RADIATION THERAPY EDUCATION PROGRAM

Policies, Procedures and Guidelines
for the Student Therapist

STUDENT HANDBOOK

Volume II: Radiation Therapy Specific Policies

2024-2025 Academic Year

Christina M. Paugh, MA.,(R)(T)
Program Director/Education Coordinator

Reviewed and Revised: October 2024

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West Virginia University Hospitals
Medical Center Drive
Morgantown, WV 26506

Radiation Therapy Education Program

Student Handbook

Section 1

General Program Information

Mission Statement

The mission of the Radiation Therapy education program at West Virginia University Hospitals is to provide quality instruction in the therapeutic applications of ionizing radiations in order to develop entry-level, technically competent professional radiation therapists who are able to meet the needs of patients and the expectations of potential employers. The program is dedicated to assuring the quality and safety of patient care in the delivery of radiation therapy treatments to the citizens of West Virginia and the surrounding region by serving as the sole radiation therapy education program in the state.

The WVUH Radiation Oncology faculty is genuinely involved with the educational process thereby providing students with an educational environment that is conducive to attaining positive learning outcomes while providing comprehensive clinical experiences and patient care opportunities.

The program is committed to helping students attain the educational goals of the program by giving them the opportunity to demonstrate the skills, knowledge, attitudes and self-direction needed to perform competently, ethically, and productively within the radiation therapy profession.

Goals

1. Students will demonstrate entry-level clinical competence in Radiation Therapy.
2. Students will practice effective communication skills.
3. Students will employ critical thinking and problem solving skills.
4. Students will demonstrate professionalism.

Christina M. Pugh
Education Coordinator

3/14/23
Date

Student Learning Outcomes

1. **Students will demonstrate entry-level clinical competence in Radiation Therapy.**
   - 1.1 Students will demonstrate appropriate immobilization and positioning skills when preparing patients for treatment and simulation.
   - 1.2 Students will operate equipment and accessories appropriately to deliver prescribed therapeutic doses.
   - 1.3 Students will utilize appropriate radiation protection procedures.

2. **Students will practice effective communication skills.**
   - 2.1 Students will demonstrate effective verbal communication skills.
   - 2.2 Students will demonstrate appropriate written communication skills.

3. **Students will employ critical thinking and problem solving skills.**
   - 3.1 Students will assess patient needs and adapt radiation therapy procedures as required.
   - 3.2 Students will demonstrate the application of didactic knowledge in the clinical setting.

4. **Students will exhibit professionalism.**
   - 4.1 Students will demonstrate work ethics and responsibility to the radiation therapy profession.
   - 4.2 Students will reflect evidence of professional growth.

Program Description:

The Radiation Therapy program at West Virginia University Hospitals is a 12 month certificate program consisting of approximately 40 hours per week of clinical and didactic instruction. The program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). Successful completion may qualify graduates as eligible to sit for the American Registry of Radiologic Technologists (A.R.R.T.) certification exam in Radiation Therapy pending ARRT review and approval.

Facilities:

The Radiation Therapy department's primary clinical site is located in the Mary Babb Randolph Cancer Center which is a subdivision within the WVUH complex. The WVUH Radiation Oncology Department has some of the most technologically advanced equipment available to treat cancer, including two Varian ™ Linear Accelerators(Trilogy and True Beam) with Cone Beam CT, RPM, IMRT and SBRT capability, a Toshiba™ LB Virtual CT Simulator, an Electa Leksell ™ Perfexion Gamma Knife Unit, and brachytherapy sources including HDR. Treatment planning is facilitated through Varian Eclipse™ and the Aria™ record and verify system.

Trajecsys Report System™:

The Trajecsys Report System™ has been implemented into our radiation therapy program for the purpose of clinical tracking. This electronic record has taken the place of the traditional paper clinical handbook that contained all of the student evaluations, including but not limited to the evaluations and competency examinations. Each enrolled student will be required to pay a one-time fee of $100.00 for usage of this system during the 12 month program. Fees are subject to change without notice.

Policies & Documents

The following policies and documents are available on-line for prospective students and the general public. Select the title to view.

History and Philosophy
of
West Virginia University Hospitals
Radiation Therapy Education Program

History:

The West Virginia University Hospitals Radiation Therapy Education Program originated in August of 1975 with the enrollment of three students.

The program was under the direction of the Radiation Therapy Department Chairman, Dr. Reddi, and administered by Melinda Hazy, Chief Technologist. The twelve month program has been accredited since 1975 by the Joint Review Committee on Education on Education in Radiologic Technology (20 North Wacker Drive, Suite 900, Chicago, Illinois 60606-2901, (312) 704-5300). The Program has graduated 46 classes to date, awarding certificates to 171 indiviudals.

Facilities:

The Radiation Therapy Education Program is located within the division of Radiation Oncology at J.W. Ruby Memorial Hospital, in the Health Sciences building. J.W. Ruby Memorial Hospital is the flagship hospital of the West Virginia University Health System, located in Morgantown, West Virginia. A 700+bed tertiary care center, Ruby is also the largest hospital in the health system and serves as the academic medical center of the West Virginia University School of Medicine. It is the teaching facility for the schools of Dentistry, Medicine, Nursing, Pharmacy, the basic sciences, and allied health professionals located in the Health Sciences building. It is the center, too, of statewide continuing education programs, and a referral center for physicians and other health professionals in all sections of West Virginia.

The West Virginia Legislature authorized construction of the Medical Center in 1951 and levied a penny- a - bottle tax on all soft drinks to provide basic financing. The Medical Center was planned as a single structure- Basic Sciences Building and University Hospital under one roof- on the Evansdale Campus, north of the WVU downtown campus. The Basic Sciences portion opened in 1957.

On July 1, 1984 West Virginia University Hospital was transferred from a state supported institution to a private corporation. This transaction was initiated to open financial avenues which would further expedite the continual progress towards maximum efficiency in patient care. The Board of Directors of the corporation is appointed by the Governor and consists largely of University and Hospital officials with selected citizens representing the various social functions around the state. The corporation is now recognized as West Virginia University Hospitals, Inc.

West Virginia University Hospitals constructed a replacement facility that is known as Ruby Memorial Hospital at West Virginia University Hospitals, Inc., that they relocated into in July of 1988. This building houses the Jon Michael Moore Trauma Center and the Children's Hospital. In an adjacent building is the Chestnut Ridge Psychiatric Hospital. West Virginia University Hospitals is a 700+ bed referral center where education of students and advancement of knowledge goes hand in hand with the best in medical care. It is the hub of the Medical Center complex, providing the training ground where students learn the science and art of caring for patients.

The Mary Babb Randolph Cancer Center which houses the Radiation Therapy Department was opened January 15, 1990. The center is named for Mary Babb Randolph, the late wife of former U.S. Senator Jennings Randolph who died of cancer in 1981. The mission of the Cancer Center is to provide the people of West Virginia with a highly qualified cancer system that pulls together patient care, education and research resources.

The top two floors of the Center are called the Robert C. Byrd Cancer Research Lab and is involved in the treatment of cancer. The Radiation Therapy Department is housed in the basement of the Cancer Center and was opened for operation in March of 1991.

The WVU Cancer Institute operates a regional network of care centers that offer access to highly advanced experts and technologies. The network's larger, regional sites offer medical oncology, surgery, and infusion services, as well as highly advanced radiation oncology services, while the critical access hospitals and smaller community hospitals provide infusion services and outpatient medical oncology.

The Radiation Oncology section became its own department in January 2012 under the direction of the founding Chairperson, Geraldine Jacobson, M.D. It currently maintains two 6-18 MV Varian Linear Accelerators with Multi-leaf collimation and IMRT and SBRT capabilities each equipped with cone beam CT, a Leskell Perfexion Gamma Knife Unit, a CT Simulator, Varian Varisource HDR, Aria Record and Verify System, and state of the art treatment planning systems. In May of 2013, the department acquired Fairmont Regional Cancer Center (FRCC)` and in 2016 we added FRCC as a clinical rotation site for the program.

The Mary Babb Randolph Cancer Center is the Institute's largest, most comprehensive cancer care facility. Located in Morgantown, the facility is the only cancer center in West Virginia that offers blood and bone marrow transplants; photopheresis and CAR T-cell therapy; gamma knife radiosurgery for brain cancers and metastasis; and hyperthermic intraperitoneal chemotherapy (HIPEC) and isolated hepatic infusion. Our comprehensive care approach ensures that everyone who seeks us out for diagnosis, treatment, and follow-up has access to the latest advancements and innovations in cancer care.

The Department of Radiation Oncology became accredited by the American Society for Radiation Oncology's Accreditation Program for Excellence (ApeX) in June of 2019 and is the first radiation oncology facility in West Virginia to receive a four-year accreditation. The Department is currently under the direction of Dr. David "Andy" Clump.

Courses of instruction for the Radiation Therapy Education Program are currently held in the Conference Room in the Radiation Therapy Department. Instruction is closely integrated with the student's clinical education, and there is a continuous search for improved ways of teaching.

Program Philosophy

The West Virginia University Hospitals Radiation Therapy Education Program is designed to provide instruction in the therapeutic application of ionizing radiation. The program is dedicated to the education of radiation therapists, in order to provide the best treatment of patients, and to provide the greatest professional growth for the student.

The objectives of the program are to provide the student with a sound educational experience, both didactic and clinical, which will prepare him/her to become a professionally competent Registered Radiation Therapist. The rapidity with which a Radiation Therapist advances in the field of Radiation Therapy depends upon his/her personality, character, ability to assume responsibility, initiative and professional preparation. It is the mission of our training program to develop each of the aforementioned qualities to the fullest extent possible in each student.

Continuing Education is encouraged by the program in an effort to motivate the technologist, or prospective technologist to keep up to date on recent technical and procedural advances in the radiation therapy field and to become familiar with other technical areas of radiation therapy into which one may wish to expand.

West Virginia University Hospitals
Medical Center Drive
Morgantown, WV 26506

WVUH ADMINISTRATIVE OUTLINE

Albert Wright
President and Chief Executive Officer

Nate Burt
Vice President, Operations

Amanda Pechatsko
Clinical Administrator

David "Andy" Clump, M.D., Ph.D.
Section Chief, Radiation Oncology

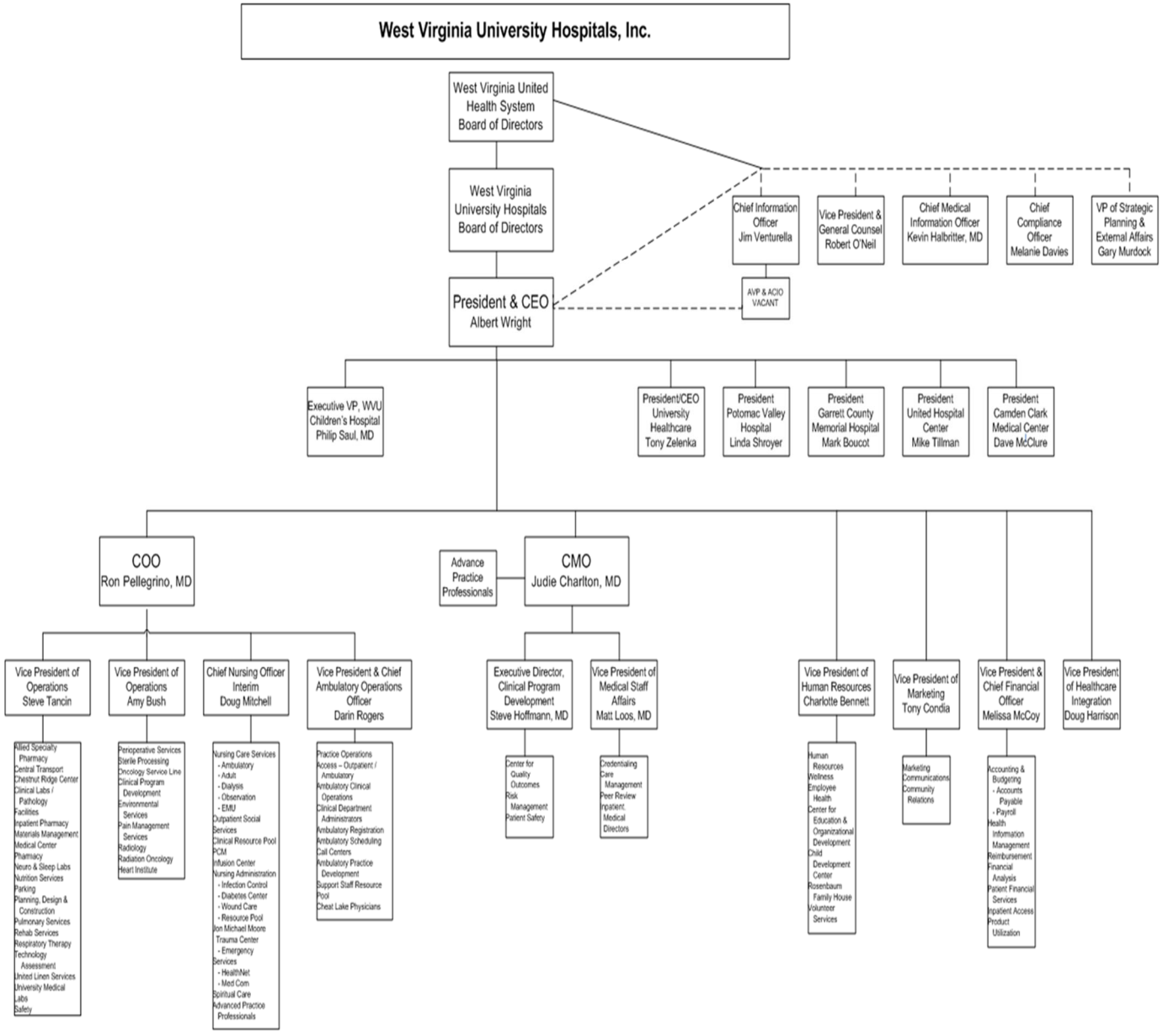
Ash Broadwater
Director Radiation Oncology

Jay S. Morris
Education Manager

Christina M. Paugh, MA, R.T.(R)(T)
Education Coordinator, Radiation Therapy Education

