



The
UNIVERSITY
of **VERMONT**

College of Nursing & Health Sciences

Department of Biomedical & Health Sciences

Radiation Therapy Program

Student Handbook

Addendum to the College of Nursing and Health Sciences Handbook

Academic Year 2018/2019

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General Program Information

Accreditation

The University of Vermont is accredited by the New England Association of Schools and Colleges (NEASC).

The Radiation Therapy program is accredited by The Joint Review Committee on Education in Radiologic Technology (JRCERT).

The program must abide by JRCERT Standards in order to maintain accreditation; if anyone has concerns that the program is not adhering to those Standards, please contact the Program Director or a University Official. If issues or concerns are not resolved, allegations may be submitted directly to the JRCERT.

JRCERT

20 N. Wacker Drive, Suite 2850

Chicago, IL 60606-3182.

Phone: (312)704-5300. www.jrcert.org

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Mission

The mission of the University of Vermont's Radiation Therapy program is to educate, train, and graduate professionally competent and ethical individuals committed to lifelong learning and who are prepared to meet current and future workplace challenges in radiation therapy.

Advisory Committees:

Clinical & Curriculum Advisory Committee (CCAC): meets annually in the fall. The committee is composed of the Medical Director, Programs Director, Clinical Coordinator, and clinical preceptors of all clinical internship sites, current radiation therapy students and members at large. The Advisory Committee reviews clinical and didactic curriculum content, evaluates student success and outcomes, and suggests improvements or changes to the program. Additionally, the Committee reviews American Registry of Radiologic Technologists exam pass rates and the Joint Review Commission on education in Radiologic Technology assessment plan.

Program Effectiveness Data and Assessment Plan

The Radiation Therapy Program assessment plan includes the Department of Biomedical and Health Sciences goals that align with the College's Mission; demonstrate problem-solving and critical thinking skills, effective written and verbal communication skills, and achieve the highest professional and ethical standards. Within these goals, the assignment of program outcomes, measurement tools, benchmarks, time frames, and responsible party are associated with each goal. Specific to the Radiation Therapy Program, effectiveness data are evaluated and reported yearly to the CCAC and the JRCERT to ensure program requirements are being met.

The radiation therapy program effectiveness data include:

1. ARRT examination pass rate for each cohort.
2. Job placement rate within six months of graduation.
3. Program completion rate.

Student learning outcomes:

Goal one: Graduates will be clinically competent

- Students will demonstrate competency positioning patients for accurate radiation therapy delivery.
- Students will integrate didactic and clinical course work to provide appropriate patient care.

Goal two: Students will exhibit problem solving and critical thinking skills

- Students will demonstrate critical thinking skills in CT simulation in accordance to physician directive and patient needs.
- Students will recognize and address additional patient needs when appropriate in the treatment process.

Goal three: Students will communicate clearly and effectively with faculty, patients, and clinical staff:

- Students will demonstrate effective verbal communication in the clinical setting.
- Students will demonstrate effective written communication.

Goal four: Students demonstrate the value of professional growth and development:

- Students demonstrate professionalism and commitment to professional growth.
- Students demonstrate professionalism in the clinical setting.
- Students demonstrate professionalism and commitment to professional development.

Professional Behavior Policy

Professionalism is an attribute each student is expected to progressively develop as they become involved in the professional courses. It requires the student to develop specific behaviors consistent with the profession of Radiation Therapy. These behaviors are part of the objectives for the clinical practicum courses and will be considered as part of the grade evaluation for the course. The following objectives describe behaviors characterizing a professional that each student will be evaluated on during his/her assigned clinical practica and as well as in University of Vermont courses and laboratories. To develop the attributes of a professional each student will:

