



Radiation Therapy Clinical Non-Credit, Non-Degree Certificate Program Student Handbook 2022 – 2023



In collaboration with
The School of Health Profession's Health Science major

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Table of Contents

GREETINGS FROM THE PROGRAM DIRECTOR	4
ABOUT THE PROGRAM	5
About the Mount Sinai Health System	5
Mount Sinai Mission	5
Mount Sinai Vision	5
The Mount Sinai Center for Radiation Sciences Education at Stony Brook University Mission State	tement 5
Program Accreditation	5
RTT Program Curriculum:	6
Program Goals & Student Learning Outcomes Clinical Year Faculty & Leadership	7 8
Clinical Locations & Departmental Supervisors	9
MOUNT SINAI RESOURCES	10
Recreation Office	10
Bookstore	10
Library	10
TUITION/REFUND POLICY	11
CLINICAL EDUCATIONAL HOURS	13
ACADEMIC CALENDAR, ATTENDANCE AND PUNCTUALITY	14
CLINICAL APPEARANCE, DRESS CODE & REQUIRED ACCESSORIES	16
PROFESSIONAL BEHAVIOR	18
GENERAL RULES OF CONDUCT AND SAFETY	19
CONDUCT	19
SAFETY	19
CLINICAL EDUCATION: POLICIES, PROCEDURES & STUDENT RESPONSIBILITIES	20
CLINICAL EDUCATION PLAN	21
DIRECT SUPERVISION POLICY	21
PROFESSIONAL CONFIDENTIALITY	22
POLICY ON DISABILITIES	22
POLICY ON MONTHLY EVALUATIONS WITH PROGRAM DIRECTOR AND CLINICAL	
COORDINATOR	23
ACADEMIC INTEGRITY	23
ACADEMIC STANDING, PROBATION, AND TERMINATION POLICY	23
STUDENT APPEAL PROCESS FOR ACADEMIC STANDING ISSUES	24
STUDENT GRIEVANCE POLICY AND PROCEDURE	24
Informal Process:	24
Formal Process	25
CRITICAL INCIDENT MANAGEMENT	26
LIABILITY INSURANCE	26
PREGNANCY POLICY	26
DECLARATION OF PREGNANCY	27
SUBPART B—RADIATION PROTECTION PROGRAMS	28





SOURCE: 56 FR 23396, MAY 21, 1991, UNLESS OTHERWISE NOTED.	28
NEW YORK STATE LICENSURE*	29
CRITERIA FOR PROGRAM COMPLETION	30
Clinical Year Grading System	30
Student Deliverables	30
Guidelines for Clinical Supervisors/Instructors	31
When Filling Out Evaluation Forms	31
CLINICAL BEHAVIOR EVALUATION	31
CLINICAL COMPETENCY POLICY	32
A LIST OF ALL REQUIRED COMPETENCIES CAN BE FOUND IN APPENDIX 10.	32
Instructions for Completing Competency Forms	32
SPECIALTY ROTATIONS	33
Physician Specialty - Rotation	34
Brachytherapy Specialty - Rotation	36
Dosimetry Specialty – Rotation	37
OBSERVATIONAL ROTATIONS	38
Proton Observational Rotation	38
COVID-19 POLICY	39
APPENDICES	40





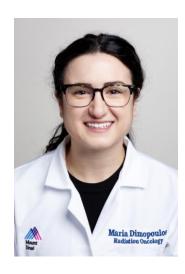
Greetings from the Program Director

On behalf of the Mount Sinai Center for Radiation Sciences Education at Stony Brook University, I welcome you as our students! We join you in anticipation of a rewarding educational experience at our institution as you prepare for careers as radiation therapists.

We at Mount Sinai are committed to providing compassionate, competent patient care in addition to an exciting and healthy environment for all students in the classroom, and throughout our clinical locations.

The field of radiation oncology is dynamic and incredibly rewarding. We are thrilled to watch you learn and grow under our guidance.

Again, welcome to the team and best wishes for a productive year.



Maria Dimopoulos, MBA, RT(T)

Associate Director, Mount Sinai Center for Radiation Sciences Education
Radiation Therapy Program Director, Clinical Assistant Professor, Stony Brook University





About the Program

About the Mount Sinai Health System

The Mount Sinai Health System is an integrated health care system providing exceptional medical care to our local and global communities. Encompassing the Icahn School of Medicine at Mount Sinai and seven hospital campuses in the New York metropolitan area, as well as a large, regional ambulatory footprint, Mount Sinai is acclaimed internationally for its excellence in research, patient care, and education across a range of specialties. The Mount Sinai Health System was created from the combination of The Mount Sinai Medical Center and Continuum Health Partners, which both agreed unanimously to combine the two entities in July 2013.

Mount Sinai Mission

The mission of the Mount Sinai Health System is to provide compassionate patient care with seamless coordination and to advance medicine through unrivaled education, research, and outreach in the many diverse communities we serve.

Mount Sinai Vision

The Mount Sinai Health System's vision is to continue to grow and challenge convention through our pioneering spirit, scientific advancements, forward-thinking leadership, and collaborative approach to providing exceptional patient care in the many unique communities we serve.

The Mount Sinai Center for Radiation Sciences Education at Stony Brook University Mission Statement

The mission of the Radiation Therapy Program is to optimize the knowledge, attitudes and skills of our students by preparing them to meet the daily challenges of a Radiation Therapist in the dynamic field of Radiation Oncology. Through clinical work and didactic lessons, students will hone the skills that are required to serve our patients in the community while maintaining ethical standards and professionalism in and out of the clinic. They will become an integral part of the health care team in the battle against cancer and leaders in providing the highest level of patient care.

Program Accreditation

The Mount Sinai Center for Radiation Sciences Education at Stony Brook University maintains accreditation through Middle States Commission on Higher Education and has applied for initial accreditation by the Joint Review Committee on Education in Radiologic Technology (JRCERT). The JRCERT is the only agency recognized by the United States Department of Education and the Council on Higher Education Accreditation for the accreditation of traditional and distance delivery educational programs in radiography, radiation therapy, magnetic resonance, and medical dosimetry. The JRCERT awards accreditation to programs demonstrating substantial compliance with the standards found in appendix 16. The Mount Sinai Center for Radiation Sciences Education at Stony Brook University is also a recognized Radiation Therapy Program





through the American Registry of Radiologic Technologists (ARRT) and the New York State Department of Health (NYSDOH).

RTT Program Curriculum:

Stony Brook Health Science Major Education:

- Stony Brook Health Science Major Education:
- Human Anatomy and Physiology for Health Science I & II
- o Research Methods in Health Science
- Human Anatomy, Health and Medical Language
- Health Care Issues
- Communication Skills
- Professional Ethics
- Health Care Informatics
- Scholarly Writing in Health Science
- Radiation Physics in Medicine
- Principles and Practice of Radiation Therapy
- Radiobiology and Health Physics
- Radiographic Anatomy and Pathology
- Radiation Oncology/Medical Physics II
- Introduction to Pathology

Clinical Year Education:

Orientation to Radiation Therapy ("Clinical Skills Orientation")

Mini-courses:

- Radiation Oncology
- Simulation
- Clinical Anatomy
- Patient Care
- Clinical Set-Ups
- Professionalism
- o Physics/QA
- Communications
- o Labs
- o Registry Review

Specialty-Rotations:

- Brachytherapy rotation
- o Physician rotation
- Dosimetry rotation
- New York Proton Center rotation

Monthly clinical rotations

- o 2 months in simulation
- o 10 months on treatment units





Program Goals & Student Learning Outcomes

Goal 1: Students will demonstrate clinical competence of an entry-level radiation therapist

Student Learning Outcomes:

- 1. Students will deliver radiation therapy treatments as prescribed by a radiation oncologist
- 2. Students will demonstrate basic knowledge and understanding relative to each sitespecific setup

Goal 2: Students will possess critical thinking skills

Student Learning Outcomes:

- 1. Students will adequately respond to challenges faced during treatment setup and delivery
- 2. Students will show the ability to perform multiple tasks in a timely manner

Goal 3: Students will practice with professional values

Student Learning Outcomes:

- 1. Students will display professional conduct
- 2. Students demonstrate life-long learning

Goal 4: Students will display effective communication skills

Student Learning Outcomes:

- 1. Students will demonstrate written communication skills
- 2. Students will demonstrate oral communication skills





Clinical Year Faculty & Leadership

Kenneth Rosenzweig, MD	Mount Sinai Radiation Oncology Professor and Chair
Kimberly Smith, MS	Mount Sinai Radiation Oncology Vice Chair, Administration
Samantha Skubish, MS, RT(R)(T)	Mount Sinai Radiation Oncology Chief Technical Director
Deborah Zelizer, phd, LCSW	Stony Brook University SHP Chair <u>Deborah.zelizer@stonybrook.edu</u> Office: (631) – 444 - 6158
Maria Dimopoulos, MBA, RT(T)	Mount Sinai Center for Radiation Sciences Education Associate Director Radiation Therapy Program Director Maria.dimopoulos@mountsinai.org Office: (212) 241 – 5118 Cell: (646) 951 - 7969
Danielle McDonagh, MS, RT(T)	Mount Sinai Center for Radiation Sciences Education Clinical Coordinator: Radiation Therapy Edu & Research Danielle.mcdonagh@mountsinai.org





Clinical Locations & Departmental Supervisors

The RTT program has a meaningful clinical education plan that assures each student is provided with a meaningful and equitable educational experience and that each student is able to complete all required competencies during their tenure in the RTT clinical non-credit, non-degree certificate program (second year of the program). This is achieved by requiring all students to complete a clinical rotation at each clinical treatment campus where students are exposed to a wide range of treatment techniques and simulations.

All clinical rotations will be conducted at Mount Sinai Health System. The Mount Sinai Health System is one of the largest health systems within the region, as such, the department is able to provide students with a wide range of procedures to achieve competency requirements put forth by JRCERT. Mount Sinai Radiation Oncology includes 4 clinical treatment locations, in combination there are 12 treatment machines, 5 simulators and brachytherapy offered at each location. Students are to report to the clinical supervisors of each Mount Sinai Radiation Oncology location.

Students gain hands on learning with various therapeutic and imaging technologies including but not limited to: SRS, SBRT, TBI, CSI, IMRT, 4DCT, Fluro, DIBH, gating, compression, alignrt, exactrac and CBCT. To ensure equity in the educational experience all students are required to rotate through each treatment location to gain the required clinical experience with all specialty procedures and imaging technology. Additionally, Mount Sinai is a partner in the New York Proton Center. As such, students also complete an observational rotation in proton therapy treatment. A map of all clinical year locations can be found in Appendix 6.

Mount Sinai Hospital

Mount Sinai Hospital – 1184 Building

Address: 1184 5th Ave (1184 Building MC Level), New York, NY 10029

Clinical Supervisor: Clodagh Starrs | (212) 241 – 8911 | clodagh.starrs@mountsinai.org

Mount Sinai Hospital – Hess Building

Address: 1470 Madison Ave (Hess Building SC Level), New York, NY 10029

Clinical Supervisor: Keith Edwards | (212) 241 – 9498 | keith.edwards@mountsinai.org

Mount Sinai West

Mount Sinai West

Address: 1000 10th Ave (Main elevators to LL), New York, NY 10019

Clinical Supervisor: Natosha Houston | (212)523–6898 |

natosha.houston@mountsinai.org





Mount Sinai Downtown

Mount Sinai Downtown - Union Square

Address: 10 Union Square East (SC Level), New York, NY 10003

Clinical Supervisor: Clifford Temple | (212) 844 – 8060 | Clifford.temple@mountsinai.org

Mount Sinai Downtown - The Blavatnik Family - Chelsea Medical Center at Mount Sinai

Address: 325 W 15th Street, New York, NY 10011

Clinical Supervisor: Denise Kraemer | (212) 84 –8041 | denise.kraemer@mountsinai.org

ProHealth-Mount Sinai Doctors Radiation Oncology

Pro-Health Mount Sinai

Address: 22-22 30th Avenue Astoria, NY 11102

Clinical Supervisor: Mohamed Radhouani | (718) 267-2763 |

Mohamed.Radhouani@mountsinai.org

New York Proton Center

New York Proton Center

Address: 225 East 126th Street, New York, NY, 10035

Clinical Preceptor: Anh Kha | (646) 968-9043 | akha@nyproton.com

MOUNT SINAI RESOURCES

Recreation Office

The Recreation Office offers a wide range of discounts to promote work/life balance and the enjoyment of many of New York City's cultural events. The office provides discounted tickets, promotions, and services that include Broadway and Off-Broadway shows, movies, sporting events, amusement parks, restaurants, health clubs and spas, hotels, cell phone service, car rentals.

All discounts require a valid Mount Sinai Health System ID.

19 East 98 Street, Room 2F

212-241-6660

Recreation.mountsinaihealth.org

Bookstore

At the Posman Collegiate Bookstore, students can order popular books, purchase supplies, food and gifts. The Bookstore is located on the ground floor of the Annenberg Building.

Library

Students have access to the Icahn School of Medicine library at Annenberg 11 with their Mount Sinai student ID. Library hours and details can be found at:

https://icahn.mssm.edu/about/ait/levy-library





TUITION/REFUND POLICY

Tuition will be charged at the rate of \$7,500 for the clinical year plus applicable university fees (university fees can be found at: www.stonybrook.edu/commcms/sfs/tuition/certificate-program). This annual tuition will be collected by the Program before the initial meeting of the program. The tuition fee shall be made payable to the School of Health Professions. A student shall not be permitted to attend classes or clinical education beyond the posted tuition deadline dates without receipt of tuition and insurance payment or approved payment voucher.

Refund of Tuition:

Students who withdraw from the Radiation Therapy clinical non-credit, non-degree certificate year of the program are liable for payment of tuition in accordance with the following schedule:

Withdrawal during	Liability
First week	0%
Second week	30%
Third week	50%
Fourth week	70%
Fifth week	100%

Orientation will be held on the first day of the program. Absence from classes does not constitute an official withdrawal and does not relieve the student of his or her financial obligation, nor entitle the student to a refund. Students must officially request to withdraw, in writing, to the Dean's Office.