West Virginia University Hospitals
Medical Center Drive
Morgantown, WV 26506

West Virginia University Hospitals Administrative Organization



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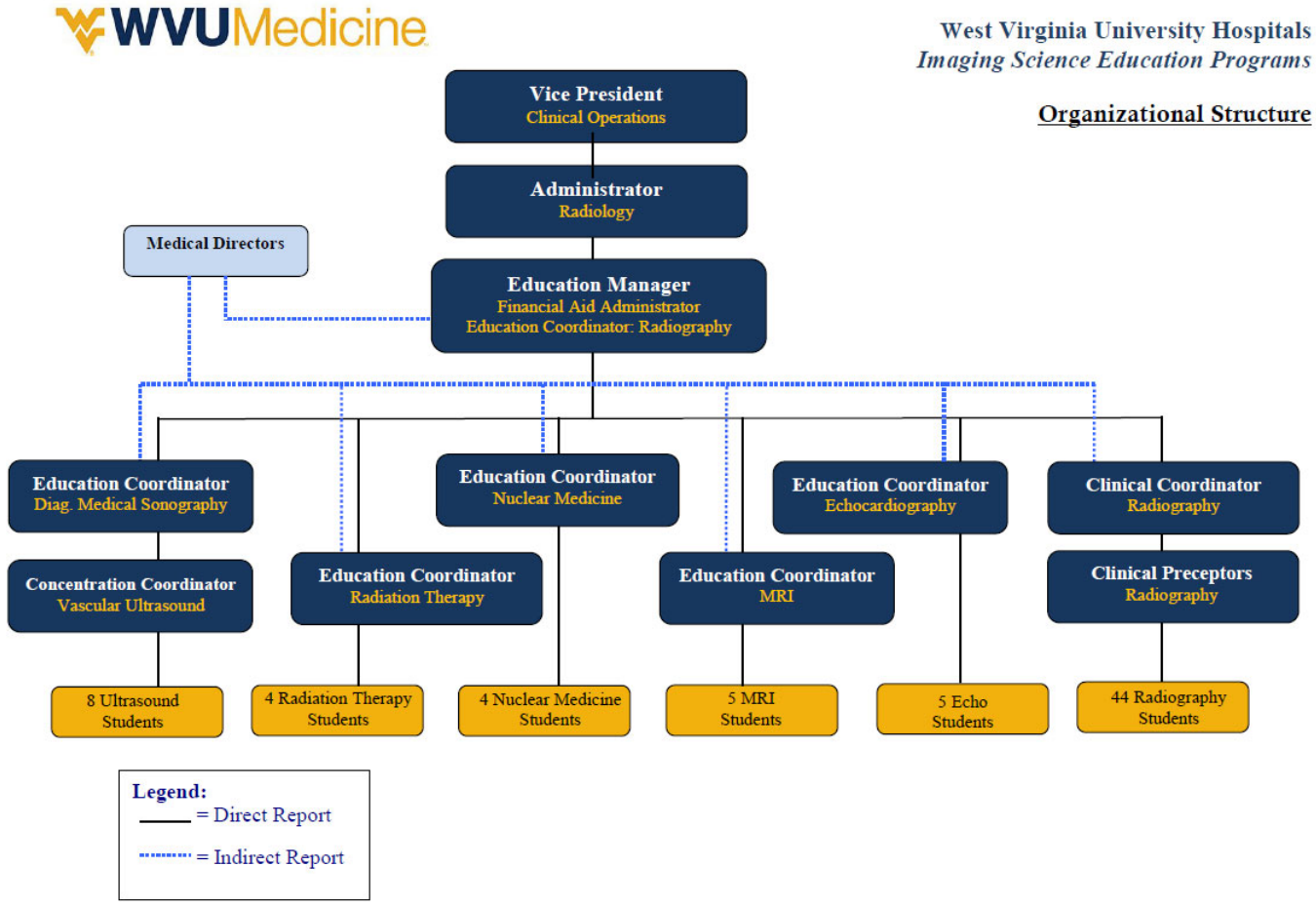
Education Organizational Structure



West Virginia University Hospitals
Medical Center Drive
Morgantown, WV 26506

Education Advisory Committee

Radiation Therapy Education Program

Amanda Pechatsko
Clinical Administrator, Radiology

Jay Morris
Education Manager

Tiffany D. Davis
Education Coordinator, Nuclear Medicine

Christina Paugh
Education Coordinator, Radiation Therapy

Kathleen Riley
Education Coordinator, Ultrasound

Brad Holben
Education Coordinator, MRI

Stephanie Hardy
Education Coordinator, Echocardiography

Joy Mason
Clinical Coordinator, Radiology Ed.

Neal Humphries
Clinical Preceptor, Radiology Ed.

Samantha Eakle
Clinical Preceptor, Radiology Ed.

Deb Ferencz
Clinical Preceptor, Radiology Ed.

Radiation Therapy Student Representative

Nuclear Medicine Student Representative

Echocardiography Student Representative

Representative Radiography Junior Class Student Representative

MRI Student Representative

Ultrasound Student Representative

Radiography Senior Class Student

WVU Hospitals
Radiation Therapy Education Program
Instructional Staff
2024-25

Course Title	**Instructor**
Orientation to Radiation Therapy Quality Management, QA, Safety & Lab Treatment Planning/Dose Calc I & II Treatment Planning/Dose Calc I & II & Lab Radiation Oncology I & II Radiobiology Research methods (Technical writing) Cardio-Pulmonary Resuscitiation Medical Ethics and Introductory Law Sim Techniques in Radiation therapy Pathophysiology I & II Imaging & Processing in Radiation Oncology Radiation Therapy Review Seminar	Christina Paugh, M.A., R.T.(R)(T)
Cross Sectional Anatomy	Tiffany Davis MA,RT(R)(N) Christina Paugh, M.A., R.T. (R)(T)
Hybrid Imaging	Tiffany Davis MA,RT(R)(N) Christina Paugh, M.A., R.T. (R)(T) Brad Holben, MSHA, R.T.(R)(MR)
Radiation Physics I	Alf Siochi, Ph.D.
Radiation Physics II Radiation Therapy Physics	Alf Siochi, Ph.D.
Radiation Therapy/Dosimetry	Brenda Darnell, B.A., C.M.D., R.T.(R)(T) Brenda Maxwell, C.M.D., R.T.(R)(T) Robert Bice, III, B.A., R.T.(R)(T) Shawn McFarland, C.M.D., R.T.(R)(T) Patel, Purvi, CMD
Mathematics Review	Neal Humphries, R.T. (R)
Patient Care and Education	Alexis Warden, PA-C Christina Paugh, M.A.,R.T.(R)(T)
Medical Terminology	Elisabeth Maiolo, B.S.,R.T.(R)(T)(CT)
Operational Issues in Radiation Therapy	Christina Paugh, MA, R.T (T)
<u>Clinical Instruction</u> Applied Therapeutic Procedures I & II	Radiation Therapy Clinical Staff C. McAfee, B. Hack, M. Radcliffe,K. Donley, L. Maiolo, S. Smith, M. Dyer, M. Chapman, S. Kuis FRCC: M. Wilson, P. Jenkins

Yrs Attend	Medical Director	Program Director	# of students	# of grads
1975-76	Dr. Reddi	Melinda Hazy	3	3
1977-78	Dr. Reddi	Diane Martin	1	1
1978-79	Dr. Frich	Diane Martin	1	1
1981-82	Dr. Frich	Jan Pacenta	3	3
1982-83	Dr. Frich	Jan Pacenta	4	4
1983-84	Dr. Frich	Jan Pacenta	1	1
1984-85	Dr. Frich	Jan Pacenta (Jul-Nov) Tricia Royce(Dec-Jun)	4	4
1985-86	Dr. Frich	Tricia Royce	4	4
1986-87	Dr. Frich	Tricia Royce	3	3
1987-88	Dr. Frich	Tricia Royce	4	4
1988-89	Dr. Frich	Tricia Royce	4	4
1989-90	Dr. Frich	Tricia Royce	3	3
1990-91	Dr. Frich	Tricia Royce	4	4
1991-92	Dr. Frich	Tricia Royce	4	4
1992-93	Dr. Frich	Tricia Royce/ Christina Paugh	4	3
1993-94	Dr. Korb	Christina Paugh	4	4
1994-95	Dr. Korb	Christina Paugh	5	5
1995-96	Dr. Korb	Christina Paugh	4	4
1996-97	Dr. Korb	Christina Paugh	4	4
1997-98	Dr. Korb	Christina Paugh	2	2
1998-99	Dr. Watkins	Christina Paugh	4	4
1999-00	Dr. Frich	Christina Paugh	4	4
2000-01	Dr. Frich	Christina Paugh	4	4
2001-02	Dr. Frich	Christina Paugh	4	4
2002-03	Dr. Frich	Christina Paugh	4	4
2003-04	Dr. Frich	Christina Paugh	4	3
2004-05	Dr. Frich	Christina Paugh	4	4
2005-06	Dr. Frich	Christina Paugh	4	4
2006-07	Dr. Frich	Christina Paugh	4	3
2007-08	Dr. Frich	Christina Paugh	4	4
2008-09	Dr. Frich	Christina Paugh	4	4
2009-10	Dr. Frich	Christina Paugh	4	4
2010-11	Dr. Frich	Christina Paugh	4	4
2011-12	Dr. Frich	Christina Paugh	4	4
2012-13	Dr. Frich	Christina Paugh	4	4
2013-14		Christina Paugh	4	4
2014-15		Christina Paugh	4	4
2015-16		Christina Paugh	4	4
2016-17		Christina Paugh	4	4
2017-18		Christina Paugh	4	4
2018-19		Christina Paugh	4	4
2019-20		Christina Paugh	4	4
2020-21		Christina Paugh	4	4
2021-22		Christina Paugh	4	4
2022-23		Christina Paugh	4	4
2023-24		Christina Paugh	4	4
Total Graduates				**171**

The Program has graduated 46 classes to date awarding certificates to 171 individuals.

West Virginia University Hospitals
Medical Center Drive
Morgantown, WV 26506

General Information

Certificate
A certificate of completion of 12 months education in Radiation Therapy Technology is awarded to each student upon successful completion of the program.

Transcript
The student will be provided a transcript of grades upon satisfactory completion of the Radiation Therapy Technology Education Program. Additional transcript of grades and other information will be forwarded upon written request.

Semester (Mid-Term/ End) Dates
Semester I:

Mid-Term	July 1 through September 30
End	October 1 through December 31

Semester II:

Mid-Term	January 2 through March 31
End	April 1 through June 30

Housing
Students are responsible for making their own living arrangements. University Housing may be available. Please ask the program director for contact information regarding University Housing if interested.

Placement Service
The program cannot guarantee employment to the student based upon program completion, but assistance is provided in obtaining employment through posting of current job openings and listings.

Holidays
The West Virginia University Hospitals, Inc. Radiation Therapy Technology Education Program will observe all official corporation holidays as follows:

- New Year's Day
- Memorial Day
- Independence Day
- Labor Day
- Thanksgiving Day
- Christmas Day

Class/Clinic Schedule
Monday – Friday (hours vary per rotation) 0800-1630, 0700-1530
*Students will complete an early shift once per month, during the spring semester.

Vacation
Students are granted two vacations. Vacation periods will be determined at the time of the annual revision of the academic calendar.

Radiation Badges

Each student technologist is furnished with a chest radiation badge. These badges must be worn in the clinical areas at all times.

Lockers

Each student is assigned a locker located in the radiation therapy department staff lounge or in the hallway of the Imaging Science Education Suite (Basement, HSC), as space is available. The department and WVU Hospitals are not responsible for lost or stolen items.

Attendance of Educational Opportunities

Students may be granted time off to attend educational meetings deemed valuable by Program Officials. Each student is expected to provide written documentation of their attendance. Travel to and from educational meetings is done on your own recognizance. Each student is responsible for their own transportation and expenses.

Travel to and from educational opportunities is done on your own recognizance. Neither WVU Hospitals, the Radiology department, nor the Radiation Therapy Education Program may be held responsible for your safety and well being.

Libraries

A library of reference books and periodicals are maintained by the WVU Health Science Center Library. You have the privilege of using these materials for your studies.

All reference materials must be checked out and returned by the due date. A lost book or reference must be replaced at the student's expense prior to graduation.

Upon completion of the Program a "Library Release" form must be completed by the WVU Health Science Center Library and turned into the Education Coordinator. Students will not graduate if all books or reference materials have not been returned.

Telephone Use & Courtesy

Telephones in the department are intended for hospital business only. Personal calls must be made on a personal phone and in the Radiation therapy break room, cafeteria, or main hospital lobby on the first floor.

When using the hospital phone for business, always identify yourself by stating your name and department (i.e., Radiation Oncology, John Doe speaking, how may I help you).

Visitors

Students are not permitted to receive visitors in the department at any time. You are to ask your friends and family members to wait for you in the hospital lobby until you are dismissed for the day.

Sample Academic Calendar

Date: 2024	Event:
July 1-3	New Student Orientation (dates TBD)
July 4	**Independence Day Holiday- No Class**
July 8	Tuition due – Modality & 2nd yr. Radiography students
July 8	Modality & 2nd yr. Rad. begin Summer & Sem III didactic / clinical courses
July-Aug	1st Year Radiography - clinical orientation and training (dates TBA)
August 12	1st Year Radiography begin Sem. I didactic and clinical classes + Tuition due
September 2	**Labor Day Holiday - No Class**
September 27	Mid-Term
November 28 & 29	**Thanksgiving Holiday - No Classes**
December 13	Last day of Semester I & III didactic courses
December 13	Final Grades due (Semester I & III)
December 16-18	Student Counseling Sessions
December 23-Jan 3	**Student Holiday break**

Date: 2025	Event:
January 6	Tuition due - Semester II & IV
January 6	All students begin Semester II & IV didactic / clinical courses
February 1	Application Deadline for 2025 Advanced Modality program candidates
March 1	Application Deadline for 2025 Radiography program candidates
March 14	Mid-Term Grades due
March 17-21	**Spring Break –** 2nd year Radiography only
April (TBA)	**Spring Break -** Modality Students
May 16	Last day of classes - 2nd year Radiography only
May 16	Final Grades due - 2nd year Radiography only
May (TBA)	**Graduation Reception** (Radiography graduates)
May 26	**Memorial Day Holiday - No Class**
June 13	Final Grades due (Rad. Therapy, Nuclear Medicine, ECHO, & MRI)
June 13	**Graduation Reception -** (Rad. Therapy, Nuclear Medicine, ECHO, & MRI)
June 13	Last day of Semester II didactic courses (1st year Rad, & Ultrasound)
June 16-18	Student Counseling Sessions (1st year Rad & Ultrasound)
June 23-27	**Summer Break -** 1st year Radiology Students & US students

West Virginia University Hospitals
Medical Center Drive
Morgantown, WV 26506

Radiation Therapy Education Program

Student Handbook

Section 2

Didactic & Clinical Education

West Virginia University Hospitals
Medical Center Drive
Morgantown, WV 26506

Didactic Education

Instructional Staff and Course List

Christina Paugh, M.A., RT (R)(T)

RTT 310: Orientation to Radiation Therapy
RTT 311: Principles and Practice of Radiation Oncology I
RTT 312: Simulation Techniques and Lab I
RTT 310: Orientation to Radiation Therapy
RTT 315: Treatment Planning I /Dose Calculations
RTT 316: Medical Ethics and Law
RTT 313: Radiation Therapy Physics I
RTT 319: Imaging and Processing in Radiation Oncology
RTT 322: Pathology I (General)
RTT 323: Technical Writing
RTT 324: Methods of Patient Care
RTT 331: Principles and Practice of Radiation Oncology II
RTT 332: Simulation Techniques and Lab II
RTT 335: Treatment Planning II /Dose Calculations
RTT 338: Pathology II (Neoplasia)
RTT 341: Radiation Biology
RTT 344: Quality Management & Lab
RTT 347: Radiation Therapy Review Seminars

Christina Paugh, Tiffany Davis, Brad Holben, Katie Riley, Stephanie Hardy

RTT 337: Operational Issues

Alf Siochi, Ph.D.

RTT 313: Radiation Therapy Physics I
RTT 333: Radiation Therapy Physics II

Elisabeth Maiolo, BS, RT(R)(T)(CT)

RTT 317: Medical Terminology

Chris Paugh, MA, RT(R)(T) and Tiffany Davis, MA, RT(R)(N)

RTT 334: Sectional Anatomy (instruction split with NM program director)

Chris Paugh, MA, RT(R)(T) Tiffany Davis,RT(R)(N) Brad Holben,RT(R)(MR)

RTT 3309: Hybrid Imaging Systems (instruction split with NM and MRI program directors)

Neal Humphries, B.A.,R.T.(R)

RTT 318: Math Review

Radiation Therapy Dosimetrists

RTT 336: Computers in Dosimetry

RADTT 310 Orientation to Radiation Therapy

30 Clockhours

Content is designed to provide student with an overview of the foundations in radiation therapy and the practitioner's role in the health care delivery system. Principles, practices and policies of the educational program, health care organizations, principles of radiation and health safety, introduction to clinical oncology and radiation treatment rationale and professional responsibilities of the radiation therapist will be discussed and examined. Content is further designed to provide an overview of cancer and the specialty of radiation therapy. The historic and current aspects of cancer treatment will be covered. The roles and responsibilities of the radiation therapist will be discussed. In addition, treatment prescription, techniques and delivery will be covered.