- arrive in the clinic and all classes at the expected time. This includes ready to start clinical practica at the designated time.
- show an interest in the professional courses, display propriety and good judgment in appearance, behavior and speech.
- cooperate and offer to help others when his or her own work is completed.
- demonstrate preparedness by timely and careful completion of required reading and writing assignments and maintain an organized and efficient work environment.
- maintain confidentiality of patient information and releasing information only to authorized persons in accordance to the Health Insurance Portability and Accountability Act (HIPAA).
- behave with complete honesty and accept responsibility for own mistakes instead of ignoring them or hiding them.
- advocate the importance of professional association.
- adhere to the dress code and observe clinical safety rules in all professional courses.
- keep the work area clean, safe and well supplied.
- adapt to unexpected changes in scheduling and display good judgment in assigning priorities when faced with several tasks.
- treat all patients, staff members and visitors respectfully at all times.
- accept constructive observations and heed instructions immediately.
- It is the student's responsibility to be fully aware of the policies and procedures of our educational partners where the student may be participating in clinical practica. Any violation of the policies and/or procedures of our educational partners and/or being deemed to create an unsafe environment for patients, staff, or fellow students; or failure to comply with the etiquette in accordance with the standards of the clinic or the CNHS is grounds for the student being uninvited from returning to the affiliate location and may result in receiving a failing grade in the associated course.

ARRT and ASRT Standards of Ethics Policies

Students are expected to follow and adhere to the American Registry of Radiologic Technologists (ARRT) Standards of Ethics and Rules of Ethics for Radiologic Technologists and the American Society for Radiologic Technologists (ASRT) Radiation Therapist Code of Ethics. If a student has convictions, criminal proceedings or military court martial and feels Section B3 of the ARRT Standards of Ethics is pertinent, please contact the Program Director as this may prevent the student from taking the ARRT registry exam as s/he may not meet the requirements of the profession and therefore may not be eligible for the board registry/certification exam.

Please review these standards by following the links below:

ARRT Standards of Ethics

<https://www.arrt.org/pdfs/Governing-Documents/Standards-of-Ethics.pdf>.

ASRT Radiation Therapist Code of Ethics.

<http://www.asrt.org/docs/default-source/practice-standards/rancodeofethics.pdf>

Essential Functions

The essential functions include additional non-academic requirements of our programs, comprising the physical, emotional and professional demands of the major. All Biomedical and Health Sciences students are responsible for the essential functions outlined in this handbook. After reviewing the essential functions, the student will have a clearer understanding of the program's expectations. Throughout the students professional studies, the ability to meet these functions will be evaluated and assessed. All RADT students are responsible for all of the following, at a minimum, essential functions. If a student is unable to meet the essential functions, with or without reasonable accommodations, the student could be dismissed from the program.

Cognitive functions

The student must be able to thoroughly, efficiently and reliably:

- Recall, interpret, extrapolate, analyze, synthesize, evaluate, and apply information from a variety of sources, including reading material, lecture, discussion, patient observation, examination and evaluation/assessment.
- Possess and apply mathematical skills and determine what data are needed to solve problems.
- Possess and apply critical thinking and problem solving skills and have the ability to resolve issues in a timely manner.
- Apply knowledge, skills, and values learned from course work and life experiences to new situations.

Affective functions

The student must be able to:

- Establish professional, trusting, empathetic relationships with patients and their families, clinical staff and the community.
- Demonstrate respect and engage in non-judgmental interactions regardless of an individual's age, gender, race, socio-economic status, religion, life-style, and/or culture.
- Work independently and effectively in groups under time constraints;
- Meet externally established deadlines.
- Be an active and engaged learner in classroom, lab and clinical settings.
- Maintain alertness and concentration with cognitive, communication and psychomotor tasks for as long as three hours at a time within the academic environment, and as long as ten hours at a time within the clinical environment.
- Identify sources of stress and develop effective coping behaviors.
- Recognize and respond appropriately to potentially hazardous situations.
- Prioritize requests and work concurrently on at least two different tasks.
- Project an image of professionalism including appearance, attitude, dress, and confidence.
- Possess the psychological health required for full utilization of abilities.
- Recognize emergency situations and take appropriate action.