Students will be responsible for other fees incurred during the duration of the program. Such fees included but are not limited to:

- Professional liability insurance \$30
- Health clearance and toxicology screening as required by clinical sites via Castle Branch \$78
- CPR training ~\$100





Health Insurance (required): Students can purchase the university plan or show proof of private insurance

Other Program and Professional Estimated Required Expenses*

Textbook	\$100.00
Laptop	\$750.00
Castle Branch screening and compliance platform - general access**	\$43.00
Castle Branch screening and compliance platform – toxicology screening**	\$35.00
Professional liability insurance	\$30.00
National Professional Society Student Membership (ASRT)	\$80.00
CPR Training	\$100.00
Registration fee for national exam (ARRT exam)	\$225.00

Note: * there will be transportation expenses to clinical rotation sites; **these prices have been negotiated and discounted with Castle Branch.





CLINICAL EDUCATIONAL HOURS

Students enrolled in the Radiation Therapy Program must complete a minimum of **235 days (1,645 hours)** of supervised clinical education and all clinical evaluations of students must be a minimal <u>pass/satisfactory</u> to qualify for graduation.

Assignments to all Mount Sinai clinical education centers:

NO STUDENT WILL BE PERMITTED TO ENTER THE CLINICAL SETTING OR ATTEND ORIENTATION WITHOUT A COMPLETED HEALTH FORM AND THE REQUIRED IMMUNIZATIONS AND HEALTH AND LIABILITY INSURANCE.

One-Year Clinical Education Session

- Orientation is mandatory and begins the clinical year.
- Each student will be assigned to a clinical education center five days a week (Monday through Friday) 8 a.m. To 4 p.m. Clinical hours may vary according to site, e.g., 7:00 a.m.
 3:00 p.m. With one-hour lunch breaks at the discretion of the instructor(s) for the duration of the clinical rotation.
- Mini Courses will be scheduled throughout the year, taking place Wednesday or Friday mornings across Mount Sinai locations – schedule to be determined.
- On a case by case basis, the program director may make a recommendation to the Dean
 of SHP to extend the length of the program for students who need time off for extended
 illness, family sick leave, or personal leave may be approved to extend their clinical
 training session no later than June 28th of the final semester.
 - To request a leave of absence from the program for personal or medical reasons, students must follow the policies and procedures outlined in the SHP handbook.
 - Each student will be assigned to a clinical education session five, eight-hour days per week (8:00 a.m. 4:00 p.m.) For the remainder of the time necessary to complete the minimum 235 days (1,645 hours) and must accompany satisfactory and timely evaluations of *all* required clinical and behavioral objectives. Only then, will the student be reviewed to determine if he/she is qualified to graduate.





ACADEMIC CALENDAR, ATTENDANCE AND PUNCTUALITY

The Mount Sinai Center for Radiation Sciences Education at Stony Brook University is a two-year, full time program that begins during the fall semester of the senior year at Stony Brook University in the Health Science major and continues through a 12-month clinical non-credit, non-degree certificate program at Mount Sinai Health System. The clinical certificate program starts in June and is completed the following June. Clinical certificate program's didactic minicourses are held on Friday mornings. Students are assigned to clinical rotations at various Mount Sinai Health System locations the remainder M-F, 8am-4pm.

The presence of students in the clinical facility must in no way alter the routine work schedule of the department, or inconvenience patients, or staff. Therefore, **dependability** and **punctuality** are essential. Students shall not be deemed as employees of Mount Sinai for any purpose, meaning this is an educational experience and as such, students must comply with the policies and procedures put forth in this handbook. Any attempt to alter or falsify an attendance record shall be considered to be unethical and unprofessional conduct and shall be grounds for dismissal from the program.

1) Attendance

- a) Each student will receive a clinical schedule. Students are allowed in the patient treatment area *only* on their assigned days.
- b) Each student is responsible for signing in and out <u>daily</u> using the Trajecsys system. <u>Failure</u> to do so will result in lost time.
- c) No student will be allowed to have clinical assignments on hospital holidays, weekends, evenings, or nights.
- d) Students are not allowed to earn more than 40 hours of clinical time in one week.
- e) Only full eight-hour days are given credit, unless previously authorized by the program director.

2) Absence & Time Off – Clinical Year:

- a) In case of <u>absence due to illness</u>, the student must notify the program director and clinical supervisor by email at least one hour prior to the start of the clinic's work day.
- b) Mount Sinai Radiation Oncology Departments are closed on the following days: New Year's Day, MLK, President's Day, Memorial Day, Juneteenth, Independence Day, Labor Day, Thanksgiving, and Christmas. As such, students are excused from clinic.
- c) Each student will be entitled to 5 personal days to be used for reasons of religious observance, vacation, minor illness, family needs, etc. Students <u>must</u> notify the program director and department supervisor at least <u>48 hours prior</u>, unless due to illness.
- d) Students receive a winter vacation that generally begins on December 24th and extends through New Year's Day, January 1st.





- e) An excess of <u>three days</u> absence in any one semester, without prior documentation stating the reason for the absence(s), will be sufficient reason to have the student's participation in the program reviewed for possible probation.
- f) Students will not absent themselves from their clinical schedule for the purpose of studying for examinations.
- g) Students may be permitted 2 days of bereavement leave (with appropriate documentation). Students must notify the program director at least 24 hours prior to their absence.
- h) Time missed due to inclement weather may need to be made up. This will be at the discretion of the program director.
- i) Students should expect that they may be called for jury duty. Because jury duty is a civic responsibility, the Mount Sinai Center for Radiation Sciences Education at Stony Brook University will not ask that students be excused from jury duty. However, if the student's absence from the program will create a hardship or jeopardize the student's academic work, the student may wish to seek a deferral through the appropriate judicial district.

3) Punctuality

- a) Each student is required to enter the clinical area at the assigned time.
- b) Each student is required to report immediately to his/her assigned area.
- c) A student who enters the clinic late *may be sent home* at the discretion of the clinical supervisor.
- d) Students may <u>not</u> work through lunch hours in order to leave the clinic early, except in extraordinary circumstances. This must be approved by the student supervisor and program director.
- e) A student who fails to return on time from break or lunch hour may be sent home at the discretion of the clinical supervisor and not be credited with time for that day.
- f) A student must contact their clinical supervisor if they expect to be arriving late for ANY reason. They must clock-in accurately and it will be recorded as a lateness.
- g) A student with 5 lateness within a semester will be given a WRITTEN WARNING. A subsequent lateness will be grounds for the program director, to recommend to the Dean of SHP in writing, (within five working days) that the student be placed on probation.

4) Make-Up Time

The fulfillment of the minimum required 235 days of supervised clinical education time is the **student's** responsibility. Failure to complete the required number of days within the allotted time period may result in a **failure to graduate**. Therefore, the student is required to make up promptly any days missed.

- a) Any necessary absence from the clinic will be made up at the first available time with the approval of the program director.
- b) Any time owed, prior to the end of each semester, must be made up prior to credit being given for the start of the following semester.
- c) Any time owed must be made up prior to June 28th of the final semester of clinical education.





CLINICAL APPEARANCE, DRESS CODE & REQUIRED ACCESSORIES

Uniform

Students must wear Mount Sinai ceil uniform top and pants, embroidered with the
 Mount Sinai logo (no jeans or shirts acceptable). Students must wear closed toe shoes.

Required Accessories

- A name tag that includes the name of the institution must be worn. It must contain the word "student."
- o Radiation badges must be worn above the waist on same side as name tag.

Personnel Radiation Monitoring:

- Students are to follow Mount Sinai's Personal Exposure Monitoring Policy (appendix 1).
 Radiation dosimetry badges are to be monitored monthly by Radiation Safety staff and appropriate follow-up actions taken as may be indicated by the results.
- Dosimeters will be given to students each month. Each student is responsible for exchanging the radiation dosimeter(s) on the designated day of each month. Radiation dosimeters are exchanged with the Program Director.
- Monthly radiation exposures for students must not exceed the maximum permissible dosage to occupationally exposed persons as established by state and federal agencies for radiologic health.
- Radiation exposure reports are posted in each Mount Sinai Radiation Oncology department and are made available to students immediately following receipt of data, at minimum once per quarter. Student date of birth and/or social security numbers are not included on radiation exposure reports.

Students are responsible for:

- Wearing the dosimeter while on duty in those areas where there is a potential for radiation exposure.
- Exchanging worn dosimeters for new ones on the first workday of each wear period (e.g., first day of month or calendar quarter, depending on assigned wear period), unless the new replacement dosimeters' arrival has been delayed, in which case the exchange may be made as soon as possible after the arrival of the new dosimeters).
- Taking proper care of dosimeters, as described by Office of Radiation Safety instructions, to avoid damaging or contaminating the dosimeters.
- Not storing dosimeters near radiation sources when not being worn.
- Not wearing dosimeters when being exposed to radiation sources for personal medical purposes (The wearer should notify Radiation Safety if this inadvertently occurs or if administered a radiopharmaceutical).
- Notifying Radiation Safety immediately whenever dosimeters are lost, accidentally damaged, name change is required, place of work has changed, or any reason why





accidental exposure may have occurred (i.e., dosimeter accidentally left near source when not worn).

- Returning all dosimeters and holders upon termination of duties with/near radiation sources.
- Notifying Radiation Safety/dosimeter distributor of pending student termination.
- Otherwise wearing assigned dosimeters in accordance with any other Office of Radiation Safety instructions.
- Failure to comply with guidelines and responsibilities above may result in forfeiture of dosimeters and/or disciplinary action.

Reports to Wearers:

- Dosimeter wearers will be notified of radiation doses as obtained as per the criteria specified in regulations contained in 10 CFR 19 or any other applicable state or federal regulation.
- Individuals may be notified if their cumulative readings in any calendar quarter exceed pre-established 'investigation levels', or if any unusual or apparently 'high' dosimeter reading(s) are identified by Radiation Safety personnel.
- Regular dose reports [excised of personal information other than dosimeter wearer id number] are provided to the dosimeter distribution group distributor for availability to wearers.
- Individuals may also obtain their dosimeter results by making proper request to the
 Office of Radiation Safety. Such requests generally are required to be made in writing to protect the individual's personal information from release to unauthorized personnel.

Regular dose reports are provided to the dosimeter distribution group distributor for availability to wearers and confidential:

- o Individual radiation dose readings are considered as protected information and access to this information is limited to Radiation Safety personnel, supervisors, program directors, management personnel, members of the Radiation Safety Committee, regulatory inspectors, or others (with RSO approval) with a legitimate need-to-know.
- Release of individual dose information in any circumstances is limited to the minimum necessary.
- Any other personal information obtained by the Office of Radiation Safety in the administration of the dosimeter program is treated as confidential.

"High" Radiation Dosimeter Readings

High or unusual radiation dosimeter readings are investigated by Mount Sinai's
Radiation Safety Officer. Readings above designated "Investigation Levels" are evaluated
with regard to workload and type of duties performed by the dosimeter wearer;
adherence to proper work practices; proper care and use of the dosimeter; and possible
exposure of the dosimeter to "non-occupational" radiation sources. In cases where it
appears that the high readings may be due to inadequate safe work practices or
improper use or storage of the dosimeter(s), the wearer is counseled by Radiation
Safety Officer and/or the wearer's supervisor(s).





Professional Appearance

- Uniform and shoes must be clean and in good repair.
- Hair must be pulled back in a neat fashion.
- Beards and mustaches must be neatly trimmed (religious custom is the only exception).
- Excessive jewelry and excessive use of cosmetics, colognes/perfumes are inappropriate in the clinic.
- Long fingernails pose a health and hygiene hazard and are considered inappropriate and not tolerated. Chipped nail polish is unacceptable.
- o Careful attention must be paid to personal hygiene when attending clinic.
- Failure to dress properly may result in being sent home at the discretion of the clinical supervisor or program director. No clinic hours will be credited.

PROFESSIONAL BEHAVIOR

1) Performance Skills and Attitudes – Assessment Procedures

In addition to mastery of cognitive skills and knowledge, students will be evaluated on their performance skills and attitudes. These include the following:

- a) Adherence to Stony Brook University's Code of Conduct;
- b) Adherence to the SHP policies and procedure manual;
- c) Adherence to the Mount Sinai Health System policies and procedures;
- d) Ability to work with and relate to peers, faculty, and other members of the health care team;
- e) Maintain a positive attitude in all aspects of work;
- f) Maintain good attendance and arrive on time to work; and
- g) Conduct one's self in a professional demeanor at all times, including professional dress.

Successful completion of each rotation requires that the student continuously maintain high standards. This means that regardless of one's level of achievement in cognitive skills and knowledge, if one's professional behavior is not appropriate, he/she may not meet minimum requirements for successful completion of the rotation.

2) Unsatisfactory Performance Skills or Attitudes

Unsatisfactory behavior such as disruption of class activities, expression of derogatory, disrespectful remarks to the instructor, inability to work with peers, or excessive unexcused absences will result in further action.





A student who has exhibited unsatisfactory behavior that may affect their final evaluation and academic standing shall receive a written warning that stated behavior may jeopardize successful completion and lead to disciplinary action.

The details of these policies and procedures can be found in the Academic Standing Policy of the School of Health Professions; see the SHP Handbook for Certificate Programs at:

Https://healthtechnology.stonybrookmedicine.edu/students/incoming/orientation

All students are also expected to adhere to the Stony Brook University Student Conduct Code (available on the SHP webpage).

GENERAL RULES OF CONDUCT AND SAFETY

Students are expected to conduct themselves in a professional manner at all times, reflecting the integrity and values of the Mount Sinai Health System. Failure to comply with the rules of conduct and safety will result in disciplinary action.

Conduct

- 1) Students are expected to observe guidelines set forth in the directives (article 35) issued by the New York State Department of Health, Radiologic Technology, Bureau of Environmental Radiation Protection.
- 2) <u>Students must abide by the policy and standard rules and regulations of the SHP, Radiation</u> Therapy Program and the Mount Sinai Health System.
- 3) Students will address the staff, patients, and fellow students by their appropriate title and/or last name.
- 4) Smoking, eating, and drinking are permitted in designated areas only.
- 5) Personal relationships with staff and patients are prohibited.
- 6) Personal conversation and discussions with classmates or staff while interacting with patients are in poor taste and should be limited to off-duty hours.
- 7) Grievances and personal dislikes should be aired in private with the appropriate person(s).
- 8) Cell phone use is not permitted during clinic hours and should be stored in student lockers. Cell phones are not to be on the person of any student in clinic areas.