Semester I (1st Quarter)

RADTT 311 Principles & Practice of Radiation Oncology I and II
RADTT 331

75 Clockhours (30 Semester I and 45 Semester II)

Content is designed to examine and evaluate the management of neoplastic disease using knowledge in arts and sciences, while promoting critical thinking and the basis of ethical clinical decision making. The epidemiology, etiology, detection, diagnosis, patient condition, treatment and prognosis of neoplastic disease will be presented, discussed and evaluated in relationship to histology, anatomical site and patterns of spread. The radiation therapist's responsibility in the management of neoplastic disease will be examined and linked to the skills required to analyze complex issues and make informed decisions while appreciating the character of the profession

Semester I & II (1st, 2nd, 3rd and 4thQuarter)

RADTT 312, 332 Simulation Techniques & Lab

6 Clockhours (3 hours each semester)

Course content is designed to provide sequential development, application, analysis, integration, synthesis and evaluation of the concepts and theories in radiation therapy treatment field design.This course will involve instruction, demonstration and participation in immobilization procedures, patient positioning and simulation with the aid of an anthropomorphic phantom. This course runs concurrently with Radiation Oncology.

Semester I & II (1st, 2nd, 3rd and 4thQuarter)

RADTT 313 Radiation Physics I: Radiation Protection, Biology, Atomic/Nuclear*)*

58 Clockhours -(may be offered as a *Videoconference course)*

Course is offered primarily as a distance education course via live lecture and interactive chat via videoconferencing. Audiovisual contact is available and lectures are recorded. Content is designed to present basic principles of radiation protection and safety for the radiation therapist. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and health care organizations are incorporated. Specific responsibilities of the radiation therapist are discussed, examined, performed and evaluated. Additionally, this course will cover the principles of nuclear physics, providing the student with the understanding of natural and artificial radioactivity, the methods of disintegration, decay schemes, transient and secular equilibrium, nuclear fission and fusion, and other Principles related to the field of Radiation Therapy.

Semester I (1st and 2nd Quarter)

RADTT 315 Dose Calculations/Treatment Planning I

30 Clockhours

Provides the student technologist with an understanding in the mechanics of therapeutic dose calculations, and in the physics principles on which they are based. Content is designed to establish factors that influence and govern clinical planning of patient treatment. This encompasses isodose descriptions, patient contouring, radiobiologic considerations, dosimetric calculations, compensation and clinical application of treatment beams. Optimal treatment planning is emphasized along with particle beams.

Semester I (1st and 2nd Quarter)

RADTT 316 **Medical Ethics and Introductory Law**

15 Clockhours

Content is designed to provide sequential development, application, analysis, integration synthesis and evaluation of concepts and theories in radiation therapy. Through structured sequential assignments in clinical facilities, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated. Content is further designed to develop and use problem solving and critical thinking skills in discussion of the sources of law, causes of action and litigation processes related to the professional practice of radiation therapy. The interrelatedness of standards of care, law, ethical standards and competence will be examined.

Semester I (1st Quarter)

RADTT 317 **Medical Terminology**

5 Clockhours

Content is designed to establish a foundation in the standardized language of medical practice, including its abbreviations and symbols. A word building system will be presented preparatory to reading, understanding, interpreting and applying physician prescriptions to radiation therapy and related services.

Semester I (1st Quarter)

RADTT 318 **Math Review**

6 Clockhours

This course will cover the basic mathematical functions necessary to understand the principles of X-ray physics. The course will include fractions, decimals, percentages, order of operations, algebra review, basic geometric principles, exponents, square roots, scientific notation and conversions.

Semester I (1st Quarter)

RADTT 319 **Imaging & Processing in Radiation Oncology**

8 Clockhours

Content is designed to establish a knowledge base in factors that govern and influence the production and recording of radiographic images for patient simulation, treatment planning and treatment verification in radiation oncology. Radiation oncology imaging equipment and related devices will be emphasized. Content is further designed to provide students with an exposure to principles related to computed tomography (CT) imaging.

Semester I (1st Quarter)

RADTT 322 **Pathophysiology I (General)**

12 Clockhours

The course content is presented in two parts: general pathology and neoplasia. General pathology introduces basic disease concepts, theories of disease causation and system-by-system pathophysiologic disorders most frequently encountered in clinical practice. Neoplasia provides an in-depth study of new and abnormal development of cells. The processes involved in the development and classification of both benign and malignant tumors and site-specific information on malignant tumors is presented.

Semester I (2nd Quarter)

RADTT 323 **Technical Writing Research Methods**

9 Clockhours

A directed study course which provides students an opportunity to pursue an area of particular interest by the research, design and construction of a technical paper. Each student is required to write a paper on a disease topic and it's treatment or a physics topic.

Semester I (2nd Quarter)

RADTT 324 Radiation Therapy Patient Care

15 Clockhours

To introduce nursing procedures and techniques utilized in the care of cancer patients as a function of the Radiation Therapy Technologist. Emphasis will be placed on the patient's physical and psychological conditions, as well as factors influencing the general health of the patient during and following a course of radiation therapy.

Semester I (2nd Quarter)

RADTT 300, 400 Educational Seminars

40 Clockhours (20 each semester)

A discussion of current literature, new procedures, new radiation therapy equipment, trends in radiation therapeutic methodology, and special presentations by guest lecturers. This course also includes active student participation in new patient rounds/peer review.

Semester I & II (1st, 2nd, 3rd, 4th Quarter)

RADTT 420 Applied Therapeutic Procedures I: Clinical Practice

636 Clockhours

This course provides the student with experience in the clinical facility, participating in the duties performed by a radiation therapy technologist. The student will be present for the initial clinical evaluation of the patient throughout the treatment planning and follow-up of the patient throughout the course of treatment. Under supervision, the student will position, plan and treat the patient, calculate and record doses, check the patient's treatment records, and observe the patient in a routine follow-up.

Semester I (1st and 2nd Quarter) - Radiation Oncology Staff

RADTT 333 Physics II: Radiation Therapy Physics

57 clockhours -(May be offered as a *Videoconference course)*

Course is offered primarily as a distance education course via live lecture and interactive chat via videoconferencing. Audiovisual contact is available and lectures are recorded. This is a continuing course of Radiation Physics I which will cover the atomic structure, the interaction of ionizing radiation matter, therapy equipment that in use in the past and present, measurement of exposure, calibration of the equipment, measurement of absorbed dose, dose calculations, treatment planning, brachytherapy, and a review of nuclear physics and protection. A study of the different types and uses of brachytherapy sources their physical properties, calculations, records, and their application in interstitial, intracavitary and surface implant procedures.

Semester II (3rd and 4th Quarter)

RADTT 319 Quality Management, Quality Assurance, Safety & Lab

16 Clockhours

Content is designed to focus on the evolution of quality management (QM) programs and continuing quality improvements in radiation oncology. Topics will include the need for quality assurance (QA) checks; QA of the clinical aspects and chart checks; film checks; the various types of evaluations and tests performed on simulators, megavoltage therapy equipment and therapy planning units; the role of radiation therapists in quality management programs; legal and regulatory implications for maintaining appropriate QM guidelines as well as the role computers and information systems serve within the radiation oncology department.

Semester II (4th Quarter)

RADTT 334 Sectional Anatomy

15 clockhours

Content will introduce students to medical imaging methods currently used in the field of radiation therapy. Students will identify normal anatomical structures via a variety of imaging formats. Basic anatomical relationships will be compared using topographical and cross-sectional images.

Semester II (3rd Quarter)

RADTT 335 Dose Calculation / Treatment Planning II

20 Clockhours

This course will provide the student with the fundamentals Radiation Dosimetry. The course will provide instruction on understanding treatment devices, treatment planning and construction of plans, both manual and by computer. Stereotactic and emerging technologies are presented

Semester II (3rd Quarter)

RADTT 336 Clinical Dosimetry

10 Clockhours

A two part clinical course allowing the student to participate in computerized treatment planning. The student will be provided with the theoretical and practical foundation in the use of computers in Radiation Therapy, and develop an understanding of basic concepts of clinical dosimetry and treatment planning. The student may also be involved in fabrication of patient immobilization and beam shaping devices, as the caseload permits. Various external beam techniques, depth dose data, dosimetry of internal sources, among other topics, are discussed, and the student afforded the opportunity, under direct supervision, to perform duties of a dosimetrist.

Semester II (3rd or 4th Quarter)

RADTT 337 Operational Issues in Radiation Therapy

10 Clockhours

Content is designed to focus on various radiation therapy operational issues. Continuous quality improvement (CQI) project development and evaluation and assessment techniques will be emphasized. Human resource concepts and regulations impacting the radiation therapist will be examined. Accreditation agencies and the radiation therapist's role in the accreditation process will be emphasized. Billing and reimbursement issues pertinent to the radiation therapy department will be presented. **Semester II (3rd Quarter)**

RADTT 3309 Hybrid Imaging Systems

6 clockhours

This course consists of a series of lectures relating to the basic fundamentals of nuclear medicine and PET/CT, magnetic resonance imaging, and radiation therapy. Clinical applications of hybrid imaging systems will be discussed. The benefits of utilizing hybrid systems to combine the physiologic, metabolic, anatomic and morphologic information to provide optimal diagnostic value will be evaluated. **Semester II (4th Quarter)**

RADTT 347 Radiation Therapy Review Seminars

80 Clockhours

A review of radiation therapy technology aimed at preparing the student for the American Registry of Radiologic Technology. Mock registries will be given. The student will review various treatment plans for a malignant disease and be able to discuss the rationale behind them.

Semester II (3rd and 4th Quarter)

RADTT 341 Radiation Biology

30 Clockhours

Content is designed to present basic concepts and principles of radiation biology. The interactions of radiation with cells, tissues and the body as a whole and resultant biophysical events will be presented. Discussion of the theories and principles of tolerance dose, time-dose relationships, fractionation schemes and the relationship to the clinical practice of radiation therapy will be discussed, examined and evaluated. **Semester II (3rd and 4th Quarter)**

RADTT 430 Applied Therapeutic Procedures II:Clinical Practice

486 Clockhours

This course is a continuation of Applied Therapeutic Procedures I and is conducted in the clinical facility for the student completing the program in Radiation Therapy Technology. Content is designed to provide sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in radiation therapy. Through structured sequential assignments in clinical facilities, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated. The student will be afforded the opportunity, under direct supervision, to perform the duties and learn the responsibilities of a radiation therapy technologist.

Semester II (3rd and 4th Quarter) - Radiation Oncology Staff

2024-25 Required /Recommended Textbooks

Required Text	ISBN	Approx. Cost
Radiobiology for the Radiobiologist, by Hall (8th Ed) **Required**	9781496335418	**$146.45**
Principles and Practice of Rad. Therapy by Washington and Leaver (5th Edition) **Required**	9780323596954	**$139.50**
The Physics and Technology of Radiation Therapy (2nd Edition) by McDermott & Orton **Required**	978-1-930524-98-9	**$164.00**
Comprehensive Review Guide For The Radiation Therapy Examination by Laura M Nappi **Required**	978-1983881220	**$89.99**
Radiation Therapy Online Registry Review Course https://www.rttexamprep.com *by* **Laura M Nappi** **Recommended**		**$349.00**
Totals (approximate new prices based on Amazon.com website as of April 2024)	**Required +Recommended**	**$539.94 +$349.00**
	Approx. total	**$888.94**

Students are required to have current editions of all textbooks.

Students may contact current students directly if they want to buy their used textbooks.

SAMPLE DIDACTIC CALENDAR

August 2024

Monday	Tuesday	Wednesday	Thursday	Friday
			1 **8:00-9:00** Physics I **11:00-12:00** Pt Care & Education	**2** **8:00-9:00** Physics I **1:00-2:00** Medical Terminology
5 **8-9** Peer Review **10:30-12** Orient to R.T. **1:00-2:00** Med Ethics	**6** **8:00-9:30** Physics I **1:00-2:30** Treatment Planning I	**7** **10:30-12:00** Orientation to R.T. **1:00-2:00** MedEthics/Law	**8** **11:00-12:00** Pt Care & Education **1:00-2:00** Medical Terminology	**9** **8:00-9:30** Physics I
12 **8-9** Peer review **10:30-12** Orient to R.T. **1:00-2:00** Med Ethics **3:30-4:30** Math Review -(online)	**13** **8:00-9:30** Physics I **1:00-2:30** Treatment Planning I	**14** **9:30-10:30** Pt Care & Education (Amanda) **10:30-12:00** Orientation to R.T. **1:00-2:00** Med Ethics/law	**15** **1:00-2:00** Medical Terminology	**16** **8:00-9:30** Physics I
19 **8-9** Peer review **10:30-12** Orient to R.T. **1:00-2:00** Med Ethics **3:30-4:30** Math Review -(online)	**20** **8:00-9:30** Physics I **11:00-12:00 Oncology** **1:00-2:30** Treatment Planning I	**21** **10:30-12:00** Orient to R.T. **1:00-2:00** Med Ethics/law **2:00-3:00 Oncology**	**22** **11:00-12:00** Pt Care & Education **1:00-2:00** Medical Terminology	**23** **8:00-9:30** Physics I
26 **8-9** Peer review **9:30-10:30** Med Ethics/law **10:30-12** Orient to R.T. **1:00-2:00** **Imaging & Processing** **3:30-4:30** Math Review -(online)	**27** **8:00-9:30** Physics I **11:00-12:00 Oncology** **1:00-2:30** Treatment Planning I	**28** **10:30-12:00** Orient to R.T. **2:00-3:00 Oncology** **3:00-4:00** Pt Care & Education (Alexis)	**29** **1:00-2:00** Medical Terminology	**30** **8:00-9:30** Physics I

WVU Medicine

Radiation Therapy Education Program

Course / Clockhour Profile (2024)

Semester I (Fall)

Course #	Title		Clock hours
RADTT 310	Orientation to Radiation Therapy		30
RADTT 311	Principles & Practice of Radiation Oncology I		30
RADTT 312	Simulation Techniques and Lab		3
RADTT 313	Radiation Physics I (Rad Safety/Biology/Atomic/Nuclear)		58
RADTT 315	Dose Calculations/Treatment Planning I		30
RADTT 316	Medical Ethics & Introductory Law		15
RADTT 317	Medical Terminology		5
RADTT 318	Math Review		6
RADTT 319	Imaging and Processing in Radiation Oncology		8
RADTT 322	Pathophysiology I (General)		12
RADTT 323	Research Methods		9
RADTT 324	Radiation Therapy Patient Care		15
RADTT 300	Educational Seminars		20
		Total Didactic	**241**
RADTT 420	Applied Therapeutic Procedures I: Clinical Practice		636
		Total Clinic	**636**
	Semester I Educational Clockhour Total		**840**
Holidays	July 4th, Labor Day, Thanksgiving x2	**Holiday**	24
Vacation	Christmas & New Years Week	**Vacation**	80
	Semester I Clockhour Total		**981**

Semester II (2024 Spring)

Course #	Title		Clock hours
RADTT 331	Principles & Practice of Radiation Oncology II		45
RADTT 332	Simulation Techniques and Lab		3
RADTT 333	Radiation Physics II (Radiation Therapy Physics)		57
RADTT 334	Sectional Anatomy		15
RADTT 335	Dose Calculations/Treatment Planning II		20
RADTT 336	Clinical Dosimetry		10
RADTT 337	Operational Issues in Radiation Therapy		10
RADTT 338	Pathophysiology II (Neoplasia)		10
RADTT 339	Hybrid Imaging Systems		6
RADTT 341	Radiation Biology		30
RADTT 344	Quality Management, Quality Assurance, Safety & Lab		16
RADTT 347	Radiation Therapy Review Seminars		80
RADTT 400	Educational Seminars		20
		Total Didactic	**322**
RADTT 430	Applied Therapeutic Procedures II: Clinical Practice		480
		Total Clinic	**480**
	Semester II Educational Clockhour Total		**802**
Holiday	Memorial Day	**Holiday**	8
Vacation	Spring Break	**Vacation**	40
	Semester II Clockhour Total		**850**

Total Didactic I & II	**563**
Total Clinic I & II	**1016**
Complete Total	**1579**

Applied Therapeutic Procedures I
RADTT 420: CLINICAL EDUCATION
Radiation Therapy Education Program
West Virginia University Hospitals
(revised 7/2023)

Semester I

Course Description

This course provides the student with experience in the clinical facility, participating in the duties performed by a radiation therapy technologist. This course further provides the student with the opportunity to apply and relate classroom theory to clinical activities. During this course, the student will be present for initial clinical evaluations of the patient and will aid in treatment planning and follow-up of the patient throughout the course of treatment. Under supervision, the student will position, plan and treat the patient, calculate and record doses, check the patient's treatment records, and observe the patient in a routine follow-up. For each of the procedures identified, the student will practice and prove competency in that area at varying levels of difficulty and responsibility during the course of the education program. The accuracy of the task shall be determined through the use of competency examinations.