Communication functions

The student must be able to:

- Attend selectively and in a controlled and respectful manner to various types of communication, including the spoken and written word and non-verbal communication.
- Relay information in oral and written form effectively, accurately, reliably, thoroughly and intelligibly to individuals and groups, using the English language; and
- Read and write English proficiently (typed and hand-written).

Radiation Therapy specific psychomotor functions

The student must be able to:

- Accurately and reliably inspect and observe the skin, facial expression, anatomical structures, posture and movement of others.
- Examine and evaluate/assess blood pressure, and lung and heart sounds.
- Accurately and reliably read equipment dials and monitors.
- Feel pulses, skin condition, muscle and tendon activity, and joint and limb movement.
- Negotiate level surfaces, ramps and stairs to assist patients/classmates appropriately.
- Lead patients/classmates through a variety of examinations and treatments typically requiring sitting, standing, squatting and kneeling on the floor or treatment table.
- Move from one surface level to another (e.g., floor to stand, stand to treatment table).
- React and effectively respond quickly to sudden or unexpected movements of patients/classmates.
- Manipulate dials, knobs, and other small to large parts and pieces of equipment.
- Maintain activity throughout an eight to ten-hour work day.
- Transport self/patients from one room to another, from one floor to another.
- Put on and take off patient clothing, including gowns.
- Put on and take off Personal Protective Equipment (PPE) (i.e. mask and gloves).
- Obtain and maintain Cardiopulmonary Resuscitation (CPR) Certification prior to and throughout all clinical practica rotations.
- Exhibit sufficient manual dexterity to manipulate small equipment such as syringes for intravenous injections; perform CPR; and treat acutely ill patients without disturbing sensitive monitoring instruments and lines.
- Manipulate another person's body in transfers, positioning, and other treatment or diagnostic techniques.
- Move dependent real or simulated patients, generating lifting forces of up to 75 pounds.
- Lift or carry up to 34 pounds.
- Reach above, reach out, and reach below to accomplish treatment and patient care.
- Work safely with potential chemical, radiologic, and biologic hazards using universal precautions.
- Accurately and reliably differentiate between red and green light.

Student Resources

Below are resources for student support at UVM. These resources are available to students who may be having difficulty meeting programmatic or academic expectations or simply feel they need additional help or resources.

Counseling and Psychiatry Services (CAPS): Support your mental health and learn how to thrive during your time at UVM. Your mental health is our top priority. Explore the options that are best for you in finding the support and connection you need. Call CAPS to schedule an appointment or ask questions about our services. Your first time seeing a CAPS counselor will be a consultation appointment.

Jacobs House
146 So. Williams St.
Phone: 802-656-3340
<https://www.uvm.edu/health/CAPS>

Student Accessibility Services (SAS): SAS provides accommodations to students with documented disabilities. Among the programs and services, SAS offers exam accommodations, meetings with Accessibility Specialists to receive advisement and advocacy around disability-related matters, ebooks, deaf and hard of hearing services, notetaking and adaptive technologies and more.

A-170 Living Learning Center
Phone: 802-656-7753
Email: access@uvm.edu
https://www.uvm.edu/academicsuccess/student_accessibility_services

Center for Academic Success: Offers subject area tutoring, supplemental instruction, learning skills, time management, and study skills.

244 Commons
Living/Learning Center
Phone: (802) 656-4075
Email: tutoring@uvm.edu
https://www.uvm.edu/academicsuccess/tutoring_center

If you find that MRS might not be the right field for you for any reason please talk with your Program Director or your Adviser. We would be happy to talk with you about the program or more about other possible majors that might fit your interests and skills.