Safety

- 1) Students are required to acquaint themselves with the routine radiation and electrical safety policies and procedures and abide by all departmental radiation safety rules.
- 2) Accidents involving patients will be reported immediately to the program director and clinical supervisor who will file a written incident report.
- 3) Accidents involving students will be reported immediately to the program director and clinical supervisor who will file a written incident report. The student will then report to the Mount Sinai Emergency Department to be evaluated and cleared.





- 4) Radiation dosimetry (film) badges will be worn at all times while in the clinical facility and left within the facility upon leaving for the day. Film badges are not to be taken home.
- 5) Gross and willful negligence in the use of radiation and/or in the handling of radioactive substances which endangers the health of the student(s), staff, or patients, will result in an immediate removal from the clinical rotation and a recommendation for immediate dismissal from the program.

Clinical Education: Policies, Procedures & Student Responsibilities

The application of theory learned in the classroom is applied to the clinical environment throughout the student's clinical education.

The following procedures are to be utilized when a student attempts to satisfy all Performance Objectives:

The clinical instructor(s) maintains all ongoing processes where the student must:

- Observe the Instructor perform the specific procedure.
- The student will assist the Instructor perform the specific procedure.
- Have the Instructor observe the student enact the same procedure.
- Have the Instructor critique and correct any possible errors.
- Prior to the student's attempt to satisfy a specific performance objective, the student must successfully perform the procedure previously.
- Having satisfied the above criteria, the student can request (at their own discretion), that the Instructor evaluates their performance for Clinical Competency.
- The student must perform each step of the procedure correctly and consistently to be deemed successful in satisfying any attempted objective.

Clinical competency evaluation forms are maintained to record student grades and progress and to communicate their performance. All records are maintained electronically on Trajecsys and verified by the Program Director. A student not successful in completing their clinical requirements will be <u>ineligible</u> for graduation. The program uses the Monthly Clinical Performance Evaluation form, Clinical Competency Evaluation, and Procedure Log to document and evaluate student progress during the clinical practicum.

All educational activities of the Program are maintained with various channels of communications. Methods of communication include, but are not limited to, scheduled clinical site visits by the Program Director, intermittent telephone calls, written correspondence, advisory committee meetings, and formal and informal conversations with the Clinical Supervisors and formal student/program director meetings.

Each student is provided with a Clinical Education Handbook during the required <u>Orientation to</u> <u>Clinical Education</u> session on the first day of the clinical practicum. Due process policies for students participating in the clinical education component are in place, as is the behavioral and





technical objectives and standards, attendance academic standing, probation and dismissal and pregnancy policies.

Clinical Education Plan

Monthly clinical rotation schedules will be provided to each student and the clinical supervisors during orientation.

At the start of each monthly clinical rotation, the clinical supervisor will introduce the department the first day of a student's clinical assignment. Students will be oriented to the hospital and the department. Students will present a "Monthly Student Intake Form" (appendix 2) on the first day of each monthly clinical rotation. This document will review student experience, goals, objectives, and expectations.

The "Plan" for the clinical education component of this program is to satisfactorily complete all clinical competencies and required assignments. All clinical courses will have competency objectives incorporated into an evaluation instrument.

Students are evaluated by the clinical staff at the end of each month. These evaluations will be utilized to establish a final grade (Pass/Fail) for the clinical education session and are kept in the student's file. The first two months of the clinical year, students will be evaluated using the "Monthly Student Evaluation – Level I" form (appendix 3), and "Monthly Student Evaluation – Level II" (appendix 4) all months thereafter.

Specialty rotations in brachytherapy, dosimetry, proton therapy and with a physician will be assigned in the month of February and March.

Instructional methods used to teach all clinical coursework include: Demonstrations, Personal Experiences, Case Study, Lecture, Labs and Simulation Techniques.

Direct Supervision Policy

All clinical activities involving a patient shall require appropriate supervision by a registered radiation therapist or any appropriate clinical staff member, e.g. RN, CMD, MD, etc. As follows:

- Students must never begin to prepare a patient for treatment or simulation without
 the clinical supervisor or a designated registered technologist being present in the
 treatment room or the simulation room.
- Students may bring patients into a treatment room, simulation suite, exam room etc. But may NOT begin to prepare the patient for any procedure without direct supervision





- Direct supervision requires that the technologist, nurse, oncologist etc. Is in the room with the student and is directly available
- Students are not permitted to activate the radiation beam or the CT scanner without the clinical supervisor or a designated registered technologist present, having given a verbal confirmation prior to each beam delivery in adherence with Mount Sinai departmental policy RO.2.12 (appendix 5).

Professional Confidentiality

One of the major restrictions that a health care profession imposes is the need to maintain strict confidentiality of medical and personal information about a patient. Medical records are comprised of many parts including the following: histories, diagnostic images, and radiographic film records. They must be handled confidentially and cannot be revealed to the patient, family, or others outside the department without the direct consent of the patient's physician. Medical information should only be shared with individuals who are involved in the patient's care and must know this information for treatment purposes. Information should never be discussed with the student's family or friends even in the most general terms, as **this would be violating the patient's rights.**

An invasion of privacy can be as obvious as releasing medical information to the press, or as subtle as discussing a patient's condition with a co-worker in a public place. Students must maintain confidentiality and ensure the privacy of each patient.

Students must maintain strict confidentiality of all health information of patients at Mount Sinai sites during and after the course of their clinical rotations. Students may neither use nor disclose health information of patients to which they have access, other than as expressly authorized by the clinical affiliate. Students may not record any patient-identifiable information on their personal documents (e.g. Clinical logs). Students must be familiar with and adhere to Mount Sinai's HIPAA policy.

Policy on Disabilities

Student Accessibility Support Center (SASC):

If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Student Accessibility Support Center, ECC (Educational Communications Center) Building, Room 128, (631) 632-6748. They will determine with you what accommodations, If any, are necessary and appropriate. All information and documentation is confidential. Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Student Accessibility Support Center. For procedures and information go to the following website:

http://www.stonybrook.edu/ehs/fire/disabilities





Policy on Monthly Evaluations with Program Director and Clinical Coordinator

Each student will meet with the program director and clinical coordinator within 1 week of the end of each month. The students will be prepared to show and discuss the following:

- Monthly attendance sheet (daily clinic, quality assurance)
- Monthly evaluation sheet
- Record of involved procedures
- · Record of competency form

Academic Integrity

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty is required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Professions, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty please refer to the academic judiciary website at http://www.stonybrook.edu/commcms/academic integrity/index.html

Academic Standing, Probation, and Termination Policy

Students must achieve a minimum **75%** (equals "C"/pass) in all of the following non-credit didactic courses to qualify for graduation: Clinical Radiation Oncology, Simulation, Clinical Set Ups, Professionalism, Patient Care, Radiation Protection and Physics.

Procedure follows the SHP policies and procedures on probation and termination contained in this book.

The program director will recommend to the dean in writing, (within five working days) that the student be placed on probation. Probation/termination is indicated by the following:

- A student enrolled in the program will be recommended for probation if a grade of less than 75% (equals minimum passing grade of "C") in any required didactic course within the program's curriculum.
- A student who has been placed on probation (e.g., failure of a pre-requisite) may not ordinarily be permitted to participate in full-time clinical practice, except under extraordinary circumstances, and at the discretion of the program faculty and the dean.
- A student that does not complete 3 competencies successfully per month, or who fails a competency attempt 3 times will be given a written warning. Any second written warning will result in probation.
- A student that fails 11 competencies throughout the course of the clinical year will be placed on probation.





- A student who does not complete 1 chart round and 1 early QA shift per monthly clinical rotation will be given a written warning. Any second written warning will result in probation.
- A student that receives under a 3.0 monthly evaluation or who logs patient learning logs less than 2 times per week will be given a written warning. Any second written warning will result in probation.
- A student given a written warning or placed on probation will undergo remediation with the program director and relative clinical supervisors.
- Unsatisfactory and/or unethical clinical performance alone will result in a recommendation to the dean for probationary status and/or possible termination from the program.
- Any student will be recommended for termination from the Radiation Therapy Program if, while on probation, their academic grade(s) falls below 75% and/or a grade of unsatisfactory in any clinical education evaluation(s).
- Students who fail (less than 75% or "C") two (2) required courses in one (1) semester will be recommended by memo to the dean, for termination from the program.
- A student who receives both a didactic course grade of less than 75% and one or more unsatisfactory clinical evaluations will be recommended, by memo, to the dean for termination from the program.
- A student placed on probation twice will be recommended for termination from the Radiation Therapy Program.

If the requirements of ethical behavior, health, good academic and clinical standings are not met, the student may be placed on probation or dismissal from the program.

Student Appeal Process for Academic Standing Issues

See the Stony Brook University SHP Student Handbook for the student appeal policy and procedure. This policy can be found on page 9, section G:

 $\frac{Https://healthtechnology.stonybrookmedicine.edu/sites/default/files/2021\%20SHP\%20Student}{\%20Handbook\%20for\%20Certificate\%20Programs.pdf}$

Student Grievance Policy and Procedure

If a student believes there has been a violation, misinterpretation, or inequitable application of any existing policy, procedure, or regulation the student has the following avenues to pursue grievances.

Informal Process: The student is encouraged to meet with the individual whose behavior warranted the grievance. If this action is not feasible, the student should contact the Program Director to discuss the issue and develop a resolution plan. The informal meeting must take place within two weeks of the occurrence that caused the grievance. Another avenue of





informal grievance is to contact the university's Ombudsman Office at https://www.stonybrook.edu/ombuds/

Formal Process

- Within two weeks, the student must submit to the program director in writing a
 detailed description of the grievance. Upon review of the written grievance, the
 Program Director will discuss the issue with the student and provide the student
 with a written resolution within 5 business days. Note: If the grievance is with the
 Program Director, the student should submit the written description of the
 grievance directly to the Chair of the department.
- If the student believes their concern has not been adequately addressed/resolved by the Program Director, within 5 business they must email the Chair of the department to request an appoint to discuss the issue. The Chair will discuss the issue with the student and provide the student with a written resolution within 5 business days (with a copy to the Program Director as appropriate).
- If the student believes their concern has not been adequately addressed/resolved by the department Chair, within 5 business days they must contact Joanmarie Schreiber, Assistant Dean for Academic and Student Affairs. The assistant dean will discuss the issue with the student and provide the student with a written resolution within 5 business days (with a copy to the program director or Chair as appropriate).
- If the student believes their concern has not been adequately addressed/resolved by the Assistant Dean for Academic and Student Affairs, they must contact Dr. Stacy Jaffe Gropack, Dean of SHP (with a copy to the program director or Chair as appropriate).
 - The Dean will discuss the issue with the student and provide the student with a written resolution within 5 business days.

The Program Director will monitor formal grievances and informal complaints and concerns to determine whether there is a pattern of complaints that could negatively affect the quality of the educational program. The Program Director will maintain a secure file, located in her office, of all formal grievances and their resolution. The Program Director review grievances and ensure that resolutions are implemented. She will also monitor the nature of grievances and resolutions to ensure that there are no trends that could negatively affect the quality of the educational program.

If the grievance involves racial/ethnic or gender discrimination the student may also contact Office of Institutional Diversity and Equity (OIDE) or the Title IX Coordinator.

- OIDE: https://www.stonybrook.edu/commcms/oide/
- Title IX Coordinator: https://www.stonybrook.edu/commcms/oide-titleix/





Critical Incident Management

Stony Brook University and the Mount Sinai Health System expect students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of University Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.

Liability Insurance

Students are required to provide proof of professional liability insurance coverage. A policy can be purchased from CM&F Group. Students are required to carry a minimum of \$1,000,000 policy coverage. The annual policy coverage should begin on the first day of clinical rotations. Approximate cost is \$30.00/year. The policy cover page, including dates of coverage and coverage amount needs to be submitted to the program director. Students are not permitted access to the clinical areas without documented proof of liability coverage. Https://www.cmfgroup.com/professional-liability-insurance/radiation-therapist-insurance/

PREGNANCY POLICY

The **pregnancy policy** of the Stony Brook University Radiation Therapy Program is designed to reduce the potential for radiation exposure to the fetus and to assure that the student participates in an academic and clinical curriculum that will enable the student to meet the objectives of the program.

In the event that a student becomes pregnant while enrolled in the program, the individual has the option of whether or not to inform the Program Director of the pregnancy. If the student chooses to inform the Program Director, it must be in writing. In the absence of this voluntary, written disclosure, a student cannot be considered pregnant. Upon receipt of a written, voluntary disclosure of pregnancy, the student shall be given a choice of three (3) options, as follows:

- 1. To continue full participation in the program modified by program officials to exclude or postpone assignments and/or employ additional safety precautions for those procedures that carry greater potential for occupational radiation exposure.
- 2. To continue full participation in the program without modification or interruption.
- 3. To withdraw completely from clinical training.

If a student chooses to <u>discontinue</u> clinical education, the student will be permitted to complete the didactic portion of the curriculum. The student will be required to be in attendance only during scheduled classroom hours as is possible. The remaining clinical training hours and all clinical competencies shall be completed at a time mutually agreed upon following the course of pregnancy. The student shall be eligible for certification and licensure <u>only</u> upon satisfaction of all program graduation criteria.





If a student chooses to <u>continue</u> with Clinical Education:

- The program officials shall determine the exact form and content of the plan for clinical training should modification be selected by the student.
- A fetal exposure monitor will be issued and possibly additional shielding materials made available if necessary.
- The plan must not compromise the program objectives or the education of the other class members.
- Efforts shall be made to allow the student to continue in the program as long as medically advisable and educationally valid.
- The student shall meet with the Radiation Safety Officer to be advised of the most current information available regarding possible medical risks of radiation exposure to the fetus and the radiation exposure monitoring guidelines to be followed.
- The student must adhere to the pregnancy policy of the clinical education center to which assigned.