Course Objectives

1. Prove competency in the treatment and/or localization of the diseases typically presented in the radiation oncology department. Semester I clinical requirements are listed on page 4 of this document. *See semester I requirements.*
2. Assist in the calculation and treatment planning for the treatment fields utilized in the Radiation Oncology department.
3. Assist in the preparation and application of brachytherapy techniques within a radiation oncology department.

In addition, after the completion of the first six months of the education program, the student will be able to:

a. Apply and relate theory to clinical activities.
b. Consistently demonstrate thoroughness, accuracy and attention.
c. Utilize time efficiently and perform consistently.
d. Grasp directions quickly and accurately.
e. Always maintain complete, accurate and concise records in accord with institutional and clinical policy and procedures.
f. Communicate readily with patients and be attentive to their emotions, needs, rights, and comforts.
g. Assume professional responsibility for actions and exhibit confidence in all activities.

Clinical Procedures

Clinical procedures include, but are not limited to the following:

- Sixteen (16) Radiation Oncology Treatment Procedures
- Six (6) Radiation Oncology Simulation Procedures
- Six (6) Dosimetry Procedures
- Six (6) Low Volume/High Risk/Participatory Procedures
- Three (3) Treatment Accessory Devices
- Seven (7) Patient Care Procedures
- Five (5) New start Procedures
- Five (5) Quality Assurance Procedures
- Four (4) Comprehensive Competencies

Evaluation

The student's Clinical grade will be determined by the following Processes:

1. **Daily Log Sheets**

   Each day, students will report the procedures which were completed on the Daily Log sheet in the Trajecsys Clinical Report System. Grading is pass/fail. Delinquent (more than 3 days) log sheets will result in a 5% reduction in the overall clinic grade.

   After observing and assisting the radiation therapist with an appropriate number of radiation therapy set-ups, a clinical competency exam will be administered for each procedure identified on the clinical checklist form. Competency categories include but are not limited to the procedures from the following sites/systems:

Brain	Skeletal	Pelvis
Head and Neck	Electron Fields	Abdomen
Thorax	Breast	Low-volume, high risk participatory procedures

2. **Clinical Competency Examination**

   Upon satisfactory participation of completion of an appropriate number of radiation therapy procedure set-ups, the student therapist may achieve competency status in the above categories by taking a clinical competency exam. The student will notify the program director or clinical supervisor when he/ she is ready to be evaluated in a category.

3. **Comprehensive Competency Examination**

   After achieving competency in a category, the Program Director or Clinical supervisor may administer a comprehensive competency exam to ensure that proficiency and accuracy is being maintained. A comprehensive competency exam will be administered at a time and on a patient designated by the Program Director or Clinical Supervisor.

4. **Monthly Clinical Evaluations**

   Monthly Clinical evaluations are rotational evaluations which are completed at the end of the month by the clinical instructor/supervisor(s) with whom the student has been working. The student is evaluated on the completion of clinical objectives, clinical competency, attitude, dependability, accuracy, and initiative, as well as other areas appropriate to the assigned rotation.

5. **Program Director Evaluation of Student Progress**

   The Program Director will assess and evaluate student clinical progress on a quarterly basis. The student is evaluated on quality of work, patient care, knowledge of equipment, application of didactic knowledge, organization of work, ability to follow directions, initiative, punctuality, professional demeanor, cooperation and teamwork, attitude toward criticism, self-confidence, relationship with instructors and staff, attitude toward profession, ability to handle stressful situations, and overall progress as well as other areas appropriate to the assigned rotation(s).

Note: **It is the student's responsibility to inform the clinical supervisor that he/she wishes to be evaluated prior to the start of the competency examination.

Grading And Evaluation
All radiation therapy students must pass each applied therapeutic procedures course with a minimum 86% weighted percent average. Failure to achieve the minimum 86% overall weighted average will prohibit the student from advancing to the subsequent semester and therefore dismissal from the program will result.

Competency grading
The student must score an 86% or higher to achieve competency status. Should the student fail to achieve an 86% or higher on a competency exam, a repeat exam must be taken (until successful), and the exams will be averaged for a final competency exam grade.

Overall Clinical Grade
RADTT 420 course grades will be based upon the completion of quarterly requirements (which include clinical check-offs, competencies, comprehensive competencies, and monthly evaluations) and will be weighted as follows:

1.	Daily Clinical Log sheets	10%
2.	Clinical Competency Exams	40%
3.	Comprehensive Competency exams	10%
4.	Monthly evaluations	25%
5.	Program Director Evaluation	15%
		100%**

** The student must complete all quarterly and semester requirements.

******** ***If the quarterly requirements are incomplete at the end of the quarter, 5% will be deducted (per requirement) from the overall clinical grade.***

Clinical Grading Scale
The clinical education weighted average grading scale will be separate from the didactic education weighted grading scale and is as follows:

100%-93%	A
92% -86%	B
85% -78%	C
77% - 70%	D
< 70	F

A minimum of 86% is required to pass Applied Therapeutic Procedures 420 and 430.

Semester I Requirements

First Quarter

At the completion of the first quarter, the student will complete the following:

a. Treatment Room
   1. First Rotation(s) – initial rotations: one (1) required competency in 1st 3 months
   2. Subsequent rotation: a minimum of three (3) competencies per rotation

b. Simulation
   1. First Rotation: no required competency (1 competency may be permitted if the student has had sufficient experience and has Program Director approval)

c. General Patient Care Procedures
   1. CPR, Oxygen Administration, Patient transfer, Vitals (BP, Pulse, respirations and temperature)

d. Observation of clinical physical exams to include new patient consult, follow-up, pelvic exam, neuro exam, oral exam and rectal exam.

Second Quarter

At the completion of the second quarter, the student will complete the following:

a. Treatment Room
   1. A minimum of three (3) competencies per monthly treatment room assignment

b. Simulation

   First Rotation: no required competency (competency is permitted if the student has had sufficient experience)

   Subsequent rotation: a minimum of two (2) competencies per monthly simulation assignment.

c. Advanced Skills

- The start of 2 new patients to include portal imaging and calculations if applicable. **(Student's choice)**
- Dose Calculations

  A minimum of 10 SSD or SAD dose calculations.
- Two or more comprehensive competency exams. **(Program Director's choice)**
- Beam Modification/Accessory Devices
- Photon block fabrication/ Electron Block fabrication
- Custom Immobilization Devices (Vac-Lok and Thermoplastic)
- Construction and clinical application of Bolus
- Tattoos

When a student is ready to be evaluated in a category, he/she will notify the Program Director or Clinical Supervisor that he/she is working with. Students can and should participate in all procedures during the first six months (1st semester) of the education program.

Completion of these competencies is a graduation requirement. Upon completion of the radiation therapy program, competency records are retained and remain on file in the office of the Program Director.

Applied Therapeutic Procedures II
RADTT 430: CLINICAL EDUCATION
Radiation Therapy Education Program
West Virginia University Hospitals

Semester II

Course Description

This course is a continuation of Applied Therapeutic Procedures I and is conducted in the clinical facility for the student completing the WVUH radiation therapy education program. Under direct supervision, the student will be afforded the opportunity to perform the duties and learn the responsibilities of a radiation therapy technologist.

For each of the procedures identified, the student will practice and prove competency in that area at varying levels of difficulty and responsibility during the course of the education program. The accuracy of the task shall be determined through the use of competency examinations.

Course Objectives

1. Prove competency in the treatment and/or localization of the diseases typically presented in the radiation oncology department. Semester II clinical requirements are listed on page 4 of this document. *See semester II requirements.*
2. Assist in the calculation and treatment planning for the treatment fields utilized in the radiation oncology department.
3. Assist in the preparation and application of brachytherapy techniques within a radiation oncology department.

At the completion of the second six months of the education program (completion of the program), the student will have completed more complex and advanced procedures and will have become increasingly proficient to:

a. Apply and relate theory to clinical activities.
b. Consistently demonstrate thoroughness, accuracy and attention.
c. Utilize time efficiently and perform consistently.
d. Grasp directions quickly and accurately.
e. Always maintain complete, accurate and concise records in accord with institutional and clinical policy and procedures.
f. Communicate readily with patients and be attentive to their emotions, needs, rights, and comforts.
g. Assume professional responsibility for actions and exhibit confidence in all activities.

Clinical Procedures

Clinical procedures include, but are not limited to the following:

Radiation Oncology Treatment Procedures
Radiation Oncology Simulation Procedures
Dosimetry Procedures
Beam Modification Procedures
Patient Care Procedures

Evaluation

The student's Clinical grade will be determined by the following Processes:

1. **Daily Log Sheets**

   Each day, students will report the procedures which were completed on the Daily Log sheet in the Trajecsys Clinical Report System. Grading is pass/fail. Delinquent (more than 3 days) log sheets will result in a 5% reduction in the overall clinic grade.
   After observing and assisting the radiation therapist with an appropriate number of radiation therapy set-ups, a clinical competency exam will be administered for each procedure identified on the clinical checklist form. Competency categories include but are not limited to the procedures from the following sites/systems:

Brain	Skeletal	Pelvis
Head and Neck	Electron Fields	Abdomen
Chest	Breast	Low-volume, high risk participatory procedures

1. **Clinical Competency Examination**

   Upon satisfactory completion of a clinical check-off, the student therapist may achieve competency status in the above categories by taking a clinical competency exam. The student will notify the program director or clinical supervisor when he/ she is ready to be evaluated in a category._

2. **Comprehensive Competency Examination**

   After achieving competency in a category, the Program Director or Clinical supervisor may administer a comprehensive competency exam to ensure that proficiency and accuracy is being maintained. A comprehensive competency exam will be administered at a time and on a patient designated by the Program Director or Clinical Supervisor.

3. **Monthly Clinical Evaluations**

   Monthly Clinical evaluations are rotational evaluations which are completed at the end of the month by the clinical instructor/supervisor(s) with whom the student has been working. The student is evaluated on the completion of clinical objectives, clinical competency, attitude, dependability, accuracy, and initiative, as well as other areas appropriate to the assigned rotation.

4. **Program Director Evaluation of Student Progress**

   The Program Director will assess and evaluate student clinical progress on a quarterly basis. The student is evaluated on quality of work, patient care, knowledge of equipment, application of didactic knowledge, organization of work, ability to follow directions, initiative, punctuality, professional demeanor, cooperation and teamwork, attitude toward criticism, self-confidence, relationship with instructors and staff, attitude toward profession, ability to handle stressful situations, and overall progress as well as other areas appropriate to the assigned rotation(s).

Note: ***It is the student's responsibility to present the necessary forms to the evaluator prior to the check-off or competency examination.***

Grading And Evaluation
All radiation therapy students must pass each applied therapeutic procedures course with a minimum 86% weighted percent average. Failure to achieve the minimum 86% overall weighted average will prohibit the student from advancing to the subsequent semester and therefore dismissal from the program will result.

Competency grading
The student must score an 86% or higher to achieve competency status. Should the student fail to achieve an 86% or higher on a competency exam, a repeat exam must be taken (until successful), and the exams will be averaged for a final competency exam grade.

Overall Clinical Grade
RADTT 420 course grades will be based upon the completion of quarterly requirements (which include clinical check-offs, competencies, comprehensive competencies, and monthly evaluations) and will be weighted as follows:

1.	Daily Clinical log sheets	10%
2.	Clinical Competency Exams	40%
3.	Comprehensive Competency exams	15%
4.	Monthly evaluations	25%
5.	Program Director Evaluation	10%
		100%**

** The student must complete all quarterly and semester requirements.

****** **If the quarterly requirements are incomplete at the end of the quarter, 5% will be deducted (per requirement) from the overall clinical grade.**

Clinical Grading Scale
The clinical education weighted average grading scale will be separate from the didactic education weighted grading scale and is as follows:

100%-93%	A
92% -86%	B
85% -78%	C
77% - 70%	D
< 70	F

A minimum of 86% is required to pass Applied Therapeutic Procedures 420 and 430.

Semester II Requirements

Third Quarter

At the completion of the third quarter, the student will complete the following:

a. Treatment Room
   1. a minimum of **three (3)** competencies per rotation

b. Simulation
   1. a minimum of **four (4)** competencies per rotation

c. Bolus Fabrication

e. The start of at least **1** new patient (multi-field) to include port films and calculations. **(Student's choice)**

Fourth Quarter

At the completion of the fourth quarter, the student will complete the following:

a. Treatment Room
   1. A minimum of **three (3)** competencies per monthly treatment room assignment (a total of **nineteen (18)** by end of 2nd semester)

b. Simulation
   1. A minimum of **four (4)** competencies
      Per each monthly simulation assignment (a total of **nine (9)** by end of 2nd semester)

c. The start of **2** new patients (multi-field) to include port films and calculations. **(Student's choice)**

d. Two or more comprehensive competency exams. **(Program Director's choice)**

e. Seven (7) assigned Dosimetry Calculations

f. Venipuncture

g. Three **(3)** or more Low volume High Risk participatory procedures (HDR, CSI, TBI, gamma knife, IORT)

h. Pediatric case (treatment or simulation)

i. Three (3) Quality Assurance procedures (treatment room and CT simulation)

When a student is ready to be evaluated in a category, he/she will notify the Program Director or Clinical Supervisor that he/she is working with.

Completion of these competencies is a graduation requirement. Upon completion of the radiation therapy program, competency records are retained and remain on file in the office of the Program Director.