Clinical Practica Policy

RADT 173, 174, & 223

Student Responsibilities:

1. Fulfill all University, College and program requirements for graduation.
2. Dress Code: Students will adhere to the dress code of the University of Vermont Medical Center (UVMCC). This includes wearing proper identification and a whole body radiation monitor at all times while in the clinic. This will be provided to the students each year as the policy may change.
3. Attendance:
 - a. Clinical hours: Students will be in attendance per course requirements or according to the schedule set by the clinical instructor. Missed clinical hours are to be made up in accordance with the clinical practicum course. Students who are in the clinic for more than 4 hours per day will be offered a 15 minute break. If the student takes longer than a 15 minute break, the time in excess of 15 minutes will need to be made up.
 - b. Spring break: Students will have the week of UVM spring break off unless hours need to be made up. Approval must be obtained from the Program Director *and* the UVM Clinical Coordinator.
 - c. Planned absence: All planned absences require a minimum of one week notification and approval by the Clinical Coordinator.
4. Professional Behavior: Students will behave professionally following the guide established by the BHSC department. Failure to adhere to BHSC or clinical practica site's professional expectations may be cause for termination from the clinical site. *Please refer to the Professional Behavior Policy in this handbook.*
5. Clinical Competencies: Students must complete required competencies set per course syllabus and/or the clinical instructor. They must compile and submit all the completed clinical competencies to the UVM Clinical Coordinator.
6. Clinical Mandatories and Health Clearance Requirements MUST be completed by August 15th prior to the start of the next academic year in order to participate in the respective clinical practicum. Failure to complete the clinical mandatories and health clearance requirements by the required date may result in failure to participate in the clinical practicum, which could result in dismissal from the course.

RADT 274

Student Responsibilities:

1. Fulfill all University, College and program requirements for graduation prior to the start of the final semester.
2. Dress Code: Students will adhere to the dress code of the affiliate site. This includes wearing proper identification and a whole body radiation monitor at all times while in the clinic.
3. Attendance:
 - a. Clinical hours: Students will be in attendance 40 hours each week. Students will

- be given at least 30 minutes for lunch, dependent on the clinics policy. Morning and afternoon breaks will follow the clinic policy.
- b. Spring break: Students will have the week of UVM spring break off unless hours need to be made up. If hours need to be made up, approval must be obtained from the Program Director or in his/her absence the UVM Clinical Coordinator, *and* the Clinical Supervisor at the Affiliate site. Spring break cannot be switched for a different week.
 - c. Planned absence/Personal days: Students are allowed two (2) personal days off during the affiliation period. These days may be used for sick days OR personal time off, including job interviews, and professional meetings. All planned absences require a minimum of one (1) week notification and approval by the Affiliate Clinical Supervisor and notification of this approval must be sent to the Program Director.
4. Professional Behavior: Students will behave professionally following the guide established by the BHSC department and the clinical affiliate site. Failure to adhere to BHSC or affiliate department professional expectations may be cause for termination from the clinical site. *Please refer to the Professional Behavior Policy in this handbook.*
 5. On-line Report: Students must submit the minimum on-line reports as outlined in the syllabus. The mechanism for submitted the reports will also be outlined in the syllabus.
 6. Clinical Competencies: Students must complete all required competencies as set for the by the American Registry of Radiologic Technologists (ARRT) and the program by the end of the semester. They must compile and submit all completed clinical competencies to the UVM Program Director or in his/her absence to the UVM Clinical Coordinator as outlined in the syllabus.
 7. Clinical Mandatories and Health Clearance Requirements MUST be completed by the dates set forth by the Clinical Education Team Lead for CNHS, BHSC in order to participate in the final clinical practicum. Failure to complete the clinical mandatories and health clearance requirements will result in failure to participate in the clinical practicum, which could result in dismissal from the course.
 8. Site selection will be completed in the fall semester prior to the RADT 274 clinical practicum. The sites will be selected through a lottery system that is equitable and fair. Students may not request specific sites to either his/her classmates or the program director or coerce, collude, or manipulate the site selection process. Failure to comply with this policy will result at a minimum in the student being placed last for a clinical affiliate site or placed before the center for student conduct.