DECLARATION OF PREGNANCY

l, ,	do hereby make this voluntary declaration of pregnancy. M
estimated date of conception was _	
understand this means the Radiatio measures to ensure that the total d occupational exposure does not exc	m making this voluntary declaration of pregnancy. In Therapy Technology Program/Licensee must take ose to the embryo/fetus during the entire pregnancy from seed 0.5 rem (5 msv). If, as of this date, the total dose to the or greater, the total dose to the embryo/fetus during the ot exceed 0.05 rem (0.5 msv).
rotations and corresponding learnin	ese measures may include the reassignment of clinical ag objectives to those that will result in lower occupational in restrictions on the duties that I perform.
It has also been explained to me that the revoking of the declaration	at I may revoke the declaration of pregnancy at any time and must be in writing.
(Student) Radiation Therapist	 Date
Radiation Safety Officer	 Date
	Sample Document
(Not	to be used as an official form)

Mount Sinai Center for Radiation Sciences Education at SBU: Student Handbook

27





Subpart B—Radiation Protection Programs

Source: 56 FR 23396, May 21, 1991, unless otherwise noted.

§20.1101 Radiation Protection Programs

- a) Each licensee shall develop, document, and implement a radiation protection program commensurate with the scope and extent of licensed activities and sufficient to ensure compliance with the provisions of this part. (See §20.2102 for recordkeeping requirements relating to these programs.)
- b) The licensee shall use, to the extent practicable, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are as low as is reasonably achievable (ALARA).
- c) The licensee shall periodically (at least manually) review the radiation protection program content and implementation.
- d) To implement the ALARA requirements of §20.1101 (b), and notwithstanding the requirements in §20.1301 of this part, a constraint on air emissions of radioactive material to the environment, excluding Radon-222 and its daughters, shall be established by licensees other than those subject to §50.34a, such that the individual member of the public likely to receive the highest dose will not be expected to receive a total effective dose equivalent in excess of 10 mrem (0.1 msv) per year from these emissions. If a licensee subject to this requirement exceeds this dose constraint, the licensee shall report the exceedance as provided in §20.2203 and promptly take appropriate corrective action to assure against reoccurrence.

[56 FR 23396, May 21, 1991, as amended at 61 FR 65127, Dec. 10, 1996]

§20.1208 Dose to an embryo/fetus

- a) The licensee shall 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). (For recordkeeping requirements, see §20.2106.)
- 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.
- c) The dose to an embryo/fetus shall be taken as the sum of—
 - 1) The deep-dose equivalent to the declared pregnant woman; and
 - 2) The dose to the embryo/fetus from radionuclides in the embryo/fetus and radionuclides in the declared pregnant woman.
- d) If the dose to the embryo/fetus is found to have exceeded 0.5 rem (5 msv), or is within 0.05 rem (0.5 msv) of this dose, by the time the woman declares the pregnancy to the licensee, the licensee shall be deemed to be in compliance with paragraph (a) of this section if the additional dose to the embryo/fetus does not exceed 0.05 rem (0.5 msv) during the remainder of the pregnancy.





NEW YORK STATE LICENSURE*

The student, after the successful completion of this two-year course of study, will be eligible to make application for New York State licensure. Two-year course of study is defined by successful completion of the Health Science major (with the applicable concentration of study) and the successful completion of the clinical non-credit, non-degree certificate program. To be employed as a radiation therapist in the State of New York the graduate must possess both the State of New York Department of Health license and pass the certification examination of the American Registry of Radiologic Technologists in Radiation Therapy. Graduates shall be issued a temporary permit to practice Radiation Therapy upon graduation, if the following criteria have been met:

- Application for licensure has been submitted to and accepted by the New York State Department of Health.
- The **NYS Department of Health** further requires that:

 Except for minor traffic violations, individuals who have ever been convicted for any offense against the law or are now under charges are required to contact the New York State Department of Health, Telephone # (518) 402-7580.
- Application has been submitted and accepted for the examination in Radiation Therapy of the American Registry of Radiologic Technologists.

Upon successfully completing the registry examination, the graduate is eligible for professional licensure by the State of New York. An application fee must be submitted with each application.

* Subsequent to passing the examination and upon program director verification of program completion, the student may obtain the requisite New York State, Department of Health license to work as a radiation therapist. Since the program will operate under the University's accreditation as an approved New York State program, students completing this program of study would not be eligible for licensing in New Jersey. New Jersey only has reciprocity with professional accredited, Joint Review Committee on Education in Radiologic Technology (JRCERT), programs.





CRITERIA FOR PROGRAM COMPLETION

In order to successfully complete the clinical program in Radiation Therapy and to be eligible to receive a Certificate of Completion, each student must satisfy the following criteria:

- 1. Complete 235 days of clinical education in accordance with the Time & Attendance Policy
- 2. Complete Clinical Competency requirements and receive satisfactory Clinical performance evaluations for each assigned clinical rotation.
- 3. Complete each Study Unit with the minimum passing grade of 75%

Clinical Year Grading System

Student's final clinical grade will be calculated based on the following courses, evaluations and deliverables:

- Didactic coursework (exams, assignments)
- Log completion
- Grand round deliverables
- Quality assurance attendance
- Monthly clinical evaluations
- Mini rotation deliverables
- Journal Club Presentations

Students will receive numerical grades in class; however, transcript grades will be documented as Pass/Fail.

Student Deliverables

In addition to completing treatment competencies, effective August 1st, students are to complete the following activities and submit deliverables as required:

- 1 quality assurance attendance per month to be entered in Trajecsys (Appendix 7)
- Grand rounds once per quarter
 - Deliverable: Essay on key take-aways (Appendix 8)
- Journal Club presentation once per quarter
 - Deliverable: Presentation on key take-aways (Appendix 9)
- Log submission, three submissions/week, to be entered in Trajecsys





Medicine		
Grade	Numerical Equiv	valent
Α	95-100	
A-	90-94	
B+	88-89	
В	85-87	
B-	80-84	
C+	78-79	
С	75-77	*Passing grade for the program is 75
C-	70-74	
F	<70	

Guidelines for Clinical Supervisors/Instructors

When Filling Out Evaluation Forms

Evaluation forms are designed to evaluate either the cognitive, psychomotor, and/or effective skills of students. When evaluation forms are being filled out, the ratings and comments should address the competency and skills that can be expected of a radiation therapist student, not an experienced radiation therapist.

Please refer to the following where applicable:

Cognitive Skills: Deal with the application of knowledge and the development of Intellectual abilities.

Psychomotor Skills: Deal with behavioral tasks involving physical action.

Affective Skills: Deal with interest, attitudes, and value.

CLINICAL BEHAVIOR EVALUATION

The monthly student evaluation form (appendix 3 and appendix 4) must be completed via Trajecsys by clinical supervisors, including appropriate (online) signatures, each month. Students are to be evaluated using the "level I" form the first two months of the clinical year (June, July), and using the "level II" form the remainder of the clinical year (August – May). Both evaluation forms include objectives for clinical, behavioral and performance skills. Clinical supervisors work with the radiation therapy team assigned to the student for the month when completing monthly evaluation forms in Trajecsys.

<u>Instructors/Evaluators</u> are encouraged to elaborate upon the student's strengths and/or areas that need improvement based upon the content of this evaluation and overall student/instructor/patient interactions in the comments section. Evaluators are requested to address any "no" answer(s) in the evaluation.





CLINICAL COMPETENCY POLICY

Starting the third month of the clinical year (August) a minimum of 3 simulation or treatment competencies are due by the last day of each month. All competencies must be completed prior by the end of the evaluation period in order to ensure a timely grade.

- 1 competency to be selected and assessed by the Clinical Coordinator
- 1 competency to be selected and assessed by the Clinical Supervisor
- 1 competency to be selected by the student, and assessed by either the program director, clinical supervisor, or clinical preceptor.

In addition, the Program Director selects and assesses 1 competency per student, per term.

A list of all required competencies can be found in appendix 10.

Instructions for Completing Competency Forms

Evaluations will not be considered complete unless all the information requested on the form in the student section is filled out entirely. The student must have observed, participated in, and performed the set-up independently at least once before requesting evaluation of performance by the supervising instructor.

The student must present the treatment and setup to the clinical preceptor prior to walking the patient in for identification. The student must explain the competency details to the clinical preceptor at the beginning of each competency. During this presentation, the student must explain the site, dose, diagnosis, histology, imaging and any other relevant information.

The supervising instructor must check off the appropriate areas on the Competency Form as each task is correctly performed (appendix 11 and appendix 12).

If a student commits an error while attempting the patient set-up, the evaluation process is terminated at that point. The error is then indicated on the worksheet and entered into Trajecsys. The sheet that reflects the error must be kept on file and the student must repeat the process from the beginning.

All completed Competency Forms will be kept in the student's folder and submitted to the program director, along with the other evaluation forms, by the last clinical day of the clinical month rotation.

Please note: students will be evaluated for specialty rotations (dosimetry, physician and brachytherapy), through submitted essay, reflective journal and worksheet.





SPECIALTY ROTATIONS

Specialty rotations include 1-week internships to better understand departmental function, and patient experience in Radiation Oncology. Students will spend 1 week under a physician's supervision and service to understand patient consults, on treatment visits and follow-ups, nursing education, as well as the communication between the department and patient. Students will spend 1 week in dosimetry, reviewing hand calculations, gaps, and crafting treatment plans under the supervision of a Mount Sinai dosimetrist. While rotating to the Blavatnik Family – Chelsea Medical Center at Mount Sinai, students will shadow brachytherapy procedures alongside radiation oncologists, Vishal Gupta, MD. In March, student will complete a 2-week observational rotation at the New York Proton Center to shadow proton therapy procedures.





Physician Specialty - Rotation

Goal: To educate the student to the role of the radiation oncologist in delivering quality care to cancer patients undergoing radiation therapy.

<u>Student Objectives:</u> Course objectives are consistent with the professional curriculum of the ASRT and approved by the Joint review Committee on Education in Radiologic Technology (JRCERT) standards for accreditation. <u>Www.JRCERT.org</u>

- Understand the fundamentals of the required physician for informed consent, side effects of radiation therapy and the expected outcomes. Identify anticipated side effects (both acute and chronic) based upon both the tumor location and anatomy within the treatment field.
- Understand the need and procedure for obtaining a patient's consent. All new patients must sign a
 written consent form filled out by their attending radiation oncologist prior to receiving treatment
 planning and radiation therapy treatments.
- Discuss aspects of clinical evaluation, therapeutic decision-making and informed consent.
- Understand the process and explain the need of new patient orientation which includes the following:
 - Introduction of the radiation oncology health care team;
 - Verification of patient's identity;
 - Tour of radiation oncology department (e.g., reception area, parking validation, refreshments);
 - Patient waiting area (e.g., changing area, lockers, gowns);
 - Nursing station;
 - Simulator; and
 - Treatment area to include patient's treatment unit.
- Understand new patient assessment to include the following:
 - View "Introduction to Radiation Therapy" video;
 - Nursing assessment and knowledge base evaluation;
 - o Reinforcement of appropriate patient education information both verbal and written;
 - o Preparation of patient information packet with site-specific handouts; and
 - Referral to social worker if needed.
- Understand evaluation of patient's support systems at home including:
 - Transportation;
 - Nutrition;
 - o Pain management; and
 - Self-care.
- Understand nursing documentation chart.
- Understand on-treatment patients including:
 - Monitoring of weight and blood pressure each visit;
 - Appropriate graphic sheet charting;
 - Updating medications on summary list;
 - Monitoring weekly blood work results;
 - o Reviewing anticipated changes related to specific treatment site; and





- Documenting telephone conversations (e.g., instruction on the proper utilization of telephone contact sheets).
- Understand chart review including:
 - Ensuring physician's orders are properly endorsed;
 - Appropriate chart order (e.g., pathology, history, physical, are in order and all documents are filed under the proper section); and
 - Nursing progress notes are properly endorsed to include the following:
 - Nursing assessment is complete;
 - Ambulatory care summary list current;
 - Physician list current and accurate; and
 - Pathology reports and current laboratory results are filed in chart.
- Understand continuing assessment, education, and management of on-treatment patients to ensure optimum quality of life while going undergoing radiation therapy treatments.
- Understand follow-up procedures including:
 - Follow-up questionnaire must be filled out properly;
 - Obtain outside data (if not presently available from chart)
 - Document results of in-house diagnostic work-ups (if not present in chart)
 - Document current weight and blood pressure;
 - Update medications and current attending physicians involved in the patient's total care;
 - o Coordinate diagnostic work-ups for date of follow-up visit and for future visits as well; and
 - Follow-up of results of all ordered diagnostic work-ups and evaluations ordered prior to or after patient's follow-up visit.

Reflective Journal: Journal is to be 4 pages in length (double spaced). Student should reflect on their experience and understanding of patient consults, on treatments visits, follow ups and nursing education. Students are to highlight the communication observed between physicians, nurses, radiation therapists and support staff. Journal is to be completed one week following a student's physician rotation.





Brachytherapy Specialty - Rotation

Goal: To educate the student on the role of brachytherapy in the treatment of cancer.

<u>Student Objectives:</u> Course objectives are consistent with the professional curriculum of the ASRT and approved by the Joint review Committee on Education in Radiologic Technology (JRCERT) standards for accreditation. <u>Www.JRCERT.org</u>

- Discuss quality control procedures and recommend tolerances for the safe handling of brachytherapy sources and remote afterloading equipment
- Identify appropriate clinical applications for brachytherapy
- Compare and contrast brachytherapy delivery systems
 - High-dose rate (HDR)
 - Low-dose rate (LDR)
- Understand isotopes, methods of radiation production, half-life, energy and radiation protection
- Understand proper brachytherapy communication, and patient observation
- Assess the patient before, during and after brachytherapy procedures
- Understand emergency procedures relative to brachytherapy treatments and machinery
- Describe the elements of a radiation protection survey for patients undergoing
 Brachytherapy in the operating room and inpatient settings
- Understand storage, remote after loaders, surveys, licensing, documentation, management of accidents, handling and quality assurance for brachytherapy procedures.

Essay: Essay is to be 4-5 pages (double spaced) that answers the following questions based on the research conducted prior to this special rotation and the observations a student experienced during the brachytherapy specialty rotation. Essay is to be completed one week following a student's brachytherapy rotation.

- 1. What is brachytherapy and when is this used in radiation oncology?
- 2. What procedures did you observe?
 - A. What instruments were used in the cases you observed?
 - B. What sources were used in the cases you observed? Include their half life
 - C. How these align with the diagnosis for each case?
 - D. What are the side effects of the procedures observed?
 - E. How were those side effects communicated to patients?





