies that I have read and understand the U.S. Nuclear Regulatory Commission Regulatory Guide 8.13, which explains the risk of prenatal radiation exposure. I also understand that the Texas State Radiation Therapy Program and its clinical affiliates recommend that pregnant students should not be involved with brachytherapy treatments.

Adjustments in clinical site assignment may be necessary to meet the limitations set by ALARA guidelines. Texas State University-San Marcos does not guarantee eligibility for graduation or application for the ARRT examination if all Directed Clinical Learning class requirements are not accomplished. All clinical time missed must be made up in order to pass that part of the curriculum.

Pregnant women are required to wear their film badges as well as other measuring devices deemed necessary and desirable by the Clinical Coordinator and consulting physicist.

I have read and understand the material outlined above and the rest of the document and agree to all conditions.

Student Printed Name: _____

Student Signature: _____

Date: _____

Appendix D
Texas State University
Radiation Therapy

Radiation Therapy Employment Notification

Name_____Date_____

1. Institution of employment:_____

Address:_____

_____

Phone number: _____

2. Name and title of reporting Supervisor: _____

3. Condition of Supervision (physicians, radiation therapists):_____

4. Employment days and hours:_____

5. Start date: _____

End date:_____

6. I acknowledge the following:

   A. My student liability insurance is valid only when I am functioning as a student. When functioning as an employee my student liability insurance is negated. I may wish to consider supplemental insurance or check with the employer with respect to insurance as an employee.
   B. Acknowledgement of this information in no way implies any Texas State University responsibility for me when engaged in activities related to employment.
   C. Extracurricular employment does not substitute for the regularly scheduled clinical education requirements in my educational program. I may not perform any clinical education competencies or other objectives during employment hours.

D. My educational responsibilities and objectives should not be compromised by obligations as an employee. The department would not wish to see me compromise my educational goals.
E. It is the responsibility of the Radiation Safety Office of the employing facility to provide to me a radiation safety monitor to use during my employment hours. The Radiation Safety Office is responsible for providing my radiation safety records to Texas State University Radiation Therapy Program.
F. It is understood that I will wear the appropriate radiation safety monitor for employment and clinical rotations and not both at one time.

Student Signature:

_____

Employer Signature:

_____

Cc: Student, Program Director, Student File, Radiation Safety Office

Appendix E
Texas State University
Radiation Therapy

Student Name: _____

Magnetic Resonance Imaging (MRI) Safe Practice Checklist

All students are to undergo an MRI screening process to ensure their safety in the MRI environment. The following items may be harmful to you and may interfere with the MRI examination. Carefully read each item on the checklist and indicate if you have or have had any of the following:

Any type of electronic, mechanical, or magnetic implant

◯ No ◯ Yes

If "yes" marked above, indicate type:

Cardiac pacemaker

◯ No ◯ Yes

Aneurysm clip

◯ No ◯ Yes

Implanted cardiac defibrillator Neuro-stimulator

◯ No ◯ Yes

Bio-stimulator

◯ No ◯ Yes

If "yes" marked above, indicate type:

Any type of internal electrodes or wires

◯ No ◯ Yes

Cochlear implant

◯ No ◯ Yes

Hearing aid

◯ No ◯ Yes

Implanted drug pump (e.g., insulin, Baclofen, chemotherapy, pain medicine)

◯ No ◯ Yes

Halo vest

◯ No ◯ Yes

Spinal fixation device

◯ No ◯ Yes

Spinal fusion procedure

◯ No ◯ Yes

Any type of coil, filter, or stent

◯ No ◯ Yes

If "yes" marked above, indicate type:

Any type of metal object (e.g., shrapnel, bullet, BB)

◯ No ◯ Yes

Artificial heart valve

◯ No ◯ Yes

Any type of ear implant

◯ No ◯ Yes

Penile implant

◯ No ◯ Yes

Artificial eye

◯ No ◯ Yes

Eyelid spring

◯ No ◯ Yes

Any type of implant held in place by a magnet

◯ No ◯ Yes

If "yes" marked above, indicate type:

Any type of surgical clip or staple

◯ No ◯ Yes

Any IV access port (e.g., Broviac, Port-a-Cath, Hickman, Picc line)

◯ No ◯ Yes

Medication patch (e.g., Nitroglycerine, nicotine)

◯ No ◯ Yes

Shunt

◯ No ◯ Yes

Artificial limb or joint

◯ No ◯ Yes

If "yes" marked above, what and where?

Tissue Expander (e.g., breast)

◯ No ◯ Yes

Removable dentures, false teeth or partial plate

◯ No ◯ Yes

Diaphragm, IUD, Pessary

If "yes" marked above, indicate type:

Surgical mesh

◯ No ◯ Yes

If "yes" marked above, indicate location:

Body piercing

◯ No ◯ Yes
If "yes" marked above, indicate location:

Wig, hair implants
◯ No ◯ Yes
If "yes" marked above, indicate location:

Tattoos or tattooed eyeliner
◯ No ◯ Yes

Radiation seeds (e.g., cancer treatment)
◯ No ◯ Yes

Any implanted items (e.g., pins, rods, screws, nails, plates, wires)
◯ No ◯ Yes

Any hair accessories (e.g., bobby pins, barrettes, clips)
◯ No ◯ Yes

Jewelry
◯ No ◯ Yes

Any other type of implanted item
◯ No ◯ Yes
If "yes" marked above, indicate location:

Safety Clearance for MRI Environment

◯ **Approved** ◯ **Not Approved**

Program Clinical Education Coordinator

Appendix F

TEXAS STATE UNIVERSITY
RADIATION THERAPY PROGRAM
HIPAA – Confidentiality of Protected Health Information

Confidentiality of Patient Information (Initial Each Section)	**Initials**
1) ***I WILL NOT*** **email** patient identifiable health information. (Patient identifiable information includes, but not limited to: name, date of birth, medical record number and/or account number, insurance member ID#, financial information such as SS# or credit card information and any other number of name that could identify the patient).	
2) ***I WILL NOT*** **print out or copy** patient identifiable health information and take outside of the facilities.	
3) ***I WILL NOT*** **share** patient identifiable health information with anyone who does not have a treatment relationship with the patient.	
4) ***I WILL NOT*** **copy** any patient identifiable health information to personal computers or thumb/jump drives, etc.	
5) ***I WILL NOT*** send attachments to personal emails with patient identifiable health information.	
6) ***I WILL NOT*** **post** ANY information regarding a patient to any social media platforms. This includes any reference to a patient's presence at any facility even if the information does not identify the patient.	

I understand and acknowledge that the restrictions and obligations I have accepted under this Agreement are reasonable and necessary to protect the privacy interests of patients and the cancer centers.

Student Printed Name: _____

Student Signature: _____

Date: _____