Sample Student Clinical Evaluation Form

Student Clinical Performance - Treatment Room

A. Organization and Work Role				
Organization	○ Unsatisfactory	○ Needs Improvement	○ Satisfactory	○ Excellent
Teamwork	○ Unsatisfactory	○ Needs Improvement	○ Satisfactory	○ Excellent
Student attitude toward colleagues	○ Unsatisfactory	○ Needs Improvement	○ Satisfactory	○ Excellent
Professinal conduct	○ Unsatisfactory	○ Needs Improvement	○ Satisfactory	○ Excellent
B. Administering and Monitoring of Radiation therapy				
Equipment operation	○ Unsatisfactory	○ Needs Improvement	○ Satisfactory	○ Excellent
Patient positioning and Immobilization	○ Unsatisfactory	○ Needs Improvement	○ Satisfactory	○ Excellent
Treatment verification and volume localization	○ Unsatisfactory	○ Needs Improvement	○ Satisfactory	○ Excellent
Record keeping	○ Unsatisfactory	○ Needs Improvement	○ Satisfactory	○ Excellent
Patient and machine monitoring	○ Unsatisfactory	○ Needs Improvement	○ Satisfactory	○ Excellent
Radiation Safety and Protection	○ Unsatisfactory	○ Needs Improvement	○ Satisfactory	○ Excellent
C. Caregiving				
Patient assessment	○ Unsatisfactory	○ Needs Improvement	○ Satisfactory	○ Excellent
Patient Safety	○ Unsatisfactory	○ Needs Improvement	○ Satisfactory	○ Excellent
Patient and family interaction	○ Unsatisfactory	○ Needs Improvement	○ Satisfactory	○ Excellent
Patient education	○ Unsatisfactory	○ Needs Improvement	○ Satisfactory	○ Excellent
D. Professionalism				
Arrives on time or early. Returns from class in a timely manner	○ Unsatisfactory	○ Needs Improvement	○ Satisfactory	○ Excellent
Assumes full responsibility for actions	○ Unsatisfactory	○ Needs Improvement	○ Satisfactory	○ Excellent
Shows initiative, follows through with tasks and is willing to lend assistance	○ Unsatisfactory	○ Needs Improvement	○ Satisfactory	○ Excellent
Asks questions routinely that lead to improved clincial skills	○ Unsatisfactory	○ Needs Improvement	○ Satisfactory	○ Excellent
Directs questions to proper people at proper times	○ Unsatisfactory	○ Needs Improvement	○ Satisfactory	○ Excellent

Comments	
Notable student achievements for this Rotation	
Area(s) student should work on for the next rotation	
Please comment on any area where the program director can help you to improve the student's clinical experience.	

Clinical Quarterly Requirements

1ST Quarter ✓ 0 or 4 RX Room ✓ 0 Sim ✓ PA worksheet ✓ Vital signs ✓ O_2 ✓ Transfer/Lifting ✓ IV peripheral insertion ✓ CPR	**2nd Quarter** ✓ 8 RX Room ✓ 0 or 3 Sim ✓ 2 new starts ✓ 10 dose calcs ✓ 2 comprehensives ✓ Bolus ✓ Electron Block ✓ Vac-lok ✓ Aquaplast
3rd Quarter ✓ 12 or 16 RX Room ✓ 3 or 6 Sim ✓ 3 new starts ✓ 10 dose calcs ✓ 3 comprehensives ✓ Pediatric Case ✓ QA Rx room and Sim	**4th Quarter** ✓ 19 RX Room ✓ 9 Sim ✓ 5 new starts ✓ 10 dose calcs ✓ 4 comprehensives ✓ HDR Brachytherapy ✓ Gamma Knife ✓ CSI ✓ TBI ✓ IORT

REQUIRED CLINICAL PROCEDURES

Category	Exam type
Treatment Room	Abdomen - AP/PA - Competency
Treatment Room	Abdomen - Multiple Fields - Competency
Treatment Room	Abdomen - Para-aortic - Competency
Treatment Room	Brain - Metastatic - Competency
Treatment Room	Brain - Primary - Competency
Treatment Room	Breast - Tangents Only - Competency
Treatment Room	Breast - Tangents with Supraclavicular - Competency
Treatment Room	Breast Tangents with SClav and PAB - Competency
Treatment Room	Breast with SClay and IM nodes - Competency
Treatment Room	Chest - AP/PA - Competency
Treatment Room	Chest - Multiple Fields - Competency
Treatment Room	Electron Fields - Abutting fields (ie Post neck boost) - Competency
Treatment Room	Electron Fields - Single - Competency
Treatment Room	Head and Neck - Laterals Only - Competency
Treatment Room	Head and Neck - Multi Field + supraclay - Competency
Treatment Room	Pelvis - AP/PA - Competency
Treatment Room	Pelvis - Inguinal - Competency
Treatment Room	Pelvis - Multiple Field Prone - Competency
Treatment Room	Pelvis - Multiple Field Supine - Competency
Treatment Room	Skeletal - Extremity - Competency
Treatment Room	Skeletal - Spine - Competency
Simulation	Abdomen - Competency
Simulation	Brain - Competency
Simulation	Breast - Tangential - Competency
Simulation	Breast - Tangential - Supraclavicular - Competency
Simulation	Chest - Competency
Simulation	Head and Neck - Competency
Simulation	Pelvis - Competency
Simulation	Skeletal - Extremity - Competency
Simulation	Skeletal - Spine - Competency
Treatment Accessory Devices	Accessory Devices - Thermoplastic Mask (Aquaplast)
Treatment Accessory Devices	Accessory Devices - Vac-lok Custom Immobilation Device for Thorax, Abdomen, or Pelvis
Treatment Accessory Devices	Bolus: Beam Modification - Bolus Fabrication
Treatment Accessory Devices	Electron block fabrication (Beam Mod/Tx Accessory Devices)

Treatment Accessory Devices	Photon Block FabricationBeam Modification/Tx Accessory Devices
Dosimetry	Dosimetry Calculations - Computed generated Isodose Plan

Category	**Exam type**
Dosimetry	Dosimetry Calculations - Geometric Gap
Dosimetry	Dosimetry Calculations - Parallel Opposed Field with Blocks
Dosimetry	Dosimetry Calculations - Single, Open Field
Dosimetry	Dosimetry Calculations - Wedged Fields
Dosimetry	Dosimetry Calculations - Weighted Fields
General	Advanced Skills - Comprehensive Comp #1 - Sem I
General	Advanced Skills - Comprehensive Comp #2 - Sem I
General	Advanced Skills - Comprehensive Comp #3 - Sem II
General	Advanced Skills - Comprehensive Comp #4 - Sem II
General	General Patient Care - CPR-BLS
General	General Patient Care - O_2 Administration
General	General Patient Care - Patient Transfer
General	General Patient Care - Periphreal IV insertion
General	General Patient Care - Vital signs (BP, Pulse, Respiration, Temp)
New Starts	1. Chest/Thorax- Sem. I
New Starts	2. Extremity/Spine - Sem I
New Starts	3. Abdomen/Pelvis - Sem II
New Starts	4. Brain/Head and Neck - Sem II
New Starts	5. Electron - Sem II
Participatory Procedure	Advanced Skills - Pediatric Case
Participatory Procedure	CSI Low Volume, High Risk Participatory - Cranio-spinal Irradiation - Competency
Participatory Procedure	Gamma Knife Procedure (Observed)
Participatory Procedure	HDR (Low Vol., High Risk Participatory - Brachytherapy
Participatory Procedure	Patient Care: Follow-up Visit
Participatory Procedure	Patient Care: New patient consult
Participatory Procedure	Patient care: On treatment visit
Participatory Procedure	Patient Care: Patient Consent
Participatory Procedure	Patient Care: Vital signs
Participatory Procedure	Patient care: Pelvis exam
Participatory Procedure	Patient care: Neurologic exam
Participatory Procedure	Patient care: Oral exam
Participatory Procedure	Patient care: Rectal exam
Participatory Procedure	TBI Low Volume, High Risk Participatory -TBI - Participatory Procedure
Quality Assurance	Equipment Quality Assurance - Linear Accelerator Q.A.
Quality Assurance	Equipment Quality Assurance - Simulation/CT Q.A.

Sample Student Competency Grade form

GRADING INSTRUCTIONS
***Student must score a minimum of 86% to pass a competency exam. **Student will not pass the exam if he/she recieves a score of "1" for more than any one task!**

****Any score below a "3" requires a comment for the corresponding item so appropriate corrections of error(s) can be made.**

Scoring:
0 = Automatic Failure (Score of "0" for any task below)
1 = Unsatisfactory (Failed to perform task correctly)
2 = Major Error (Maximum correction/prompting)
3 = Moderate Error (Moderate correction/prompting)
4 = Minor Error (Minimal correction/prompting)
5 = No Error (No correction/prompting)

Pass (does not exceed one score of "1" for any task) (score is > 86%)
Fail (exceeds one score of "1" or receives a "0" for any task) *Must repeat qualifying exam before attempting competency!*

◉ Instructions

Section I. Procedure

Verification Process: Demonstration of proper verification of correct patient and procedure with 2 patient identifiers (verbal name and DOB and armband) prior to beginning procedure. Performs time-out.

○ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Cognitive Domain: Interprets treatment chart, identifies and considers dose to critical structures, assesses patient status concerning side effects and or mental or physical conditions.

○ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Communication Proficiency: Demonstration of correctly explaining procedure to the patient in a timely and efficient manner, professional demeanor with patient and staff, and patient care skills are appropriate and professional throughout the entire exam.

○ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Procedure Proficiency: Demonstration of correct patient positioning for stated procedure, appropriate visualization of organ or system being evaluated.

○ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Psychomotor domain: prepares room, selects appropriate accessories, positioning and immobilization devices. Correctly uses treatment accessories, and monitors patient throughout procedure. Follows radiation safety principles.

○ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Software/Computer Proficiency: Demonstration of correct acquisition and processing protocol selection (all parameters are appropriate for procedure.)

○ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Processing & Interpretation Skills: Anaylzes portal images and makes appropriate adjustment when needed.

○ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Section II. Comprehensive Proficiency Student must score "3" points or higher in this section to pass qualifying and/or competency exam.

◉ Instructions

Overall Procedure Competence: Demonstration of overall readiness and proficiency in performing every aspect of the stated exam and having the general knowledge to validate competence.

○ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Section III. Comments (enter at right)

◉ Enter

☐ Check to complete later, then click "Submit"

◉ Approved ○ Not Approved

West Virginia University Hospitals
Medical Center Drive
Morgantown, WV 26506

Radiation Therapy Technology Education Program

Student Handbook

Section 3

Radiation Therapy Education Policies

The administration of West Virginia University Hospitals and the faculty of the West Virginia University Hospital's Imaging Science Education Programs reserve the right to change any of the stated policies as necessary and/or when advisable for improvement of or to meet new standards within the program.

Clinical Education / Standards Policy

The Radiation Therapy Education Programs sponsored by West Virginia University Hospitals (WVUH) recognizes that the application of didactic material is an essential component of the education process and that the student's clinical performance is a valid indicator of professional progress and achievement. In accordance with our accreditation Standards, WVUH has developed a competency-based curriculum designed to document the student's clinical performance in the Clinical Experience course (Applied Therapeutic Procedures Courses RADTT 420 and RADTT 430). Clinical rotation schedules are designed so that the required 1:1 staff to student ratio is maintained and the equity in student placement is ensured. This policy serves to identify the structure and standards by which the clinical education process is administered.

I. Clinical Education Overview:

Clinical education is conducted exclusively at WVUH owned and operated facilities. All clinical sites are located within 25 miles of the main campus. Clinical rotations are only conducted at the WVUH main facility, Ruby Memorial Hospital, and at the satellite center, Fairmont Regional Cancer Center. Students are not required to complete any additional orientation procedures beyond those required for admission to participate in clinical rotations. Clinical rotations are primarily assigned between 8am and 4:30pm each weekday as assigned each semester. No clinical education is conducted on weekends, holidays or midnight shifts.

II. Clinical Education Process:

The following describes the progressive procedures employed in achieving and validating clinical competence:

a. Didactic Instruction

After matriculation into the program, students are progressively introduced to the various procedural and technical requirements for each clinical exam through didactic instruction and testing during the 12 month program.

b. Clinical Practice/Student Clinical Log Sheets

Concurrent with didactic instruction and under direct supervision, the student will position, plan and treat the patient, calculate and record doses, check the patient's treatment records, and observe the patient in a routine follow-up physician visits. These clinical activities are to be recorded daily by the student therapist in the Trajecsys electronic clinical report system via an internet connection.

c. Clinical Competency Examination

After observing and assisting the radiation therapist with an appropriate number of radiation therapy set-ups (generally a minimum of 3 or more), a clinical competency exam will be administered for each procedure identified on the ARRT clinical checklist for Radiation Therapy Procedures. Competency categories include but are not limited to the procedures from the following sites: Brain, Head and Neck, Chest, Breast, Abdomen, Pelvis, Skeletal, electron fields, general patient care procedures, simulation procedures, Dosimetry, treatment accessory devices and participatory procedures. Successful completion of a competency **does not** qualify a student to perform that particular exam without direct supervision.

d. Comprehensive Competency Examination

After successful completion of a Clinical Competency examination in a specific category, the Program Director or Clinical supervisor may administer a comprehensive competency exam to ensure that proficiency and accuracy is being maintained. At midterm or semester end, each student will be required to complete a minimum of (2) comprehensive exams on radiation therapy procedures in which they have

previously demonstrated competence. A comprehensive competency exam will be administered at a time and on a patient designated by the Program Director or Clinical Supervisor.
Refer to the following for clarification of specifics depicted in the policy:

a. Direct Supervision of Students
b. Applied Therapetic procedures I and II
c. ARRT Clinical Competency Procedures Checklists
d. Trajecsys Student clinical logs and competencies

III. Clinical Grade Calculation

The student's clinical grade consists of several components, each utilizing a different mechanism to assure a complete and comprehensive evaluation of clinical performance. The following components and weighted averages are utilized:

Component	Weighted Average
Student Log Sheets	10%
Clinical Competency	40%
Monthly Evaluations	25%
Comprehensive Competency	15%
Program Director Evaluation	10%
	100%

Each clinical grading component is explained in both Applied Therapeutic Procedures Courses (RADTT 420 and RADTT 430).

IV. Clinical Grading Scale

The following grading scale will be utilized as an objective evaluation mechanism for representing the student's clinical grade and performance.

Percentage Grade		Letter Grade
100-93%	A	4.0
92% - 86%	B	3.0
85% - 78%	C	2.0
77% - 70%	D	1.0
< 70%	F	0.0

V. Clinical Grade Standard (minimum)

Each student is required to achieve a minimum overall weighted clinical average of **86% (B Letter Grade)** at the end of each semester in order to successfully complete the clinical education component of the program. Due to the progressive nature of the clinical education component, no provisions are provided for repeating a clinical level. Each clinical education level must be completed before advancing to the subsequent semester; therefore, students who fail to achieve an **86% (B Letter Grade)** weighted clinical average at the end of each semester will be dismissed from the program. Students are counseled by the Program Director regarding their clinical progress at mid-term, semester end, and/or as needed; however, it is the student's responsibility to maintain awareness of their clinical progress at all times.

Christina M. Pough, MA, R.T.(R)(T)

Radiation Therapy Program Director/Education Coordinator

Admissions Policy

Policy

West Virginia University Hospitals and those responsible for the administration and management of the Radiologic Technology Education Programs consider each applicant for admission without regards to age, sex, race, color, religion, ancestry, national origin, handicap, or veteran status. Although accredited to enroll 4 students per academic year, program officials reserve the right to limit enrollment based upon the quality of the applicant pool and current employment market conditions. Due to the academic structure and length of the program, the radiation therapy education program does not accommodate part-time students, transfer students, advanced placement students, or early release from the Program. Admission to the Radiation Therapy Education Program sponsored by West Virginia University Hospitals is governed in accordance with the following minimum admission requirements.

Requirements for Admission Consideration

All of the following criteria are required for admission consideration and documentation must be received on or before February 1st of the year in which the student is applying for admission.