Dosimetry Specialty - Rotation

Goal: To educate the student on the workflow and approval process of treatment plans in a radiation oncology department. To create treatment plans of their own, with understanding of dose distributions and dose tolerances.

<u>Student Objectives</u>: Course objectives are consistent with the professional curriculum of the ASRT and approved by the Joint review Committee on Education in Radiologic Technology (JRCERT) standards for accreditation. Www.JRCERT.org

- o Determine a patient's external contour, internal structures and volumes of interest used in
- Treatment planning
- o Describe dose distributions, tolerances, and dose volume histograms
- o Identify inconsistencies between treatment prescriptions and treatment plans
- Identify organs and tissues at risk and their dose limitations using tolerance dose tables
- o Describe methods of determining a patient's external contour, definition of internal
- Structures and volumes of interest used in treatment planning
- o Identify vital structures considered during treatment plans
- o Compare various methods of tissue compensation and their dosimetric impact

Define:

- 1. Gross tumor volume (GTV)
- 2. Clinical target volume (CTV)
- 3. Planning target volume (PTV)
- 4. Treated volume
- 5. Irradiated volume
- 6. Maximum dose within target volume
- 7. Minimum dose within target volume
- 8. Mean (average) dose within target volume
- 9. Modal dose within target volume
- 10. Median dose within target volume
- Describe the general flow of the IMRT process from patient immobilization through
- Treatment delivery
- Evaluate a variety of treatment plans for clinical use
- o Create treatment plans: single field, AP/PA, IMRT, electron, wedged fields, SBRT and imaging fields

Competencies required on the six treatment plans: single field, AP/PA, IMRT, electron, wedged fields, SBRT and imaging fields

Worksheet: Dosimetry worksheet will be distributed and collected during the dosimetry rotation. Worksheet is to be completed one week following a student's dosimetry rotation.

Mount Sinai Center for Radiation Sciences Education at SBU: Student Handbook





OBSERVATIONAL ROTATIONS

An observation site is used for student observation of the operation of equipment and/or procedures. These sites provide opportunities for observation of clinical procedures that are not available at the RTT Program's main clinical settings. Students may not assist in, or perform, any aspects of patient care during observational assignments.

Proton Observational Rotation

New York Proton Center (NYPC) Location: 225 East 126th Street, New York, NY 10035 NYPC Clinical Supervisor: Anh Kha | akha@nyproton.com | (646) 968 – 9043

Students will spend 2 weeks observing radiation therapists at the New York Proton Center (NYPC), a consortium between the Mount Sinai Health System, Memorial Sloan Kettering Cancer Center and Montefiore Medical Center, managed by prohealth. Students will report to the NYPC chief radiation therapist and will be under direct supervision at all times. Students will receive a dosimeter badge at the start of their observational rotation, badge results will be shared with the RTT Program director immediately once received.

Proton Observation Rotation Objectives

At the conclusion of the Proton Observational Rotation, students will be able to:

- Categorize radiation therapy equipment:
 - Proton cyclotron
 - Components
 - Methods of radiation production
 - Accessories
 - Compensation
- Explain proton:
 - Properties
 - Energy deposition
 - Bragg peak advantage
 - Clinical applications and treatment delivery
 - Immobilization requirements
 - Motion management and mitigation strategies
 - Patient positioning
 - Imaging workflow
 - Treatment delivery





COVID-19 POLICY

The impact of COVID-19 continues to vary widely among radiation therapy programs. The RTT Program will adhere to guidelines given by the New York State, Stony Brook University and the Mount Sinai Health System.

The RTT Program will continue to fulfill the didactic and clinical competency requirements outlined by the American Registry of Radiologic Technologists (ARRT) and in compliance with the Joint Review Committee on Education in Radiologic Technology (JRCERT). The RTT program's contingency plan is to provide virtual clinical education inclusive of, but not limited to, student projects, research and virtual mini courses. The RTT Program is prepared with robust online educational resources and support from Stony Brook University, the Mount Sinai Health System and the American Society of Radiologic Technologists (ASRT). The following guidelines will be followed:

- Students in clinical settings are not to participate in clinical care of patients suspected or known to have COVID-19.
- Students must abide by the Mount Sinai Health System (MSHS) policies and personal protective equipment (PPE) guidelines. MSHS COVID-19 policies can be found at: https://www.mountsinai.org/about/covid19/staff-resources
- Students should remain aware of national guidelines from the CDC concerning precautions for viral illness (COVID-19) risk mitigation and exposure response.
- Students must stay home if they are ill with fever, with or without respiratory symptoms.
- All students are to check for any signs of illness before reporting to clinical rotations and notify their program director and clinical supervisor if they become ill.
- A student who is ill with fever and/or respiratory symptoms will require a healthcare provider's note before returning to clinic.
- If a student is exposed to a confirmed or possible case of COVID-19, the student is required to inform their program director and clinical supervisor immediately. The student will complete testing and the RTT Program will provide guidance on when the student is approved to return to clinic
- Accommodations due to COVID-19 Related Exposure/Illness: Academic and clinical accommodations may be made for testing, missed assignments, missed work and lost time due to quarantine and/or testing.
- Additional information can be found at:
 Https://www.cdc.gov/coronavirus/2019-ncov/index.html

 Https://www.mountsinai.org/about/covid19/staff-resources
 Https://www.stonybrook.edu/commcms/studentaffairs/caps/resources/covid-19-resources.php





Appendices

Appendix 1: Personal Exposure Monitoring Policy

	THE MOUNT SINAI HOSPITAL, NEW YORK POLICY AND PROCEDURE	SUBJECT NO. 7 RS7 - Policy # 7		
	DEPARTMENT: Radiation Safety			
	SUBJECT: Personal Exposure Monitoring			
Original date of issue 12/15/2014				

Reviewed:	12/2014			
Revised:	12/2014			

Personal Exposure Monitoring Program

A. General Purpose

Any individual who, during the performance of normal occupational duties, is likely to receive a dose in excess of 10% of the annual limit (5,000 mrem/year) must be monitored for radiation exposure. The Radiation Safety Office in conjunction with the Radiation Safety Committee (RSC) will decide whether or not a group of workers requires monitoring. It is the responsibility of each monitored worker to comply with the policies and procedures regarding the monthly/quarterly exchange of the radiation monitoring dosimeters. Individuals, who mishandle their dosimeters, including chronic failure in mandatory timely exchange, will be reported to their department head and/or hospital administration as violating rules and regulations.

Radiation exposure records are reviewed as soon as they are received by the Radiation Safety Office (typically every 2 weeks). Hard copy of staff exposure records are maintained in the Radiation Safety Office and are always available for review during normal working hours. Digital exposure records are available upon email request.

B. Dosimeter Types

Whole body dosimeters (Pl, Black color) are to be worn on the front trunk of the body underneath any lead apron. Pl dosimeters are exchanged monthly for clinical workers and quarterly for research workers.

Collar dosimeters (P13, Red color) are to be worn on the collar outside any lead apron or thyroid shielding. P13 dosimeters are worn by all fluoroscopy users and are exchanged monthly. Lead apron and thyroid collar shields must be used during the procedures. Physicians performing Interventional Procedures will wear a collar dosimeter only. The Effective Dose Equivalent for these individuals will be determined by EDE2 calculations based on NCRP 122 recommendation.

Page 1 of 4





Ring or finger dosimeters may be worn by physicians performing fluoroscopy or cardiac catheterization procedures and by individuals who handle radioactive material or sources. Ring monitors shall be worn on the hand expected to get the largest exposure.

Fetal dosimeters (P17 with picture of fetus) are to be worn on the abdomen (always under lead apron when used) by declared pregnant workers.

C. Thyroid Monitoring

Thyroid counts are performed on the following groups of employees:

- Thyroid burden of Nuclear medicine personnel who helped prepare or administer a
 dosage of iodine-131 is measured within 3 days after administering the dosage.
 NYCDOH Article §175.03(k) requires maintaining a record of each thyroid burden
 measurement, date of measurement, the name of the individual whose thyroid burden was
 measured, and the initials of the individual who made the measurements.
- Thyroid burden of Radiation Safety personnel who monitor therapeutic I¹³¹ patients are measured within three days after the treatment.
- Thyroid burden of laboratory personnel who perform radioiodinations with volatile I¹²⁵ or I¹³¹ are measured within three days after each procedure.

D. ALARA (As Low As Reasonably Achievable) Program

Mount Sinai Medical Center is committed to the implementation of a program to maintain radiation exposure to staff, visitors, and patients As Low As Reasonably Achievable. The program is implemented through the constant review of personnel monitoring records by the Radiation Safety Office. Results of these audits are presented to the Radiation Safety Committee and recommendations are made. The below table summarizes the ALARA level limits:

Quarterly ALARA Levels

Туре	Level I	Level II
Whole Body	125 mrem	375 mrem
Lens of Eye	325 mrem	1,125 mrem
Extremity	1,250 mrem	3,750 mrem

Note: These limits have been adopted from NYCDOH regulatory guide 10.8

Page 2 of 4





ALARA Level I: Each incident will trigger a notification process to the individual and/or their supervisor, as well as report to the quarterly Radiation Safety Committee meeting.

ALARA Level II: The Radiation Safety Office will investigate each such incident. The results of each investigation will be presented to the quarterly Radiation Safety Committee meeting.

E. Annual Limits on Exposure

Annual limits on occupational radiation exposure are in addition to any other radiation exposure one receives for medical diagnoses or treatment or from background sources. They are designed to limit risks from occupational exposure to be comparable to risks in other safe industries. The table below lists annual occupational exposure limits. The limits are:

Annual Exposure Limits

Type of Exposure	Annual Limit	
Total Body Deep Dose	5,000 mrem	
Any Organ	50,000 mrem	
Lens of Eye	15,000 mrem	
Skin or Extremity	50,000 mrem	
Natural Background (NCRP 160)	620 mrem	

Annual exposure histories (Form 5s) are provided to all monitored staff as required by regulation as soon as they become available each year.

F. Declaration of Pregnancy for Radiation Workers

In addition to the limits listed above, there are explicit limits applied to the embryo/fetus of a pregnant radiation worker. In order for the fetus to be monitored, the pregnant worker must declare the pregnancy in writing to the Radiation Safety Office. The declaration of pregnancy is voluntary and confidential. The table below lists the specific limits to the embryo/fetus:

Period of Exposure	Amount
Entire Gestation (9 months)	500 mrem
Each Month during Gestation	50 mrem

Page 3 of 4





As soon as the Radiation Safety Office is notified of a declared pregnancy, the individual will undergo a confidential consultation with the Radiation Safety Officer. The employee's occupational exposure history will be reviewed and if the limits indicated above are likely to be exceeded, recommendations will be made to ensure that these limits are adhered to during the course of the pregnancy. A fetal monitoring dosimeter will be issued which must be worn beneath any lead apron on the abdomen to measure the exposure.

G. General Procedures for Handling Dosimeters

All departments with individuals who are issued radiation dosimeters must adhere to the following procedures:

- Dosimeters must be exchanged monthly/quarterly for processing by the contract service company. All badges are to be returned to the service company within one week of return to the Radiation Safety Office.
- Control dosimeters are kept in the Radiation Safety Office and are returned with personnel monitors for accurate processing of badges.
- 3. Personnel dosimeters assigned to individuals shall not be worn by anyone else.
- Personnel dosimeters must not be taken home and must be kept in a background level area when not being worn.
- New employees who are assigned dosimeters and who were monitored at previous employment must submit information about previous employer so that their occupational exposure histories can be obtained.
- 6. Each department must appoint a badge coordinator and alternate to coordinate the requirements of this section. These individuals, who will meet with Radiation Safety Office personnel to discuss badge issues, will be responsible for maintaining departmental compliance with the regulations and obtaining and coordinating necessary information with the Radiation Safety Office.
- If an employee is aware that his/her badge has been exposed (unexpectedly), it is the employee's responsibility to notify the Radiation Safety Office immediately.

Page 4 of 4





Appendix 2: Monthly Student Intake Form Months 1-3

Mount Stony Brook Sinai Medicine
Monthly Student Intake Form
Name:
Date:
Machine & Dept. :
Previous Experience:
Goals this month:
Expectations
2 Week follow up on performance and goals

Month 1 Objectives:

- Greeting patients
- Degrees: gantry, collimator, couch
- Patient orientation: LAO,RPO, etc. // supine, prone, decubitus
- Planes of the body/directional terms
- Patient positioning: triangulation
- Pulling up instructions in Mosaiq, setting up the treatment room
- · Pendant and couch functions
- Emergency off buttons
- Big picture: departmental operations (OTV, nursing), supplies

Month 2 Objectives:

- · Setting up the treatment room
- Confidently confirming Rx
- Getting familiar with Mosaiq
- Treatment console
- · Patient shifts
- "NA-ing" film
- Imaging—pitch, yaw, roll
- Set ups: brain, thorax, pelvis

Month 3 Objectives:

- *Competencies , QA, chart rounds begin*
- Setting up the treatment room
- Presenting pts to PD /sup/lead: dose, fx, site, dx, imaging
- Imaging MV





Months 4-9

Mount Stony Brook Medicine
Monthly Student Intake Form
Name:
Date:
Machine & Dept. :
vious Experience:
Expectations
2 Week follow up on performance and goals

Months 4-9 Objectives:

- Professionalism
- Greeting patients
- Degrees: gantry, collimator, couch Patient orientation: LAO,RPO, etc. // supine, prone, decubitus
- Planes of the body/directional terms
- Perform patient shifts
- Pendant and couch functions
- Emergency off buttons
- Dry runs
- Review patient information/setup in Mosaiq, set up

- Patient positioning: triangulation
 Patient positioning: triangulation
 Patient positioning: biangulation
 Big picture: departmental operations (OTV, chemo, nursing), supplies
- Confidently confirming Rx
- Operating treatment console
- "NA-ing" film, charting
- Set ups: brain, thorax, pelvis, H&N, breast, extremity
- Presenting pts to PD /sup/lead: dose, fx, site, dx, imaging
- Imaging: KV, MV & CBCT using proper language (pitch, yaw, roll)
- Understand SBRT workflow
- Simulation specific:
 - Sim order
 - SOPs
 - Speech
 - · Immobilization devices
 - Console
 - Tattooing workflow + practice