Clinical Affiliate Responsibilities

1. **Clinical Supervision and Access Policy:** Students are always directly supervised during their clinical experiences. The degree of supervision is commensurate with the amount of experience and competency of the student. At no time are students ever placed in a position of doing clinical work as replacement for a certified and/or licensed therapist. The affiliate will allow students access to all areas of the Radiation Oncology department as necessary for their clinical experience. The student will have access to an internet- connected computer in order to access his/her UVM e-mail and to submit their online clinical reports.
2. **Schedule:** The clinical affiliate will provide a rotation schedule to fulfill all the requirements of the clinical internship. A copy of this schedule will be sent to the Program Director and the Clinical Coordinator at UVM and available to each student. Any significant changes in the rotation schedule will be communicated to the student, Program Director, and Clinical Coordinator at UVM.
3. **Orientation:** Students will participate in the required Orientation at each institution and they will be provided a structured orientation to their affiliate department.
4. **Student Evaluation:** The Clinical Supervisor at each site will be responsible for compiling evaluations for each student at the end of each clinical rotation. The compiling of all the final competencies is the responsibility of the student as they must submit them to the UVM Program Director or in his/her absence to the UVM Clinical Coordinator.

Radiation Safety Policy

All students in the Radiation Therapy Program understand the need to adhere to and practice radiation protection policies in the clinical area.

Radiation Protection

Students are required to apply correct radiation protection practices at all times; these principles will be taught during MLRS 140. At no time may a student participate in a procedure while using unsafe radiation protection practices. The student must always adhere to practices which reduce radiation exposure to patients, themselves and other personnel.

These include, but are not limited to, the following:

- 1 The student will not operate equipment in labs on campus or in the clinical setting without having an instructor readily available for supervision.
- 2 Students are never allowed to radiograph each other. Phantoms and positioning devices are provided for laboratory experiments and as teaching aids.
- 3 The student must always adhere to practices which reduce radiation exposure to self and others to As low As Reasonably Achievable.(ALARA)
- 4 Any questionable practice must be reported to the Program Director and/or the Clinical Coordinator.

Radiation monitor badge

Each student is issued a whole body radiation monitor badge (AKA badge) prior to his/her first clinical experience. The badges are distributed by the Clinical Coordinator in RADT 173, RADT 174. And RADT 223, at the beginning of the semester and then replaced monthly for the semester. For RADT 274, badges are mailed to the clinical affiliate site at the beginning of the semester and replaced monthly. Students are expected to:

1. appropriately wear a badge anytime the student is in the clinic. If the student does not have his/her badge s/he cannot remain in clinic.
2. return the badge to the Clinical Coordinator at the end of each month.
3. appropriately care for the badge while in his/her possession.
4. The UVM Radiation Safety Officer and the RADT Program Director will review the reports monthly. If a student receives a dose higher than what is set by the Radiation Safety Officer, the student and the Program Director will be notified. The Student can review the monthly radiation report by contacting the Radiation Safety Officer or the Program Director.

Radiation Exposure Limits

The program follows the regulatory statutes and guidelines of the appropriate State and the Nuclear Regulatory Commission (when required) in which the student is participating in his/her clinical practicum. In addition, the program follows the As Low As Reasonably Achievable (ALARA) principle in accordance with the maximum permissible total effective dose equivalent. If a student reaches ALARA level I, s/he will be counseled by the University's Radiation Safety Officer. In order to abide by these standards, the badge must be worn appropriately during clinical practice.

Radiation Safety Pregnancy Policy

While all students in the Radiation Therapy Program understand the need to adhere to and practice radiation protection policies in the clinical area, this is especially important for the female student who might be pregnant. Exposure to radiation may be harmful to the developing fetus, therefore, the female student may choose to voluntarily declare her pregnancy. Declaration of pregnancy must be made in writing and must include the approximate date of conception. Refer to Declaration of Pregnancy Form at the end of this Handbook.

The declared pregnant student will be advised as to the radiation and occupational hazards to her unborn child by the University of Vermont Radiation Safety Officer in consultation with the Program Director and Clinical Coordinator. The student will be monitored by University of Vermont officials throughout her pregnancy or completion of the program, whichever occurs first.