1. Applicant must be a graduate (or pending graduate) from a JRCERT accredited program in Radiologic Technology.
2. Applicant must **review** the Essential Performance Standards document on the program's web-site (www.wvuhradtech.com).
3. Applicant must **submit** the following by the February 1st to be considered for the program starting in July each year:
    a. Program Application
    b. Three personal reference forms (included with the application packet)
    c. Official High School or GED scores
        i. Satisfactory completion (passing grade of "C" or higher) of at least 2 courses of high school level (or higher) mathematics. One of the courses must be a high school level Algebra course and the other must be a higher math course (i.e. Algebra 2, Geometry, Trigonometry, Calculus, College Algebra, etc).
        ii. Satisfactory completion (passing grade of "C" or higher) of at least 3 courses of high school level (or higher) science (i.e. Biology, Physics, Chemistry, or Human Anatomy and Physiology).
    d. Official Transcript(s) of all post-secondary education (college, radiography, technical school, etc.)
        i. Radiography Transcripts from an accredited program approved by the Joint Review Committee on Education in Radiologic Technology (JRCERT).
    e. American College Test (ACT) scores **or** Scholastic Aptitude Test (SAT) scores
        1. Applicants must meet the following minimum scores for admission considerations:
            i. Minimum required composite score: **ACT-19 or better, or 900 SAT equivalent.**
            ii. The ACT or SAT Writing component is not required or included in the minimum score.
            iii. ACT or SAT requirement is waived for applicants possessing a baccalaureate degree or higher.
            iv. ACT School Code - 4549 SAT School code - 3863
4. American Registry of Radiologic Technologists (ARRT certification).
    a. Registry eligible students are accepted on the condition that they successfully pass the ARRT examination in Radiography. Proof of American Registry of Radiologic Technologists (ARRT) certification in Radiography if applicable. Students who are currently enrolled in a JRCERT accredited Radiography Program and have not yet taken the ARRT exam may apply in accordance with the Non-Registered Student Admissions Policy.
    b. Students who do not pass must withdraw from the Program and can only regain admission by entering the applicant pool in subsequent enrollment years.
5. To be eligible to sit for the primary certification exam in Radiation Therapy administered by the American Registry of Radiologic Technologists, applicants must document the following:
    a. Completion of an Associate's degree (or higher) from an accredited post-secondary institution. The degree can be in any field or discipline.

Academic Evaluation

Program officials utilize an established, objective screening mechanism to assign academic points to a candidate based on their currently level of academic achievement. The following categories are evaluated in assigning academic points

1. ACT Composite score or SAT (Critical Reading & Math) score.
2. Radiography program and college level grades to include:
    a. Physics & Radiobiology
    b. Image Production & Characteristics (Exposure)
    c. Human Structure and FunctionAnatomy & Physiology
    d. Radiographic Procedures & Positioning
    e. Applied Radiographic Procedures (Clinic)
    f. Mathematics (cumulative)
    g. Science (cumulative)
    h. Healthcare – other applicable (cumulative)
3. Radiography + University Credit and or Degree (based on GPA relative to number of hours completed)
4. Healthcare experience
5. Personal Interview

6. Military Service / VA Benefit Eligible

   For applicants that will potentially be using VA educational benefits if accepted, WVUH will accept, review and maintain a written record of previous education and training for each candidate. Such materials will be reviewed to determine if credit towards admission or program completion is possible.

Interview Evaluation

Interviews are granted to the top 12 academic candidates each year; however, the Education Coordinator reserves the right to limit or expand this number based on the quality of the applicant pool. Applicants not receiving an interview will be notified by mail. Interviews will be conducted in February or March of each year and candidates will be notified of their admission status no later than April 1st of each year.

Interviews are conducted by an Admissions committee consisting of a least 3 members selected by the education coordinator and may include faculty members, department managers and /or clinical staff. Using a standardized form, total interview scores from each committee member will be calculated and averaged for each candidate. Candidates must score a minimum average of **25 interview points** (out of a possible 40) to be considered eligible for admission to the program. (See Interview Form).

Overall Evaluation

The Education Coordinator will combine the Academic & Interview points into a cumulative score for each candidate and will rank the candidates in descending order. The Admission committee will review the scores and finalize the assessment by assigning up to **5 additional points** to the candidates score based on programmatic / institutional fit, and the candidates projected ability to be successful in the program. All points will be summated and a Total Point score will be assigned.

Selection

The Education Coordinator will rank the candidates in descending order and will extend offers up to the 4 candidates having the highest Total Points scores. The next 2 candidates will be waitlisted in the event one or more of the top 4 candidates do not accept the position. Waitlisted positions expire once a class is filled and do not carry over to the next admission year.

The 4 candidates selected for admission will receive:

1. Acceptance letter
2. Copy of the student handbook
3. Invoice for Admission Fee
4. The following forms (to be completed, signed and returned)
   - □ Statement of Intent To Enroll
   - □ Essential Performance Standards
   - □ Non-ARRT registered verification

All other applicants interviewed will receive a written verification of their non-admission or waitlisted status.

Acceptance

The 4 selected applicants will be given approximately 10-15 business days to respond to the offer of admission by completing the following prior to the established deadline:

1. Read the Student Handbook
2. Complete, sign & return the following forms:
   - □ Statement of Intent to Enroll
   - □ Essential Performance Standards
   - □ Non-ARRT registered verification
3. Submit a $50.00 check to WVUH for the admissions fee.

If an applicant fails to respond to the offer of admission by the established deadline, program officials will consider the offer as null and void, and will proceed by offering the position to a wait-listed applicant.

Enrollment

Enrollment is contingent upon the student satisfactorily completing the following screening and assessment procedures within the guidelines specified by West Virginia University Hospitals. These screenings will be conducted during the orientation time frame or at a time specified by program officials. Students will be provided with additional information regarding these procedures prior to the program start date.

Students will be required to:

1. Complete a health assessment and a vaccination record review conducted by the Employee Health department.
2. Complete the criminal background investigation process. (See WVUH Policy V.036)
3. Complete the drug screening / testing process. (See WVUH Policy V.035)

Christina M. Pough, MA, R.T.(R)(CT) _____ 10/23/24

Program Director/Education Coordinator Signature Date

Weighted Values for Applicant Admission Points

Policy
The following values will be assigned to the applicant's previous academic achievements and the personal interview. Points assigned to each candidate will be summated and utilized as criteria for admission consideration:

I. ACT/SAT scores (1-4 pts)

ACT Composite Score Range	SAT Score Range (CR + M)	Points Assigned
< 19	<900	0
19 - 22	900 - 1049	1
23 - 26	1050 – 1209	2
27 - 30	1210 – 1359	3
31 – 36	1360 - 1600	4

II. Radiography/College/University Coursework (0-40 pts)
Applicants are awarded academic credit points towards admission for the following cumulative Radiography courses and cumulative collegiate level based courses based upon the following letter grade scale:

Courses

a. Physics & Radiobiology
b. Image Production and Characteristics (Exposure)
c. Human Structure and Function (Anatomy and Physiology)
d. Radiographic Procedures and Positioning
e. Applied Radiographic Procedures (Clinic)
f. Mathematics (Cumulative)
g. Science (Cumulative)
h. Healthcare related (Cumulative)

Letter grade	Points Assigned
A	5
B	4
C	3

III. Degree credit + Radiography combined (0-9 pts)
Applicants are awarded academic credit points towards admission based upon the combined Radiography courses and the **highest** college degree earned only and is based upon the student's cumulative GPA. The point values are based upon the following score range.
College credits points are awarded for earned degree(s) and degree seeking candidates based upon the students GPA relative to the number of credit hours completed.

Radiography Courses/ College Credis / University Degree

Associates Degree and/or 30 to 59 Credit Hours

GPA	Points Assigned
3.60 - 4.00	3
3.00 - 3.59	2
2.00 - 2.99	1
< 1.99	0

Baccalaureate Degree and/or 60 to 119 Credit Hours

GPA	Points Assigned
3.60 - 4.00	6
3.00 - 3.59	5
2.00 - 2.99	4
< 1.99	0

Graduate Degree and/or 120+ Credit Hours

GPA	Points Assigned
3.60 - 4.00	9
3.00 - 3.59	8
2.00 - 2.99	7
< 1.99	0

IV. Healthcare Experience (0-3 pts)
Points are awarded to those applicants who have healthcare related work experience at a rate of 1 points per year for a maximum of 3 points.

Category	Points Assigned
Health Related ≥ 3 years	3
Health Related ≥ 2 years	2
Health Related ≥ 1 year	1
No Health related experience	0

V. Personal Interview (8-40 pts)
Points are averaged from each interviewer and are based upon the following categories for a maximum of 40 points.

Category	**Points Scale (see Interview form)**		
Appearance	1 - 5 points	Comprehension	1 - 5 points
Affability/Attentiveness	1 - 5 points	Knowledge about Profession	1 - 5 points
Poise- Stability	1 - 5 points	Initiative & Drive to Succeed	1 - 5 points
Personality	1 - 5 points	Initiative towards Program Admission	1 - 5 points
Communication skills			

VI. Professional / Programmatic Fit (0-5 pts)
Points may be awarded by the consensus of the interview committee to predict the extent to which the candidate will be successful in the education program. The overall interview rating is awarded 0 – 5 points based upon program/institutional fit.

Category	Points Scale
Total mean interview points less than 30	0 points
Total mean interview points 30-34.9	3 points
Total mean interview points greater than 35	5 points

Applicant is not considered for Program Admission if they have 25 or fewer interview points.

Program Director/Education Coordinator

10/23/24
Date

Orientation Policy

Policy:

It is the policy of the West Virginia University Hospitals Radiologic Technology Education Program in Radiation Therapy to provide basic hospital and radiation oncology department orientation information to new students. The two-day orientation is mandatory for all students; however, in the extraordinary event, as deemed by the Program Director, that a student would not be able to attend, he or she will be required to use their personal time off in accordance with the Attendance Policy. PTO time in the amount of 8 hours for the first orientation day and 4 hours for the second day will be charged. The student is solely responsible for obtaining any information missed during new student orientation.

Christina M. Pough, M.A., R.T.(R)(T)

Education Coordinator

10/22/2024

Date

Attendance Policy

A student's daily attendance is vitally important in order for them to maintain satisfactory didactic and clinical performance. Students that miss exceptional amounts of clinic time will find it difficult to acquire the exams needed to fulfill their clinical education requirements. Students need to realize that poor attendance during their education can have a negative effect on their future. Employers tend to be wary of student applicants that have a record of excessive absenteeism. It is natural to relate absenteeism with a poor work ethic and a lack of commitment to the profession.

Personal Time Off: (PTO)

Personal time off (PTO) may be utilized for unscheduled absences (illness, personal emergency, etc.) and scheduled absences (job interviews, doctor appointments, etc.).

Twelve-month programs:

The student will be allotted 48 hours of personal time off for a twelve-month program. In addition, each school year will include three (3) weeks of leave to include: 2 weeks over the Christmas / New Year holiday, and one week in the spring.

Eighteen-month programs:

The student will be allotted 72 hours of personal time off for an eighteen-month program. In addition, each school year will include four (4) weeks of leave to include: 2 weeks over the Christmas / New Year holiday, one week in June, and a final week in the fall which is determined by the education coordinator.

Compensatory Time Off: (Comp time)

Compensatory time off is awarded at the discretion of the program director for activities that may exceed an 8 hour school day and/or for extraordinary circumstances. Some examples include but are not limited to: staying late to assist with heavy workload, going above and beyond duties, and/or conference(s) that are outside of the typical time frame of a normal school day.

Scheduled & Unscheduled Absences:

1. It is the student's responsibility to notify both the Program Director and Clinical Rotation site when calling to report off for illness or other personal emergencies. Notification must be received by a Program Official no later than 30 minutes prior to the beginning of the student's assigned shift. Failure to notify a Program Official in a timely manner will result in the student receiving an unexcused absence for that day. Students are required to leave a message on the phone mail system of the Program Director and the clinical rotation site.

2. In addition to calling off, students must document their absence by completing a Time Off Request form in Trajecsys. Comp time may not be utilized for unscheduled absences.

3. Students that miss consecutive days due to an illness will only be charged 8 hours of PTO for every three (3) days of absence, providing the student has a valid medical excuse from a physician stating the amount of time that the student is excused. The provision does not apply to time missed due to illnesses or incapacitation related to elective procedures or surgeries. Please refer to the Medical Leave of Absence policy regarding extended illnesses.

4. PTO and comp time shall be granted in minimum increments of 1 hour, unless previously approved by the Program Director.

5. Students requesting time-off for non-emergent reasons should pre-schedule PTO or comp time with program officials by the end of their shift at least one (1) day prior to the requested time off. Students should complete a Personal Time Off Request form in Trajecsys and inform the Program Director as soon as the form has been submitted to ensure prompt review.

Excessive Absenteeism

This policy serves to identify the procedure and criteria implemented when a student exceeds their allotted number of hours of personal time off (PTO).

1. Excessive absenteeism will not be tolerated. If a student exhausts their allotted PTO days, they will be subject to the following disciplinary action.

   Twelve-month programs:
   a. If the 48 hours of allotted PTO is exhausted, the student will receive documented counseling regarding their attendance and 1 point will be deducted from their overall clinical grade.

   b. If 16 additional hours are missed (total 64 hours), the student will receive a second formal written warning regarding their position in the Program and 2 additional points will be deducted from their overall clinical grade (total 3).

   c. If 16 additional hours are missed (total 80 hours), the student will receive a final formal written warning regarding their position in the Program and 2 additional points will be deducted from their overall clinical grade (total 5).

   d. If the total amount of time absent exceeds 80 hours, the student will be dismissed from the Program if any additional time off occurs. Students will be evaluated on an individual basis as to the circumstances causing the absenteeism.

   Eighteen-month programs:
   a. If the 72 hours allotted PTO is exhausted, the student will receive documented counseling regarding their attendance and 1 point will be deducted from their overall clinical grade.

   b. If 16 additional hours are missed (total 88 hours), the student will receive a second formal written warning regarding their position in the Program and 2 additional points will be deducted from their overall clinical grade (total 3).

   c. If 16 more additional hours are missed (total 104 hours), the student will receive a final formal written warning regarding their position in the Program and 2 additional points will be deducted from their overall clinical grade (total 5).

   d. If the total amount of time off exceeds 104 hours, the student will be dismissed from the Program if any additional absences occur. Students will be evaluated on an individual basis as to the circumstances causing the absenteeism.

2. In the event that a student exceeds their allotted personal time off, their clinical education will be extended beyond graduation so that all clinical requirements can be satisfied. However, the clinical education process cannot be extended beyond 5 days after graduation. All absences over the allotted personal time off will be considered as unexcused absences and will result in documentation of unsatisfactory attendance on the final transcript.

3. In accordance with the Standards of an Accredited Educational Program in Radiologic Sciences, with regard to the maximum hours of clinical and didactic instruction, students will not be permitted to make-up their excessive missed time by extending their hours in clinic on a daily basis.

Unexcused absences

Unexcused absences are classified as the following:

1. Leaving the facility grounds without a program official's permission.
2. Leaving your assigned clinical area without program officials or a staff technologist's permission.
3. Failure to notify program officials prior to your assigned shift of an unscheduled absence.
4. Absences that occur as a result of disciplinary action (e.g. suspension) or those in excess of the allotted 48 hours PTO for twelve month programs or 72 hours PTO for eighteen month programs.

In the event that a student incurs an unexcused absence, the Disciplinary Action policy will be implemented. It is mandatory for all students to make-up, after graduation, any time missed as a result of an unexcused absence so that all clinical requirements can be satisfied. As with the excessive absenteeism policy, the clinical education process cannot be extended beyond 5 days after graduation for unexcused absences.

Tardiness

Students are required to be in their assigned clinical or didactic area and fully prepared to begin the daily clinical assignments prior to or by their designated starting time. Students should be aware that falsifying attendance records is grounds for immediate dismissal.

Tardiness is subject to the following guidelines and provisions:

a. Tardiness is considered as any arrival time past the designated start of the student's shift.
   Example: if your shift begins at 7:00am, you would be considered tardy at 7:01am.

b. Tardiness beyond 30 minutes will result in the student being charged 0.5 days (4 hours) of PTO.

c. Failure to notify program officials 1 hour beyond the designated time of arrival will result in the student being charged 1 day (8 hours) of PTO, marked as an unscheduled absence, and will result in a written warning.

d. Excessive tardiness will not be tolerated and will result in a reduction in Clinical Points which will negatively affect the student clinical grade. Continued abuse will additionally result in disciplinary action and will result in documentation of "unsatisfactory attendance" on the final transcript.

e. Exceptions to this policy will be at the program official's discretion and will be limited to unforeseen events.