Student deliverables:

- 3 competencies/ month: 1 student choice, 1 sup, 1 CC 1 (3 student choice in simulation) 2 chart rounds & 1 QA / month





Months 10-12

Mount Stony Brook Sinai Medicine			
Monthly Student Intake Form			
Name:			
Date:			
Machine & Dept. :			
Previous Experience: Goals this month:			
Expectations			
RO2.12 Beam On Discussion & Expectations			
2 Week follow up on performance and goals			

Months 10 - 12 Objectives:

- Professionalism
- Greeting patients
- Degrees: gantry, collimator, couch
- Patient orientation: LAO,RPO, etc.
- Planes of the body/directional terms
- · Perform patient shifts
- Pendant and couch functions
- · Emergency off buttons
- Dry runs
- Review patient information/setup in Mosaiq, set up treatment room
- Patient positioning: triangulation
- Patient positioning: biangulation
- Big picture: departmental operations (OTV, chemo, nursing), supplies
- Confidently confirming Rx
- · Operating treatment console
- "NA-ing" film, charting
- All setups
- Presenting pts to PD /sup/lead: dose, fx, site, dx, imaging
- Imaging: KV, MV & CBCT
- Complete SBRT workflow
- AlignRT, Exactrac, DIBH
- Communication with staff and patient
- QA competencies, radiation safety
- Simulation specific:
 - Sim order
 - SOPs
 - Speech
 - Immobilization devices
 - Console
 - Tattooing workflow + practice

Student deliverables:

- 3 competencies/ month: 1 student choice, 1 sup, 1 CC
- 2 chart rounds & 1 QA / month





NYPC

NEW YORK
PR*TON CENTER

Student Intake Form—Observational Rotation
Student name:
Dates of rotation:

Previous experience:

Goals this month:

■ 1 Week follow up on performance and goals

Center for Radiation Sciences Education

Onboarding:

- Clock in/out daily using Trajecsys (location = NYPC)
- Complete daily NYPC attestation
- Receive dosimeter badge
- · Introduction to NYPC team

Objectives:

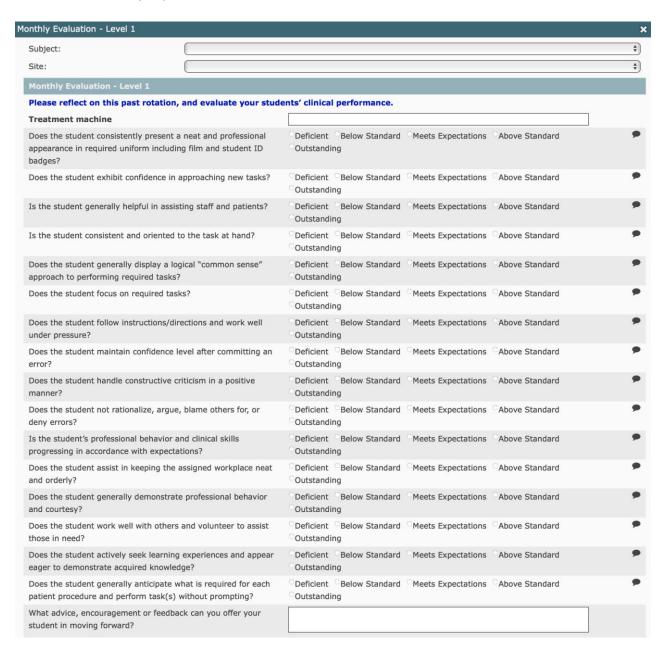
- Observe NYPC workflow and EMR system
- Categorize radiation therapy equipment:
 - Proton cyclotron
 - Components
 - Methods of radiation production
 - Accessories
 - Compensation
- · Explain proton:
 - Properties
 - * Energy deposition
 - * Bragg peak advantage
 - Clinical applications and treatment delivery
 - * Immobilization requirements
 - * Motion management & mitigation strategies
 - * Patient positioning
 - * Imaging workflow
 - * Treatment delivery

Thank you NYPC staff!





Appendix 3: Monthly Clinical Evaluation – Level I To be entered via Trajecsys







Appendix 4: Monthly Clinical Evaluation – Level II To be entered via Trajecsys

nthly Evaluation - Level 2	
Does the student exhibit confidence in approaching new tasks?	Deficient Below Standard Meets Expectations Above Standard Outstanding
is the student generally helpful in assisting staff and patients?	**Deficient ** Below Standard ** Meets Expectations **Above Standard **Outstanding
is the student consistent and oriented to the task at nand?	Deficient Below Standard Meets Expectations Above Standard Outstanding
Does the student generally display a logical Common sense" approach to performing required casks?	**Deficient ** Below Standard ** Meets Expectations **Above Standard **Outstanding
Does the student focus on required tasks?	Deficient Below Standard Meets Expectations Above Standard Outstanding
Does the student follow instructions / directions and work well under pressure?	**Deficient **Selow Standard **Meets Expectations **Above Standard **Outstanding
Does the student maintain confidence level after committing an error?	Deficient Below Standard Meets Expectations Above Standard Outstanding
Does the student handle constructive criticism in a positive manner?	Operations Operations Operations Operations Operations
Does the student not rationalize, argue, blame others for, or deny errors?	Deficient Below Standard Meets Expectations Above Standard Outstanding
is the student's professional behavior and clinical skills progressing in accordance with expectations?	Deficient Below Standard Meets Expectations Above Standard Outstanding
Does the student assist in keeping the assigned workplace neat and orderly?	Deficient Below Standard Meets Expectations Above Standard Outstanding
Does the student generally demonstrate professional pehavior and courtesy?	Deficient Below Standard Meets Expectations Above Standard Outstanding
Does the student work well with others and volunteer to assist those in need?	Deficient Below Standard Meets Expectations Above Standard Outstanding
Does the student actively seek learning experiences and appear eager to demonstrate acquired knowledge?	**Deficient **Delow Standard **Meets Expectations **Above Standard **Outstanding
Does the student generally anticipate what is required for each patient procedure and perform cask(s) without prompting?	**Deficient **Below Standard **Meets Expectations **Above Standard **Outstanding
Additional Objectives: Identifies patient correctly.	Deficient Below Standard Meets Expectations Above Standard Outstanding
Assists ambulatory patients on and off treatment unit and/or simulator table.	Deficient Below Standard Meets Expectations Above Standard Outstanding
Assists in moving non-ambulatory patients from wheelchair and/or stretcher to treatment unit or simulator tables.	**Deficient **Below Standard **Meets Expectations **Above Standard **Outstanding
Correctly repositions medical equipment (e.g., I.V. units, urinary drainage bags and monitors).	Operations Observed Technology Deficient Observed Standard Obser
Sets field sizes, collimator and gantry angles correctly and consistently.	Deficient Below Standard Meets Expectations Above Standard Outstanding
Identifies: - Key staff members of the health care team - Assigned treatment unit or simulator, and its effective energy and type of radiation output - All emergency off buttons and main circuit breaker - Components on treatment unit and simulator console	**Deficient ** Below Standard ** Meets Expectations **Above Standard **Outstanding
Correctly and safely operates treatment/simulator table and understands all functions of the pendant control.	**Deficient ** Below Standard ** Meets Expectations **Above Standard **Outstanding
Correctly processes portal films / simulator radiographs.	Deficient Below Standard Meets Expectations Above Standard Outstanding
Cleans, washes / disinfects treatment / simulator area and equipment in preparation for next patient and helps to keep work area tidy and organized chroughout the workday.	Operation Delow Standard Meets Expectations Above Standard Outstanding
What advice, encouragement or feedback can you offer your student in moving forward?	





Appendix 5: Mount Sinai Radiation Therapy Student Policy

THE MOUNT SINAI HEALTH SYSTEM, NEW YORK	SUBJECT NO.
STANDARD: POLICY AND PROCEDURE	RO 2.12

DEPARTMENT: Radiation Oncology: Mount Sinai Hospital (MSH), Mount Sinai Downtown Union Square (MSDU), Mount Sinai Downtown at Chelsea Center (MSDCC), Mount Sinai West (MSW)

SUBJECT: Radiation Therapy Students

Original date of issue: January 9, 1999

Reviewed:	4/10, 12/14 (BI, MSW)	2/12,2/13,1/14,1/15 (MSH)	10/16	1/17	4/19
Revised:	4/10, 12/14 (BI, MSW)	2/12, 1/14 (MSH)	10/16		SS

Policy

The department of Radiation Oncology participates in the clinical instruction and education of students in Radiation Therapy.

Purpose

All students enrolled in the Mount Sinai Center for Radiation Therapy Education at Stony Brook
University are required to be under DIRECT SUPERVISION by a licensed radiation therapist at all times.
Direct supervision is defined as in the room and immediately available, elbow to elbow during beam-on
and imaging.

Procedure

- 1. All Students are required to follow the rules outlined in their Clinical Internship Handbook.
- All students will be orientated through the Hospitals New Beginnings Program and expected to understand the mission, vision and values of the institution as well as all departmental policies and procedures.
- Therapists working in the area where students are assigned are responsible for the instruction and supervision of those students.
 - A. It is the responsibility of the supervisor to ensure that the therapists are maintaining the required level of instruction and supervision of the students.
- As per New York State law, performing radiation treatment delivery or simulation procedures must be under direct supervision at all times.
 - A. Prior to administering dose under direct supervision, it is required students:
 - i. Successfully complete
 - HAN 395: Radiation Physics in Medicine
 - 2. HAN 401: Radiobiology & Health Physics
 - 3. HAN 492: Radiation Oncology/Medical Physics II
 - 4. HAN486: Principles & Practice of Radiation Therapy

Page 1 of 2





- ii. Complete and receive a certificate for radiation safety mini-course.
- iii. Participate and pass competency in morning QA procedures
- iv. Complete 9 months of clinical rotations
- Ultimately receive approval, at the discretion of the departmental supervisor or treating therapist responsible for patient's treatment.
- B. When students are at the treatment console the supervising therapist must also be at the console checking all treatment parameters the student has input, including imaging matches.
- C. Students must receive a verbal "okay" confirmation from the supervising therapist before initiating beam for imaging or treatment.
- D. The supervising therapist must be elbow to elbow with the student for the duration of initiation of treatment and imaging.
- Students are required to participate clinically and demonstrate proficiency in the care and treatment of patients following the required curriculum of their educational program.
- The clinical preceptor/departmental supervisor will evaluate the student for clinical and technical competency and report any concerns to the Program Director or Chief Technical Administrator.

Page 2 of 2





Appendix 6: Clinical Year Locations







Appendix 7: Morning QA Form To be entered via Trajecsys





Student Name	
Date	
Machine	
Major Study	Quality Control & Chart Rounds
Skill	Morning QA - PARTICPATORY or COMPETENCY

Morning QA

	Please confirm the student was	present for morning QA and	I gave detail to the following
--	--------------------------------	----------------------------	--------------------------------

Emergency Off switches
Back-up counter
Radiation off at console
Door interlocks
Audio and visual communication
Electrical radiation warning lights
Field size and light field congruence
Laser alignment

Explained the need for machine warm-up procedures

Dose output (photon and electron energies)

Beam symmetry

Functionality of limit switches and readout indicators

Critical machine parameters (water pressure, water level, temperature, vacuum pressure)

On Board Imaging QA

Reported deviances to appropriate personnel

Simulation specific: Laser alignment QC water phantom (e.g., CT number)		
Signature of "early" RTT or evaluator:		
Please indicate below if participatory or compe	tency:	
QA Participatory	QA Competency	
	Did the student demonstrat	e competence on the
	quality control procedur	es listed above?
	PASS	FAIL
Comments:		
Morning QA (Quality Control Procedures)		

Mount Sinai Center for Radiation Sciences Education at SBU: Student Handbook





Appendix 8: Grand Rounds Rubric





Radiation Oncology Grand Rounds Essay Essay Rubric

Student:Topic:

Prompt: What you took away from Grand Rounds Length: 3 pages double spaced Format: APA Due: 1 week post Grand Rounds

Due: I week	post Grand Rounds					
	A (100-90)	B (89-80)	C (79-70)	D (69-60)	F (Less than 60)	Total Points
Content Development, Sources, and Evidence	Demonstrates skillful use of high-quality, credible, relevant sources. Communicates, organizes, and synthesizes information from sources.	Demonstrates use of relevant sources. Inadequately communicates, organizes, and synthesizes information from sources.	to use sources. Communicates fragmented information so	Demonstrates a weak attempt to use sources although incorrectly. Communicates incorrect information.	Uses sources inappropriately. Does not achieve intended purpose. Sources are misquoted, taken out of context, or incorrectly paraphrased.	
Organization	Organizational pattern (specific introduction and conclusion, and sequenced material within the paper) is clearly and consistently observable and makes the content of the paper cohesive.	Organizational pattern is somewhat observable within the paper.	Organizational pattern is intermittently observable within the paper.	Organizational pattern is weakly observable although hard to follow throughout the paper.	Organizational pattern is not observable within the paper.	
Language	Language choices are imaginative, memorable, and compelling and enhance the effectiveness of the paper.	Language choices are thoughtful and generally support the effectiveness of the paper.	commonplace and	Language choices are elementary and minimally support the effectiveness of the paper.	Language choices are unclear and minimally support the effectiveness of the paper.	
Growth	Central message is convincing and strongly supported, highlighting many aspects of student learning content.	Central message is consistent with the supporting material highlight some points of learning.	explicitly stated in the	Central message is weak and unclear. Key takeaways are misunderstood.	Central message is unclear and unorganized. Lacking content learned.	
Errors	Paper is error free.	Paper includes minor errors.		Paper has significant errors.	Paper presents with substantial errors which make the content hard to follow.	





Appendix 9: Journal Club Presentation Rubrics

Journal Club Presentation Rubric

Center for Radiation Sciences Education Journal Club Presentation Rubric





Student:	Literature Title:	

Prompt: The purpose of this presentation is to research, understand, and share a piece of academic literature that relates to radiation therapy.

Journals: JAMA Oncology, Canada's Journal of Medical Imaging and Radiation Sciences, ASRT Publications: Radiologic Technology, Radiation Therapist, Scanner.