For the declared pregnant student, the NRC limits the dose to the embryo/fetus to 0.5 rem (5mSV) over the entire pregnancy. All efforts will be made to avoid substantial variation above a uniform monthly exposure rate (0.05 rem/month) (0.5 mSV/month). The student will be issued an additional badge (belly badge) that must be worn appropriately during clinical practica for the duration of pregnancy or completion of the program, whichever occurs first. Refer to NRC Regulatory Guide 8.13

<http://pbadupws.nrc.gov/docs/ML0037/ML003739505.pdf> for more information.

The declared pregnant student must inform her physician of her enrollment in the Radiation Therapy Program and obtain a written statement of her/his recommendations for continuing in the program.

The declared pregnant student may continue in both didactic and clinical education courses. If the student feels that she cannot continue in the program, she may apply for a leave of absence and reenter the program after the birth of her child. Reentry will be at the beginning of the appropriate semester if space is available.

A student may undeclare her pregnancy in writing at any time.

Magnetic Resonance Imaging (MRI) Safety Policy

In the event that a student should observe an imaging procedure, s/he must review the MRI Safety Policy, review the safety checklist, and sign the attestation of such policy.

MRI uses strong magnetic fields to create a diagnostic image. The magnetic field that is generated is *always* on, therefore, continual safety precautions must be taken. The magnetic field is very sensitive to metal objects containing iron and other ferrous metals but can also interfere or cause damage to implanted or medical devices. Please review the list of contraindications located on Trajecsys for a observing a MRI. If you should have a device or a medical condition that is not listed, please ask the clinical coordinator or program director prior to observing in MRI to allow an adequate clearance for everyone's safety.

Professional Courses:

Students must earn a grade of “C” or better in all professional courses. The numerical grade of “C” is determined per course and is at the discretion of the course instructor. Professional courses are listed below. Refer to the CNHS handbook for specific criteria for meeting academic standards.

Radiation Therapy

ANPS 19 and 20: Anatomy and Physiology
MLRS 140: Radiation Science
MLRS 141: Advanced Radiation Science (2018 & 2019 cohorts only)
MLRS 175: Medical Imaging
MLRS 215: CT Procedures
MLRS 296: Leadership and Management in Healthcare
Physics 013: Conceptual Physics (effective 2014 cohort)
RADT 152: Principles of Radiation Therapy
RADT 176: Clinical Radiation Oncology
RADT 244: Essentials of Patient Care
RADT 270: Dosimetry Concepts
RADT 275: Dosimetry
RADT 277: Techniques in Radiation Therapy
RADT 280: Quality Assurance & Treatment Planning

Students must progressively pass *all* of the clinical practica courses to meet the academic requirements for graduation and eligibility for the ARRT registry/certification exam. Refer to the CNHS and BHSC handbook for specific criteria for meeting academic standards.

Clinical Practica

RADT 173: Introduction to Clinical Practice (Clinical Practicum I)
RADT 174: Clinical Practicum II
RADT 223: Clinical Practicum III
RADT 274: Clinical Practicum IV

Document created: December 5, 2008
Updated January 8, 2013, July 17, 2015, August 22, 2017, May, 2018

Declaration of Pregnancy

I have received a copy of the University of Vermont's Radiation Safety Pregnancy Policy. Furthermore, I have read the policy and understand my rights and responsibilities.

Printed Name

Date of Birth

Signature

Date

Student Acknowledgement Signature Page

By my signing below, I acknowledge that I have received, read, understand and agree to abide by the University of Vermont Radiation Therapy Program Student Handbook. I understand that if I do not abide by the policies and meet essential functions, expectations, program, college, and University requirements, I may be discontinued from the program and the major.

I also understand that it may become necessary for program officials to revise the contents of the Student Handbook prior to my completion of the program, in which case I agree to abide by the revisions.

Printed Name

Date of Birth

Signature

Date