Tardiness will be governed by the following limits and corresponding corrective actions:

Twelve-month programs:

a. Upon the occurrence of three incidences of tardiness, the student will be issued a verbal warning and 1 point will be deducted from their clinical grade.

b. Upon the occurrence of three additional incidences of tardiness (total of 6), the student will be issued a formal written warning and 2 additional points will be deducted from their clinical grade (total 3).

c. Upon the occurrence of three additional incidences or tardiness (total of 9), the student will be issued a second formal written warning and 2 additional points will be deducted from their clinical grade (total 5). At this level, the student's attendance will also be marked as "unsatisfactory" on their final grade transcript.

d. Upon the occurrence of one additional incident of tardiness (total of 10), the student will be issued a third formal written warning which will result in their subsequent dismissal from the program.

Eighteen-month programs:

a. Upon the occurrence of three incidences of tardiness, the student will be issued a verbal warning and 1 point will be deducted from their clinical grade.

b. Upon the occurrence of three additional incidences of tardiness (total of 6), the student will be issued a formal written warning and 2 additional points will be deducted from their clinical grade (3 total).

c. Upon the occurrence of three additional incidences of tardiness (total of 9), the student will be issued a second formal written warning and 2 additional points will be deducted from their clinical grade (5 total). At this level, the student's attendance will also be marked as "unsatisfactory" on their final grade transcript.

d. Upon the occurrence of three additional incidences of tardiness (total of 12), the student will be issued a third formal written warning which will result in their subsequent dismissal from the program.

Funeral Leave
Students will be given a maximum of three (3) days excused absence for deaths in their immediate family. Immediate family shall include: husband, wife, child, mother, father, brother, sister, mother-in-law, father-in-law, and grandparents. Exceptions to this policy may be granted only by the Program Director.

Students needing to utilize funeral leave will be required to submit a Leave Request form in the Trajecsys Report System and notify a program official of submission as soon as possible, prior to being absent.

Military Leave

West Virginia University Hospitals supports the Military Services of the Government of the United States and provides the following provisions for students serving in the Military Reserves during their enrollment in the program.

a. Students serving in any branch of the U.S. Military Reserves are allotted 2 weeks (10 days) of leave per academic year to fulfill their required military commitment. Students that miss additional time (>10 days) due to military service will be required to utilized personal leave or arrange an acceptable time frame in which to make-up the time missed so that the program's clinical requirements can fulfilled. Make-up time is subject to the Education Coordinator's discretion and subsequent approval.

b. Students are responsible for all didactic and clinical course materials presented during their absences related to military service.

c. In the event that a student is called-up to active military duty, the program will reserve a position for that student so that they can be re-enrolled upon the completion of their active duty assignment.

Vacation and Holidays

Twelve-month programs:

Students are granted three (3) weeks of vacation during their 12 month enrollment in the Program. Vacations are scheduled as two (2) weeks over Christmas/New Year's and one week in the spring. Program officials reserve the right to alter vacation dates.

Students are granted seven (7) holidays per year which include the following:

New Year's Day
Memorial Day
Independence Day (July 4th)
Thanksgiving AND Friday after Thanksgiving
Labor Day
Christmas

Eighteen-month programs:

Students are granted one (1) week of vacation during each semester enrolled in the Program. Vacations are scheduled as two (2) weeks over Christmas/New Year's, one (1) week in June and the final week of vacation being held in the fall. The final week in the fall is determined by the education coordinator. Program officials reserve the right to alter vacation dates.

Students are granted seven (7) holidays per year which include the following:

New Year's Day
Memorial Day
Independence Day (July 4th)
Thanksgiving AND Friday after Thanksgiving
Labor Day
Christmas

Attendance Documentation

Students are required to document their attendance by using the Trajecsys Report System.

Using PTO or Compensatory Time:

Students desiring to use PTO or Compensatory Time will be required to submit a Time Off Request form in the Trajecsys Report System and notify a program official of submission by the end of their shift at least one (1) day prior to the requested time off. The exact number of hours to be taken must be marked, appropriate designation must be selected (PTO, comp, military, medical, funeral), and student must provide time of day they wish to use their time if not a whole day (i.e. 2 hours PTO, 2pm-4pm, leaving early). A comment box will be provided on the leave request form for further information, if necessary.

Please note that if requesting to use a half-day of PTO or Comp time you would be utilizing four (4) hours of PTO or Comp time. For example, if you are scheduled from 7am-3:30pm and request a half day in the afternoon, you would work 7am-11am, using four (4) hours. If you are scheduled from 7am-3:30pm and request a half day in the morning, you would work 11:30am-3:30pm.

Interview Time Off:

Students are allotted interview time off for the purpose of interviewing for a job in the area of advanced imaging for which they are currently enrolled. The amount of time allotted is dependent upon location of the interview, not to exceed eight (8) hours, and is limited to one (1) time use, regardless of amount of time used. For all interviews taking place on-site within student's respective department or within a 40 mile distance, a total of 4 hours may be used if necessary. For all interviews taking place off-site and greater than a 40 mile distance, a total of up to eight (8) hours may be used to account for travel.

All interview time off must be pre-approved by the Program Director at least 24 hours prior to the interview date. Students desiring to use any amount of interview time off will be required to submit a Personal Time Off Request form in Trajecsys by the end of their shift at least one (1) day prior to the interview date. The student will also be required to complete necessary forms which can be located and printed from the "Documents" section of Trajecsys. These forms must be signed by a member of the interview committee and returned to the Program Director the next school day, immediately following the interview. If the signed document is not returned, the absence will be considered unexcused and PTO will be taken. If additional interview time is needed, PTO must be used.

Policy Enforcement:

Accurate evaluation and interpretation of student attendance can only be accomplished if students are methodical and precise in their documentation. For this reason, the following guidelines have been established and will be strictly enforced.

1. Each student must clock in and clock out in the Trajecsys Report System to document daily attendance times upon their arrival and departure of clinical duties.
2. Students that fail to document accurately and timely will be counted absent until they notify the designated Program official. All time not accounted for (missed documentation) will be deducted from the student's PTO balance and disciplinary action may be enforced in accordance with the excessive absenteeism policy.
3. Logging attendance must be performed on an approved hospital computer. Logging attendance with a mobile device is unauthorized and will be considered falsification of attendance documentation unless previously approved by a program official under special circumstances. Falsification of attendance documentation is grounds for immediate dismissal from the program in accordance with the disciplinary action policy.
4. Time exceptions will be considered unauthorized unless approved by a program official under special circumstances.

5. Any student failing to properly utilize the attendance system (failing to clock in and clock out in Trajecsys, failing to comment on early dismissals, etc.) will be subject to the following:

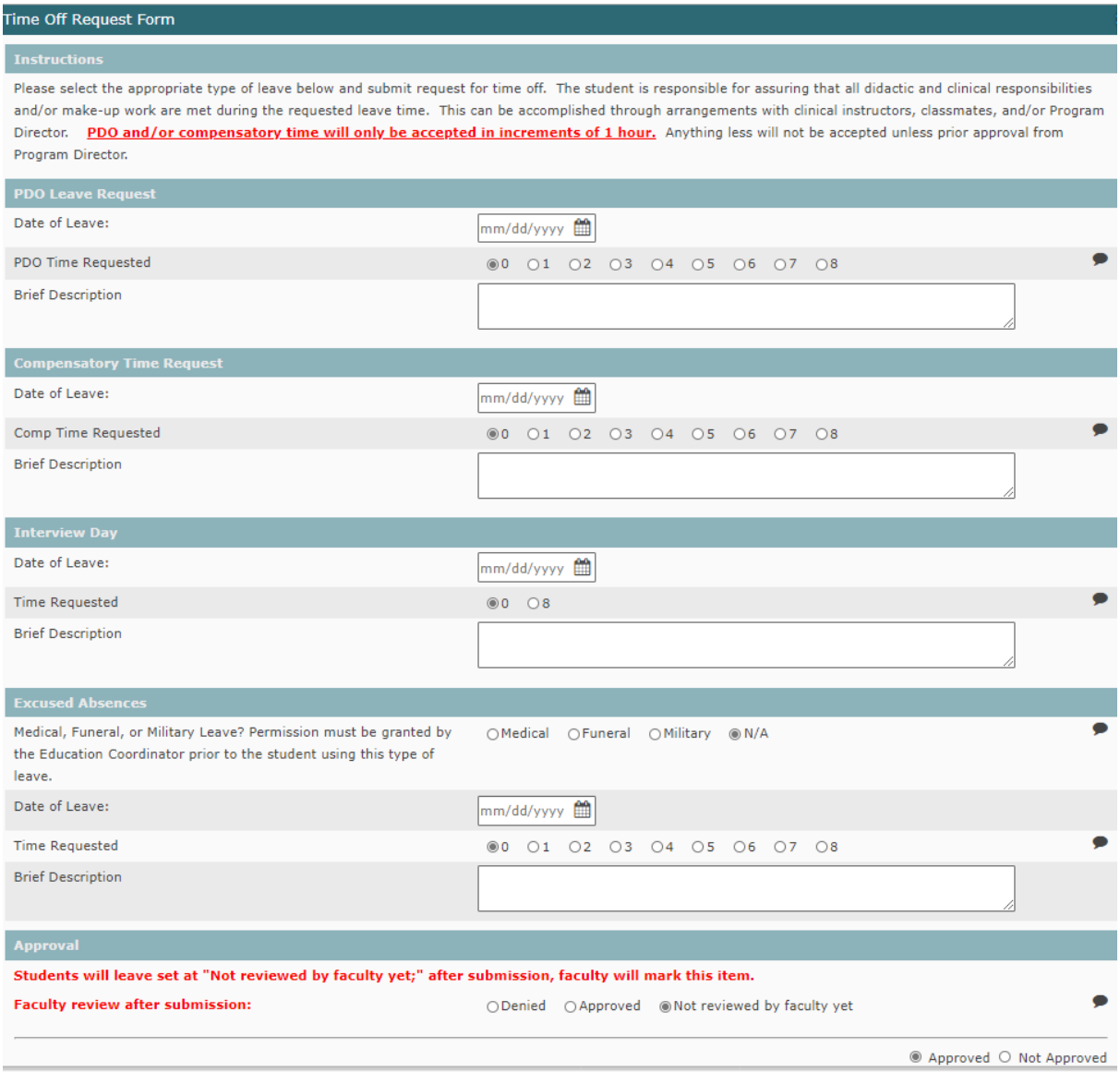
Twelve-month programs:

a. Upon the occurrence of three incidences of failing to log attendance, the student will be issued an oral warning and 1 point will be deducted from their clinical grade.

b. Upon the occurrence of three additional incidences of failing to log attendance (total of 6), the student will be issued a formal written warning and 2 additional points will be deducted from their clinical grade (total 3).

Sample Time Off Request Form

Located in Trajecsys Report System under Evaluations tab.



Time Off Request Form

Instructions

Please select the appropriate type of leave below and submit request for time off. The student is responsible for assuring that all didactic and clinical responsibilities and/or make-up work are met during the requested leave time. This can be accomplished through arrangements with clinical instructors, classmates, and/or Program Director. **PDO and/or compensatory time will only be accepted in increments of 1 hour.** Anything less will not be accepted unless prior approval from Program Director.

PDO Leave Request

Date of Leave: mm/dd/yyyy

PDO Time Requested: ◉0 ○1 ○2 ○3 ○4 ○5 ○6 ○7 ○8

Brief Description:

Compensatory Time Request

Date of Leave: mm/dd/yyyy

Comp Time Requested: ◉0 ○1 ○2 ○3 ○4 ○5 ○6 ○7 ○8

Brief Description:

Interview Day

Date of Leave: mm/dd/yyyy

Time Requested: ◉0 ○8

Brief Description:

Excused Absences

Medical, Funeral, or Military Leave? Permission must be granted by the Education Coordinator prior to the student using this type of leave. ○Medical ○Funeral ○Military ◉N/A

Date of Leave: mm/dd/yyyy

Time Requested: ◉0 ○1 ○2 ○3 ○4 ○5 ○6 ○7 ○8

Brief Description:

Approval

Students will leave set at "Not reviewed by faculty yet;" after submission, faculty will mark this item.

Faculty review after submission: ○Denied ○Approved ◉Not reviewed by faculty yet

◉ Approved ○ Not Approved

Christina M. Baugh, MA, R.T.(R)(T)

Education Coordinator

Pregnancy Policy

It is the policy of the West Virginia University Hospitals Imaging Science Education Programs to provide reasonable radiation protection to student radiographers occupationally exposed to radiation. Pregnant students are expected to follow the additional protective measures detailed below which have been developed to restrict the fetal radiation dose below the maximum permissible dose (MPD) as recommended by the National Council on Radiation Protection (NCRP) and the Nuclear Regulatory Commission (NRC).

Orientation

Upon initial enrollment to the program, all radiography students will receive an orientation / in-service in regard to prenatal radiation exposure as currently recommended by the National Council on Radiation Protection (NCRP) and the Nuclear Regulatory Commission (NRC). This orientation / in-service will be given by a Radiation Safety Officer during student orientation week.

Voluntary Disclosure

Disclosure of all medical conditions, including pregnancy, is strictly voluntary and at the student's discretion. Students have the right to refuse disclosure of medical information; however, in the event that a student chooses not to disclose information regarding pregnancy, the student is acknowledging that they are assuming all responsibly for their condition and the related risks.

If the student chooses to voluntarily disclose information regarding their pregnancy (see Options #2 & #3 below), the Education Coordinator will contact the Radiation Safety Officer to arrange for the student to review their previous radiation exposure history and to review protective actions as well as the risks associated with radiation exposure to the fetus. The student shall be issued an additional dosimeter which is to be worn at the level of the pelvis to monitor fetal dose. The student also shall read appendix to NRC 8.13-3 (instruction concerning prenatal radiation exposure).

Enrollment Options

With regards to programmatic enrollment and completion, students have the following (3) three options:

Option #1 – Choose Not to Disclose Information Regarding Pregnant Condition
By choosing this option, the student implies acknowledgment that they are assuming responsibility for all potential radiation risks and related complications. No policy or performance exceptions can or will be implemented should the student choose this option.

Option # 2 – Request a Leave of Absence during pregnancy.
A student may request a leave of absence by voluntarily notifying program officials of a pregnant condition. Students may request to initiate a leave of absence upon disclosure or may elect to defer the leave until the completion of the current semester. Students desiring to complete the current semester before taking a leave of absence should notify program officials as soon as possible so that the appropriate radiation safety procedures for pregnant students may be employed for the remainder of the term. The terms and conditions of the leave of absence are specified in the Medical Leave of Absence policy.

Option # 3 - Remain in Program throughout pregnancy.
The following conditions are applicable if the student elects to remains in the program during pregnancy:

a. The student shall wear additional exposure monitoring devices as determined by the Radiation Safety Officer's recommendation.

b. The student shall participate in all scheduled clinical rotation areas as assigned provided the monthly dose does not exceed 50 mRem per month to the fetal dose monitor.

c. If the monthly dose meets or exceeds 50 mRem in any one month period, the following activites will be reduced or restricted:

    i. The student shall not participate in Brachytherapy source implant procedures

    ii. The student shall not participate in the simulation of patients who have been implanted with radioactive nuclides(i.e., I-125, Ir-192, Cs-137, etc)

    iii. The student shall not participate in any work in radiation storage areas including loading of or removal of or transporting of after loading nuclides.

d. Absences due to pregnancy are governed by the Attendance and Medical Leave of Absence policy

Written Notifications

Disclosure:
After voluntary disclosure and subsequent consultation with the Radiation Safety Officer, students choosing Options #2 or #3 shall complete and submit the attached Pregnancy Verification form. All documentation shall be entered into the student's permanent personal file.