Length: 20 minute maximum

	A (100-90)	B (89-80)	C (79-70)	D (69-60)	F (Less than 60)	Total Points
Content Development, Sources, and Evidence	Demonstrates skillful use of high-quality, credible, relevant sources. Communicates, organizes, and synthesizes information from sources.	Demonstrates use of relevant sources. Inadequately communicates, organizes, and synthesizes information from sources.		Demonstrates a weak attempt to use sources although incorrectly. Communicates incorrect information.	Uses sources inappropriately. Does not achieve intended purpose. Sources are misquoted, taken out of context, or incorrectly paraphrased.	
Organization	Organizational pattern is clearly and consistently observable, stides are clear and with appropriate amount of content making the presentation cohesive and appealing.	Organizational pattern is somewhat observable and presentation slides are generally clear.		Organizational pattern is weakly observable although hard to follow throughout the presentation, presentation slides are lacking content or overwhelming in amount of text.	Organizational pattern is not observable, slides are unclear and difficult to follow.	
Language	Language choices are imaginative, memorable, and compelling and enhance the effectiveness of the presentation.	Language choices are thoughtful and generally support the effectiveness of the presentation.	and partially support the	Language choices are elementary and minimally support the effectiveness of the presentation.	Language choices are unclear and minimally support the effectiveness of the presentation.	
Growth	Central message is convincing and strongly supported, highlighting many aspects of student learning content.	Central message is consistent with the supporting material highlight some points of learning.	Central message can be deduced, but is not explicitly stated in the presentation. Unclear learning experiences.	Central message is weak and unclear. Key takeaways are misunderstood.	Central message is unclear and unorganized. Lacking content learned.	
Speech	Demonstrates high-quality speaking performance in clear tone and organization. Presentation is engaging and holds strong eye contact throughout.	Demonstrates generally clear tone and organization. Presentation is generally engaging and eye contact is present.		Speech is rushed or challenging to follow.	Speaking performance is poor, lacking eye contact and clear tone.	





Journal Club Mock RTC Rubric





Center for Radiation Sciences Education **Mock ASRT Radiation Therapy Conference** Presentation Rubric

Student:	Topic:	

Prompt: The purpose of this presentation is to prepare students for a career supported by professional development, research, and a commitment to disseminate their knowledge Presentation length: 30-35 minutes

Step 1: Brainstorm a topic idea and receive approval

Step 2: Draft an abstract proposal, receive Professor D's comments/edits prior to moving forward

Step 3: Draft a 20-25 minute presentation using the mock ASRT Radiation Therapy Conference slide deck

Step 4: Present to your peers supervisors and mentors

Step 4	4: Present to your peers, su	pervisors and mentors				
	A (100-90)	B (89-80)	C (79-70)	D (69-60)	F (Less than 60)	Total Points
Content Development, Sources, and Evidence	Demonstrates skillful use of high-quality, credible, relevant sources. Communicates, organizes, and synthesizes information from sources.	Demonstrates use of relevant sources. Inadequately communicates, organizes, and synthesizes information from sources.	use sources. Communicates fragmented information so intended purpose is not fully	Demonstrates a weak attempt to use sources although incorrectly. Communicates incorrect information.	Uses sources inappropriately. Does not achieve intended purpose. Sources are misquoted, taken out of context, or incorrectly paraphrased.	
Organization	Organizational pattern is clearly and consistently observable, stides are clear and with appropriate amount of content making the presentation cohesive and appealing.	Organizational pattern is somewhat observable and presentation slides are generally clear.	Organizational pattern is intermittently observable and presentation slides present too much text.	Organizational pattern is weakly observable although hard to follow throughout the presentation, presentation slides are lacking content or overwhelming in amount of text.	Organizational pattern is not observable, slides are unclear and difficult to follow.	
Language	Language choices are imaginative, memorable, and compelling and enhance the effectiveness of the presentation.	Language choices are thoughtful and generally support the effectiveness of the presentation.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation.	Language choices are elementary and minimally support the effectiveness of the presentation.	Language choices are unclear and minimally support the effectiveness of the presentation.	
Growth	Central message is convincing and strongly supported, highlighting many aspects of student learning content.	Central message is consistent with the supporting material highlight some points of learning.	Central message can be deduced, but is not explicitly stated in the presentation. Unclear learning experiences.	Central message is weak and unclear. Key takeaways are misunderstood.	Central message is unclear and unorganized. Lacking content learned.	
Speech	Demonstrates high-quality speaking performance in clear tone and organization. Presentation is engaging and holds strong eye contact throughout.	Demonstrates generally clear tone and organization. Presentation is generally engaging and eye contact is present.	Speaking performance is moderate, lacking eye contact and clear tone.	Speech is rushed or challenging to follow.	Speaking performance is poor, lacking eye contact and clear tone.	





Appendix 10: Required Competencies

Radiation Therapy Treatment Pr	ocedures – Compete	ency Objectives (to be	submitted via Trajecsys)
Radiation Treatment Procedure	Patient Set-Up Or Simulated	Date Completed	Verified by Instructor's Signature
BREAST			
Tangents Only			
Tangents with Supraclavicular			
Tangents with Supraclavicular and			
Posterior Axilla Boost			
Special Set-up (Photon or electron			
boost, prone, gating)			
HEAD AND NECK			
Multi Field IMRT			
RESPIRATORY/ THORAX	<u> </u>		
Non-IMRT			
IMRT			
SBRT**			
ABDOMEN			
IMRT			
SBRT**			
PELVIS			
Multi-Field Supine			
Multi-Field Prone			
SBRT**			
SKELETAL			
Multi-Field Spine			
Extremity			
HEMATOPOIETIC and LYMPHORETICULA	R		
Total Body*			
CENTRAL NERVOUS SYSTEM			
Primary			
Metastatic (whole brain)			
Craniospinal *			
SRT**			
SKIN			
Primary**			
ELECTRON OR PHOTON			
Abutting Fields			
ELECTRONS			
Single Field			
Single Field			

^{*}Acceptable to be completed as participatory procedures





** Additional competency required by RTT program

SIMULATION PROCEDURES (to be submitted via Trajecsys)			
	Date Completed	Patient ID#	Instructor(s) Verification
Brain			
Breast			
Head and Neck			
Pelvis			
Skeletal			
Thorax			





Appendix 11: Treatment Competency Form *To be entered via Trajecsys*





Student Name	
Date	
Txt Machine	
Major Study	
Skill	
Pt Diagnosis	

Treatment Competency Form

Ple	ease confirm if the student did the following:
	Reviewed chart prior to preparing the room
	Prepared the room
	Greeted and assisted correct patient to and from treatment area
	Explained procedure and confirmed patient understanding
	Attended to patient comfort and modesty
	Positioned patient to reproduce set-up indicated in the treatment chart
	Verified SSDs
	Positioned treatment machine to reproduce set-up indicated in the chart
	Assured that field light aligned with skin marks or tattoos
	Used / Verified correct wedge
	Utilized appropriate shielding (eye, testicular etc.) and positioned it correctly
	Properly utilized bolus material
	Maintained patient markings
	Rechecked set-up
	Instructed patient to remain still during treatment
	Verified field placement using image guidance as required
	Performed appropriate shifts as required
	Obtained check image or weekly port image (as needed)
	Set / Verified appropriate controls on treatment unit console (mu / time)
	Monitored dose rate / console indicators during treatment
	Monitored patient during treatment
	Recorded all pertinent data into treatment chart
	Referred patient to appropriate medical personnel for problems the patient was encountering
	Completed procedure within the allotted time
	Demonstrated an acceptable level of proficiency for this procedure
	Demonstrated an acceptable of knowledge and understanding relative to this procedure
Comm	ents on presentation of competency, student performance, skills to focus on:
Signati	ure of Evaluator:
Treatm	nent Competency Form

Mount Sinai Center for Radiation Sciences Education at SBU: Student Handbook





Appendix 12: Simulation Competency Form *To be entered via Trajecsys*





Student Name	
Date	
Simulator	
Major Study	Simulation Procedures
Skill	
Pt Diagnosis	

Simulation Competency Form

Please	confirm if the student did the following:
	Obtained and reviewed sim order prior to simulation
	Confirmed required items in pt chart prior to simulation (prescription, path, etc.)
	Acquired special instructions from the physician as needed
	Prepared the room
	Greeted and assisted correct patient to and from treatment area
	Explained procedure and confirmed patient understanding
	Verified consent
	Attends to patient comfort and modesty.
	Managed the patient as the situation required (contrast reactions, medical conditions, etc.)
	Fabricated and / or utilized immobilization devices as needed
	Positioned and immobilized the patient using lasers / fiducials etc.
	Instructed patient to remain still during procedure
	Determined the appropriate region of interest using anatomical landmarks
	Utilized preset protocols or adjusted parameters to obtain scan (slice thickness, field of view)
	Performed scan of the region of interest
	Monitored the patient during the procedure.
	Monitored the equipment during the procedure.
	Marked isocenter and / or other required markings on the patient
	Transmitted network images to server
	Printed images as needed
	Recorded positioning and equipment setup parameters
	Acquired and labeled necessary photos
	Verified follow up appointment
	Released patient or referred to appropriate personnel for education
	$Demonstrated\ appropriate\ radiation\ protection\ methods\ to\ limit\ patient\ and\ personnel\ exposure$
	Completed procedure within the allotted time
	Demonstrated an acceptable level of proficiency for this procedure
	Demonstrated an acceptable of knowledge and understanding relative to this procedure
Comme	ents on presentation of competency, student performance, skills to focus on:
Signatu	re of Evaluator:
Simula	tion Competency Form

Mount Sinai Center for Radiation Sciences Education at SBU: Student Handbook





Appendix 13: 2022 Student Orientation handbook School of Health Professions https://healthprofessions.stonybrookmedicine.edu/sites/default/files/Certificate%20Programs%202022%20STUDENT%20ORIENTATION%20HANDBOOK.pdf



2022 STUDENT ORIENTATION HANDBOOK SCHOOL OF HEALTH PROFESSIONS

Academic Policies and Procedures, Rules and Regulations

Including (in the order in which they appear)

- I. School of Health Professions Mission and Vision Statement
- II. School of Health Professions Policies and Procedures
 - A. Academic Standing
 - B. Academic Dishonesty
 - C. Independent Study and Readings
 - D. Course Waiver
 - E. Challenge Exam
- III. orandum on Uniform Regulations, Miscellaneous Rules and Points of Information
- IV. Student Responsibilities for Clinical Education
- V. Americans with Disability Act
- VI. School Statement on Diversity, Equity and Inclusion
- VII. Policies on Non-Discrimination and Sexual Harassment- Please see the following website:

http://medicine.stonybrookmedicine.edu/ugme/mistreatment_policy

VIII. Student Participation on School Committees





Appendix 14: Mount Sinai Info Sheets

Center for Radiation Sciences Education





Mount Sinai Hospital

Hess – 1470 Madison Ave | SC Level 1184 – 1184 5th Ave | MC Level

Supervisors	Clodagh Starrs (212) 241 - 8911 clodagh.starrs@mountsinai.org Keith Edwards (718) 570 - 1984 keith.edwards@mountsinai.org
Lead RTTs	Rodney Michel Rodney.michel@mountsinai.org Cindy Vavasis Cynthia.vavsais@mountsinai.org
Shifts	7/8/9
Chart Rounds	Wednesdays 4pm

Attending Radiation Oncologists:

Dr. Bakst – H&N, Breast, TBI

Dr. Buckstein - Liver, GI

Dr. Dharmarajan - Palliative

Dr. Goodman - Associate Director Tisch Cancer Institute, GI

Dr. Green - Breast

Dr. Ghiassi Nejad - GI, GYN

Dr. Lazarev - Various sites

Dr. Rosenzweig - System Chair, Lung

Dr. Samstein - Precision Immunology Institute, Brain, Lung

Dr. Sharma - Palliative/H&N

Dr. Stock - Prostate

Dr. Yeh - Pediatrics

Machines: 1184 21 EX: x40228

TrueBeam3 (ExacTrac, OSMS): x45233

21 IX: 45765 CT SIM: x45224

Machines: Hess

<u>TrueBeam 1</u>: x59488 <u>TrueBeam 2</u>: x59486 <u>CT Sim:</u> x594952

Cafeteria

• Book Store

• Icahn School of Medicine Levy Library

MSH Info Sheet

Lead RTTs:

- Rodney Michel
- · Cindy Vavasis

Senior RTTs:

- Joe Arrigo
- Alex Ashley
- Jibin Joseph
- Taylor Malloy
- Kevin Minassian
 Vincent Gazzara
- Mark Roytman
- Joseph Skorupski

Staff RTTs:

- Michelle Arguello
- Jennifer Calleo
- Lizmarie Castro
- Alice Corrigan
- Kennedi Dorset
- Mehak Ijaz
- Katherine Lynch
- Patrycia Sek
- Ken Snapp
- Rhube St. Juste
- Kayla Ulloa
- Nancy Wraga









Supervisor	TBD (212) 844 – 8060
Lead	Cliff Temple
Shifts	Vary: 7/9/9:30
Chart Rounds	Friday 9AM

Mount Sinai Downtown: Union Square 10 Union Square East LL Level

Attending Radiation Oncologists:

Dr. Chadha - Breast

Dr. Liu - H&N

Dr. Stewart - Prostate/H&N

Dr. Gupta - SBRT Lung

Dr. Rosenzweig - Lung (Wednesdays)

Dr. Choi - Vmat pelvis/anal

Machines:

TrueBeam: x446091

IX: x448031

CT SIM: x448085

- 4th Floor Pod G: Offices
- LL Rad Onc treatment machines

Lead RTT:

Cliff Temple

Senior RTTs:

- Kathy Gelpi Arana
- Cecilia Oneil
- Wye (Kelly) Phan
- Jenn Shaughnessy
- Donielle Canizares
 Elmas Karagos
- Staff RTTs:

Yikmunn Ong

Mount Sinai Union Square Info Sheet









Supervisor	Natosha Houston (212) 523 - 6898
Supervisor	
	natosha.houston@mountsinai.org
Lead	Andrea Cepeda
Shifts	Vary: 7/8/8:30/9
Chart Rounds	Tuesdays 9am

Mount Sinai West 1000 10th Ave LL Level

Attending Radiation Oncologists:

Dr. Dutta - Department Chair, Various sites

Dr. Gliedman - Prostate/breast/brain SRS (M/TH)

Dr. Rosenzweig - System Chair, Lung (Wednesdays)

Dr. Saitta - GYN/breast/various sites (M/Tu/F)

Dr. Stewart - Prostate

Machines:

TrueBeam: x364640

IX: x364691

CT SIM: x368838

- Cafeteria
- Parking
- Dosimetry Classroom

Lead RTT:

Andrea Cepeda

Senior RTTs:

- Antonella Leon
- Arielina Merino
- Marvin Milord
- Charles Nam
- · Nicole Silverio

Staff RTTs:

Samantha Cariello

Mount Sinai West Info Sheet









Supervisor	Denise Kraemer (212) 367 -1796
	denise.kraemer@mountsinai.org
Lead	Tuan Tran
Shifts	Vary: 7/8/9
Chart Rounds	Friday 9am

Mount Sinai Downtown:

The Blavatnik Family Chelsea Medical Center at Mount Sinai 325 West 15th Street

Attending Radiation Oncologists:

Dr. Gupta - GYN/Various sites

Dr. Chadha - Breast

Dr. Saitta - Gyn/breast/various sites

Machines:

 \underline{EX} : Retrofitted w/OBI & vmat, originally a clinac (To become brachy suite)

TrueBeam

GE Sim: Will be replaced as well

Lead RTT:

• Tuan Tran

Senior RTTs:

- Rania Mohamed
- Kathy Gelpi Arana
- Yanira Rivera

HDR Brachy – Dr. Gupta / Tandem & ovoids, cylinders.

Mount Sinai Chelsea Info Sheet











Information Sheet 225 East 126th Street

Supervisor	Anh Kha (646) 968-9043 akha@nyproton.com
Lead Therapist	Andrew Okhuereigbe aokhuereigbe@nyproton.com
Lead Therapist	Donny Longo dlongo@nyproton.com
Lead Therapist	TBD
Shifts	Early
	Mid
	Late

Attending Radiation Oncologists NYPC:

Dr. Charles Simone, Chief Medical Officer, Thoracic Ca.

Dr. Isabelle Choi, Clinical Director/Director of Research, Breast Ca.

Dr. Arpit Chhabra, Director of Education, GI Ca.

Dr. Shaakir Hasan, Radiation Oncologist, GU Ca.

Dr. Robert Press, Radiation Oncologist, Head and Neck Ca.

Additional affiliate physicians can be found at www.nyproton.com/care-team/

Machines:

Machine 1: Pediatric Anesthesia in the AM, CSI, Head and Neck, Brain, GI, GU.

Machine 2: Vision/Align RT, majority of SBRT cases, CSI, Head and Neck, Brain, GI, GU.

Machine 3: SDX Breath Hold, SBRT, CSI, Head and Neck, Brain, GI, GU.

Machine 4: Fixed Beam Room: Brain, Head and Neck, Prostates, Pelvis.

Staff RTTs:

- 1. Brittany Fritz
- 2. Tracy Barcelona
- 3. Danielle Boos
- 4. Robert Chen
- 5. Stefanie Cianflone
- Adam Corey-Rander
- Alyssa Cunningham
 Angela Della Rocca
- Jewel Graham
- 10. Mary Hanlon
- 11. Joseph Jacobo
- 12. Rochel Jean-Louis
- 13. Frank Kwan
- Elissa Milan
- 15. Taek Oh
- 16. Jason Pineiro
- Shlomo Kalman-Rosenfield
- 18. Ajay Ramdeholl
- Shafira Subedi
- 20. Marilyn Tagoe
- 21. Maxwell Telfer
- 22. Patricia Thornton
- 23. Sarah Wong

Facilities:

- Parking info Open, free parking 1ot connected to NYPC building on E 126th Street.
- All personnel wearing scrubs are to bring scrubs into work and change into scrubs onsite.
- NYPC virtual tour can be found at https://experience.nyproton.com/

New York Proton Center Info Sheet





Appendix 15: MRI Screening Form

Mou	nt Sinai	м	ount Sinai Mount Sinai New York Mount Sinai	Name:	
Mou	spital nt Sinai ieens	м	West Beth I srael Eye and Ear Outpatient ount Sinai Mount Sinai Infirmary at Faculty t. Luke's Brooklyn Mount Sinai Practices		// Gender: M
	DE	ΔΕ	TMENT OF RADIOLOGY	MRN:	
ı			IC RESONANCE IMAGING (MRI) PATIENT SCREENING	Location:	
			QUESTIONNAIRE	Physician:	
INSTI	RUCTI	ons	Please answer each question below. Your respo Each box should be marked individually—pleas		
YES	NO			- distance	, m - 1, m - 10, m - 1
\Box		1.	Do you have a pacemaker, AICD, internal pacing	g wires, EKG lea	ads or Holter monitor?
0_		2.	Do you have an implanted stimulator (including b	one growth stir	mulator, spinal stimulator or
STOP	\Rightarrow A	resp	cochlear or other ear implant) or medication i onse of "Yes" to either question above requires dis	cussion between	n provider and Radiology before proceeding.
D	0	3.	Have you had brain surgery or do you have met	allic clips (aneu	rysm clips) in your head?
	0	4.	Have you ever had eye surgery or implants?		
D		5.	Have you ever worked around a metal lathe, had or had a shrapnel (war or gunshot) injury anywf		
D	0	6.	Have any devices (e.g., stent, filter, coil or vasce		
	D		6a. If you do have a stent, is it drug-eluting?		
0	0	7.	Do you have an implanted tissue expander?		
0	D	8.	Do you have a replaced heart valve, other prost	hesis or any other	er surgical implant?
D	0	9.	Do you have any tattoos, permanent make-up, o	or piercings?	
D	D	10.	Do you wear hearing aid(s), either in the ear can	al or on the surfa	ce? (Remove before entering room)
			List any other type of metal in or on your body:		
п	0		Do you wear a transdermal medication patch (e.	a Nitroalycerin.	Nicotine, etc.)?
D			Do you have kidney/renal disease, liver disease,		
			Do you have any allergies? If so, specify:	or unuborous	
0	0		Are you claustrophobic (afraid of enclosed or tig	ht enaces)2	
					a uniethand on an innation()?
			Are you wearing a RFID or Radiofrequency ID dev If female, are you (or could you be) pregnant or a		70 M (1) 10
				ne you bleastie	edingr
			Patient age:years	45-1-54	de al les basis
			Approximate patient weight:(pounds) an Print & sign your name, and indicate date, time & rel		(feet-inches)
				anormo panora.	WARNING: The MRI magnet is ALWAYS O
		PRIN	TED NAME		MRI environment if you have any question
		2			concern regarding an implant, device or obje
		SIGN	ATURE am p Patient p Ph	ysician	Consult the MRI technologist or radiologist BEFC
					entering an MRI room.
R PA	TIENTS	REQ	JIRING ASSISTANCE WITH QUESTIONNAIRE	MRI EMPLOYEE R	REVIEWING RESPONSES FOR RADIOLOGY
Inform	ation co	mobon	sted by chart history (required)	Checklist reviewed	and any positive responses addressed/reconciled (required)
NAME (OF INDIVI	DUAL	ASSISTING PATIENT DATE arri	NAME OF INDIVIDUA	AL ASSISTING PATIENT an
GNAT	URE		TIME	SIGNATURE	TIME
	HIBNES	RIN	EIVING CONTRAST (TO BE COMPLETED IN RADIOLO	GY)	CAND COMM
	UNCTI	033270	☐ Check if drawn as POCT in Padiology	CONTRAST	AGENT SITE VOLUME RAT
152000		(57.5)	REVIEWED ON RESULTS		mL
NALI	-		BY RESULTS	OUTCOME:	☐ Routine Injection
10000			E-030 23 30		Contrast Reaction
NALI	, ,		Date / / eGFR		
NAL I		am om	Date / / eGFR HUMMIZZON NOMA -	AA .	☐ Extravasation See electronic / supplement documentation for details





Appendix 16: JRCERT Standards

https://www.jrcert.org/accreditation-information/accreditation-standards-2021/







Appendix 16: Nursing Competency Form

	X	Á
M	ou	nt
Si	na	i



Student Name	
Date	

General Patient Care Requirements

Please confirm the student demonstrated competence in the patient care activities listed below. These activities should be performed on patients whenever possible, but procedures may be demonstrated in a clinical lab environment if state or institutional regulations prohibit candidates from performing the procedures on patients.

- · Vital Signs Blood Pressure
- · Vital Signs Pulse
- Vital Signs Respiration
- · Vital Signs Temperature
- O2 Administration
- · Patient Transfer

Comments:
Signature of evaluator:
General patient Care Requirements





Appendix 17: Dosimetry Competency Form





Student Name	
Date	

Dosimetry Competencies

Candidates must demonstrate competence calculating doses for the treatment plans listed below. Calculations should be performed for actual patients; however, calculations may be completed in a clinical lab exercise if demonstration on actual patients is not feasible.

- · Determines correct treatment unit
- Determines correct radiation type (photons / electrons) and energy
- · Determines correct treatment technique (fixed vs. rotational)
- Accurately interprets prescription (dose per fraction, daily dose, total dose)
- · Verifies number of portals
- Verifies treatment depths
- · Verifies correct collimator length and width
- · Calculates correct equivalent square
- · Calculates correct dose and MU per field
- · Selects correct output charts
- Selects correct absorption factor chart
- Determines correct output factors (OP / SFS / PSF etc.)
- · Determines correct absorption factors
- · Selects correct tray and/or wedge factors as needed
- · Interpolates correctly as needed
- Calculates correct critical organ dose as needed
- Accurately determines appropriate time for portal reconfiguration (e.g. off-cord, etc.)
- · Correctly documents all calculation actors
- Transfers appropriate information to other team members (R&V/chart)

Please indicate if the student has shown competency for the following:

•	Single field	PASS	FAIL
•	Parallel opposed fields	PASS	FAIL
•	Weighted fields	PASS	FAIL
•	Wedged fields	PASS	FAIL
•	Computer generated isodose plan	PASS	FAIL
•	Electron field	PASS	FAIL
	Plan with bolus	PASS	FAIL

Co	m	m	-	-	-
v					

Dosimetry Competencies





Appendix 18: Brachytherapy Rubric





Specialty Rotation Essay Rubric Brachytherapy

Student:	Topic:

Prompt: See student handbook
Length: 4-5 pages double spaced
Format: APA
Due: 1 week post completion of Brachytherapy special rotation

	A (100-90)	B (89-80)	C (79-70)	D (69-60)	F (Less than 60	Total Points
Content Development, Sources, and Evidence	Demonstrates skillful use of high-quality, credible, relevant sources. Communicates, organizes, and synthesizes information from sources.	Demonstrates use of relevant sources. Inadequately communicates, organizes, and synthesizes information from sources.	to use sources. Communicates fragmented information so	Demonstrates a weak attempt to use sources although incorrectly. Communicates incorrect information.	Uses sources inappropriately. Does not achieve intended purpose. Sources are misquoted, taken out of context, or incorrectly paraphrased.	
Organization	Organizational pattern (specific introduction and conclusion, and sequenced material within the paper) is clearly and consistently observable and makes the content of the paper cohesive.	Organizational pattern is somewhat observable within the paper.		Organizational pattern is weakly observable although hard to follow throughout the paper.	Organizational pattern is not observable within the paper.	
Language	Language choices are imaginative, memorable, and compelling and enhance the effectiveness of the paper.	Language choices are thoughtful and generally support the effectiveness of the paper.	commonplace and	Language choices are elementary and minimally support the effectiveness of the paper.	Language choices are unclear and minimally support the effectiveness of the paper.	
Growth	Central message is convincing and strongly supported, highlighting many aspects of student learning content.	Central message is consistent with the supporting material highlight some points of learning.	explicitly stated in the	Central message is weak and unclear. Key takeaways are misunderstood.	Central message is unclear and unorganized. Lacking content learned.	
Errors	Paper is error free.	Paper includes minor errors.	1 1	Paper has significant errors.	Paper presents with substantial errors which make the content hard to follow.	





Appendix 19: MD Rotation Rubric





Specialty Rotation Reflective Journal MD Rotation

Student:	Topic:

Prompt: See student handbook Length: 4 pages double spaced Format: APA Due: 1 week post completion of

	A (100-90)	B (89-80)	C (79-70)	D (69-60)	F (Less than 60)	Total Points
Content Development, Sources, and Evidence	Demonstrates skillful use of high-quality, credible, relevant sources. Communicates, organizes, and synthesizes information from sources.	Demonstrates use of relevant sources. Inadequately communicates, organizes, and synthesizes information from sources.	Demonstrates an attempt to use sources. Communicates fragmented information so intended purpose is not fully achieved.	Demonstrates a weak attempt to use sources although incorrectly. Communicates incorrect information.	Uses sources inappropriately. Does not achieve intended purpose. Sources are misquoted, taken out of context, or incorrectly paraphrased.	
Organization	Organizational pattern (specific introduction and conclusion, and sequenced material within the paper) is clearly and consistently observable and makes the content of the paper cohesive.	Organizational pattern is somewhat observable within the paper.	Organizational pattern is intermittently observable within the paper.	Organizational pattern is weakly observable although hard to follow throughout the paper.	Organizational pattern is not observable within the paper.	
Language	Language choices are imaginative, memorable, and compelling and enhance the effectiveness of the paper.	Language choices are thoughtful and generally support the effectiveness of the paper.	commonplace and	Language choices are elementary and minimally support the effectiveness of the paper.	Language choices are unclear and minimally support the effectiveness of the paper.	
Growth	Central message is convincing and strongly supported, highlighting many aspects of student learning content.	Central message is consistent with the supporting material highlight some points of learning.	Central message can be deduced, but is not explicitly stated in the presentation. Unclear learning experiences.	Central message is weak and unclear. Key takeaways are misunderstood.	Central message is unclear and unorganized. Lacking content learned.	
Errors	Paper is error free.	Paper includes minor errors.	Paper presents errors throughout.	Paper has significant errors.	Paper presents with substantial errors which make the content hard to follow.	