Withdrawal of Declaration of Pregnancy
The student has the right to withdraw their written declaration of pregnancy at any time by completing the attached Withdrawal of Declaration form. By completing and submitting the form, the student acknowledges that their previously disclosed medical condition (i.e., pregnancy) no longer exists.

Christina M. Pugh, MA, R.T.(R)(T)
Program Director/Education Coordinator

1/31/2024
Date

West Virginia University Hospitals
Imaging Science Education Programs / Radiation Therapy

Pregnancy / Radiation Safety Protection Verification Form

I verify by my signature below that:

1. I have voluntarily notified a program official and the Radiation Safety Officer of my pregnancy.
2. I have been advised by the Radiation Safety Officer in regard to protective actions as well as the risks associated with radiation exposure to the fetus. I have also read the appendix to NRC 8.13-3.
3. I have received an additional dosimeter which I am wearing at the level of the pelvis to monitor radiation dose to the fetus.
4. I have had the opportunity to discuss questions concerning radiation safety during my pregnancy with the Radiation Safety Officer. Furthermore, I understand that should additional questions arise, I may again consult with the Radiation Safety Officer.

_____ I understand the potential radiation risks to myself and my fetus during my pregnancy while participating in the clinical education components of the Radiation therapy program. I elect **to remain** in the Program and adhere to the requirements as stated in Option # 3 of the attached Pregnancy Policy.

_____ I understand the potential radiation risks to myself and my fetus during my pregnancy while participating in the clinical education components of the Radiation therpay program. I elect **not to remain** in the Program and request that a medical leave of absence be granted. I have read, understand, and agree to the conditions specified in the Medical Leave of Absence policy.

_____ _____
Student Date

_____ _____
Education Manager Date

West Virginia University Hospitals
Imaging Science Education Programs

Withdrawal of Declaration of Pregnancy Form

I verify, by my signature below, that I withdraw and/ or void my previous declaration of pregnancy.

_____ _____

Student Date

_____ _____

Education Manager Date

Hours of Academic and Clinical Education

In accordance with the *Standards for an Accredited Educational Program in Radiation Therapy*, the radiation therapy education program maintains that the maximum hours of clinical and academic hours shall not exceed 40 hours per week.

Student therapists will attend clinical and academic course work within a 40 hour work week. Routine educational assignments will require the student to be in attendance Monday through Friday, from 8:00 a.m. to 4:30 p.m. (Five 8 hour days) Students will not be scheduled to clinical rotations on weekends or designated student holidays.

When in attendance, students are expected to attend all didactic and clinical rotations throughout the day. "Cutting" of class is not permitted. Students will be assigned to participate in clinical rotations that will begin at 7:00 a.m. in the second semester to ensure that they are able to achieve competency in daily Q.A. and warm-up procedures for the Linear accelerators, Simulator and C.T. Scanner. When assigned to these early rotations, the student will leave daily at 3:30 p.m. so that they will not exceed the 40 hour week.

Program Director/Education Coordinator

10/23/24

Date

Student Supervision Policy

This Policy serves to identify the current guidelines for supervision of student radiation therapists as stated in the current *Standards for an Accredited Educational Program in Radiation Therapy*.

In support of professional responsibility for provision of quality patient care and radiation protection, all clinical assignments and all radiation therapy procedures performed by students shall be under the direct supervision of a qualified practitioner (e.g. registered radiation therapist, credentialed medical physicist, licensed radiation oncologist, licensed nurse) during all aspects of the procedure. Students must always be directly supervised during all patient procedures.

Direct Supervision is defined as student supervision by a qualified practitioner who is:

i. Physically present during the conduct of the procedure and
ii. Reviews and approves the procedure and/or image
iii. Supervision of students over closed-circuit monitors is not acceptable

Guidelines:

The parameters of direct supervision are as follows:

1. A qualified practitioner reviews the procedure in relation to the student's achievement.
2. A qualified practitioner evaluates the condition of the patient in relation to the student's knowledge
3. A qualified practitioner is present during the conduct of the procedure
4. A qualified practitioner reviews and approves the procedure. This will be documented by the therapist cosigning their initials to all radiation therapy procedures performed by student therapist
5. A qualified practitioner ensures all treatment fields and portal images have been completed. In no case are students permitted to exit out of the electronic patient chart.
6. A qualified practitioner reviews and approves all patient positioning shifts (including auto shifts) before the patient is treated.

Christina M. Laugh, M.A., R.T.(R)(T) — Program Director /Education Coordinator

10/23/24 — Date

West Virginia University Hospitals	Policy No: **2.008**
Radiologic Technology Education Programs	Effective: **7/1984**
Radiation Therapy	Revised: **10/2024**

Radiation Safety & Exposure Monitoring

West Virginia University Hospitals, in accordance with the rules and regulations established by the National Council on Radiation Protection and Measurements (NCRP) and the Nuclear Regulatory Commission (NRC), has implemented policies and procedures to assure that health care professional can work safely with or near sources of ionizing radiation.

Education

Program officials identify that appropriate education is critical to providing the level of understanding necessary for students to practice radiation safety and protection for themselves and their patients. Radiation safety and protection is comprehensively covered through the following mechanisms:

1. Orientation:
    a. Introductory Radiation Safety In-service conducted by Radiation Safety Officer
    b. Related policy review by Program Director.
    c. Discussion of the radiation safety & protection procedures employed in the clinical environment by Program Director.
2. Didactic & Clinical Curriculum
    a. Program adopts the ASRT curriculum, which incorporates radiation safety and protection practices and procedures via various course objectives.
    b. Formal Radiation Protection & Radiation Biology Courses conducted in Semester I & II each year.
    c. Annual Radiation Safety in-service (institutional requirement).
    d. Program clinical experience and evaluation process.

Radiation Exposure Monitoring

During orientation, students are issued dosimeters and are instructed in their proper usage and application. Each quarter, the dosimeters are sent to Mirion Technologies and the subsequent report is evaluated by the Radiation Safety Office and is forwarded to the program officials. Program officials will review the quarterly dosimeter reports with each student and will require the student to document the review by initialing the report. Program officials will maintain a copy of the student's dosimeter report. Any student receiving an exposure in excess of the applicable limits, will be notified in writing and be will be subject to the policies & procedures maintained by the Radiation Safety Office governing such events. Program officials will maintain a copy of the student's dosimeter report.

Guidelines for Dosimeter usage:

1. Dosimeter badges should be worn whenever you are in the vicinity of ionizing radiation. If you lose your badge or if it is temporarily not available, you should get a temporary replacement from the Radiation Safety Office. Do not lend your badge to a friend.

2. Badges must not be left in the vicinity of sources of radiation when the wearer is not present. The most common reason for exceptionally high dosimeter readings at this institution has been accidental exposure of badges left on lab coats or lead aprons. Do not wear it when you are having medical or dental x-rays of yourself.

3. Badges should not be subjected to extremes of heat or cold. Do not launder. Do not attempt to open or break the seal around the dosimeter. Please refrain from writing or placing other information on the badge. It is important that we be able to read both your name and all numbers typed on the badge.

4. The OSL dosimeter is exchanged once every 3 months.

For additional information or questions, please contact Radiation Safety Office, Health Sciences Center North, Room G-139. Phone # 304-293-3413 or http://www.hsc.wvu.edu/rsafety/

Christina M. Pugh, MA, R.T.(R)(T) — 10/23/24

Education Coordinator — Date

Clinical Education Make-up Policy

Policy:

This policy serves to identify the procedure and criteria for making up clinical education when absences in excess of the allotted 6 personal time off (PTO) occur. Absences in excess of the 6 days must be made up by the student in order to complete the clinical education component of their education and receive the recommendation of the Education Coordinator to sit for the ARRT examination.

The following guidelines will be utilized by the student to re-establish their good standing in the clinical education component of their education.

a. The student may convert compensation time to account for excess personal leave, or

b. The student's clinical education will be extended beyond graduation to account for the number of days or hours in excess of the allotted 6 personal leave days not to exceed 5 days.

c. In all cases, unexcused absences must be made up after graduation.

These guidelines will be used by the education program to provide the student with a mechanism to complete their clinical education when the student's attendance has been affected by adverse circumstances (ex: extended illness). Chronic attendance problems will be governed by the Attendance & Disciplinary Action policies.

Christina M. Tough, M.A., R.T.(R)(T) — 10/23/24

Program Director/Education Coordinator — Date

Transfer Credit /Advanced Placement and Part-Time Student Policy

This policy serves to identify the Program's philosophy relative to transfer of credit, advance placement of students and part-time student attendance.

With respect to the following considerations:

1. The Radiation Therapy program length of 12 months;
2. The specificity of the course content;
3. The precise correlation between the didactic curriculum and clinical education;
4. The sequential and progressive nature of the curriculum format;
5. The competitive nature of the enrollment process; and
6. The operational hours of the clinical facility.

The Radiation Therapy program at West Virginia University Hospitals does not make provisions for transfer credit, advance placement status, or part-time enrollment.

Christina M. Pugh, M.A., R.T.(R)(T)

Program Director/Education Coordinator

10/23/24

Date

Graduation Requirements

Students enrolled in the Radiation Therapy Program must complete the following to be eligible for graduation and receive authorization from program officials that they have completed the necessary didactic and clinical criteria to sit for the ARRT certification examination in Radiation therapy.

1. Achieve a passing grade (78% or >) in each didactic course.
2. Achieve a passing grade (86% or >) in each clinical course (Applied Therapeutic Procedures I and II) by the end of each semester.
3. Successfully complete all clinical competency requirements in accordance with published clinical education standards policy.
4. Complete the published number of clinical hours within the provisions established by the program's attendance policy.
5. Demonstrate critical thinking, effective communication, and problem solving skills within the framework of the education structure.
6. Demonstrate ethical and professional behavior within the standards of the institution and the ARRT's code of ethics.
7. Demonstrate completion of an Associate's degree (or higher) from an accredited post-secondary institution in order to be eligible to sit for the primary certification exam in Radiation Therapy administered by the ARRT. The degree can be in any field or discipline.
8. Meet all financial obligations to the Program and the Institution.

Christina M. Pough, MA, R.T.(R)(T) — 10/23/24

Program Director/Education Coordinator — Date

Non-Registered Student Admissions Policy

West Virginia University Hospitals Radiation Therapy Education Program matriculates students who have provided proof of ARRT registration or have documented in writing that they are ARRT registry eligible for the Radiography examination. This policy is applicable to students that have not passed the American Registry of Radiologic Technologists (ARRT) registry examination in Radiography. Registry eligible students are accepted into the Radiation Therapy Education Program on the condition that they successfully pass the ARRT exam in Radiography.

Procedure:

1. The student must take the ARRT exam in Radiography **before entering the program on July 1st**
2. The Program **must receive documentation** of ARRT Registration **by July 1st**
3. **In the event that the student does not successfully pass the ARRT Radiography exam before July 1st, the student's offer for admission to the Program will be rescinded without further consideration**.

This policy is enacted for the purpose of:

Assuring that all students meet the required admissions requirements for the Radiation Therapy Education Program, thereby assuring the Program maintains high admission standards for accepting quality students.

Christina M. Pough, MA, R.T.(R)(T)

Program Director/Education Coordinator

10/23/24

Date

West Virginia University Hospitals
Radiation Therapy Education Program

Non-Registered student Admission Agreement

I have received a copy of the non-registered student admissions policy for the West Virginia University Hospitals Radiation Therapy Education Program. I have read and understand these regulations and agree to abide by the same. I agree not to hold West Virginia University Hospitals liable for any losses incurred including financial loss.

_____ _____
Student signature Date

_____ _____
Program Director/Education Coordinator Date

Student Guidelines for Utilization of Compensatory Time

The following policy and procedure serves to identify the requirements and guidelines for the student to obtain approval to be absent from the program through utilization of compensation time earned.

Requirements and Guidelines:

1. Compensation time earned by the student may not be taken during scheduled didactic course hours. Exceptions will be made only through approval by the program director.

2. The student must obtain prior approval to utilize compensation time by submitting a Leave Request Form in Trajecsys and will be verified by the Program Director or a Program Clinical Supervisor. Program officials will approve 8 hours of compensation time off no later than 24 hours prior to the date the student requests to be off. In cases where the student is requesting less than 8 hours off, program officials may approve compensation time on the day of request.

3. Failure to receive prior approval from the Program officials and/or failure to present the approved Personal Leave Request Form prior to the time of utilization by the student, will result in Program officials recording an unexcused absence on the student's attendance record.

4. The student may not receive approval to utilize compensation time earned via telephone unless the following circumstances exist:
    a. Severe weather conditions or transportation problems. A detailed explanation of the situation or circumstances must be provided by the student.
    b. Student illness where the student has exhausted allotted number of personal leave days.
    c. Emergency situation requiring the student's presence. A detailed explanation of the circumstances must be provided by the student.

In reference to the aforementioned circumstances, the Program official's professional opinion and judgment will dictate the final decision for approval or non-approval.

5. Without exception, students who are absent during scheduled program hours without notifying program officials of their intent to utilize personal leave or without receiving prior approval to utilize compensation time, will be assessed an unexcused absence.

    a. Unexcused absences must be accounted for following formal graduation of the class in order to receive the Program certificate and the Program Director's signature on the authorization form required to permit the student to sit for the American Registry of Radiologic Technologists examination.

Christina M. Laugh, M.A., R.T.(R)(CT) _____ 10/23/24

Program Director/Education Coordinator Date

Didactic Education Make-up Policy

The program officials and instructors will abide by the following procedure for permitting students to make-up course work missed as a result of being absent from a scheduled lecture session. This policy serves to eliminate, as much as possible, any potential advantage that a student may achieve by being absent from a scheduled lecture session and thereby obtaining a greater amount of study and/or preparation time, for the scheduled activities of the class, than those students in attendance.

1. The student is solely responsible for the lecture material covered and for making up any examinations, quizzes, homework assignments, etc. which occurred during their absence from the lecture session.

2. All examinations and/or quizzes must be made up on the student's first regular scheduled day of attendance (Monday thru Friday) following their absence from the lecture session.

The student must follow the following procedure:

   a. Contact the course instructor by 9 am on the day of your return and inform the instructor that you are presenting yourself to make-up the missed examination and/or quiz.

   b. In the event that the course instructor is not available, contact the program director or program clinical supervisor immediately and inform him/her to this affect.

   c. Instructors may submit the examination and/or quiz to a program official who will proctor the make-up session for the instructor. Instructors who anticipate that they will not be available for the make-up session must arrange in advance for the program director and/or clinical supervisor to proctor the session.

3. Failure of the student to follow the aforementioned make-up guidelines imposes a mandatory requirement upon the instructor to record a percentage grade of zero for the examination and/or quiz.

4. A student who fails to meet an assignment (e.g. term paper) deadline as a result of being absent on the deadline day must submit the assignment on the first regular scheduled day of attendance following the absence. The equivalent of a 10% reduction in grade will be imposed as a penalty for missing the deadline. If the student fails to submit the assignment as described above, the instructor is required to enter a percentage grade of zero for the assignment.

This policy and procedure will be followed in all cases except where the Program Director and Instructor have agreed to waive this policy because of special extenuating circumstances.

Christina M. Laugh, M.A., R.T.(R)(CT) _____ 10/13/2022

Program Director/Education Coordinator Date

Trajecsys Report System Policy/Electronic Clinical Handbook

The Trajecsys Report System:

The West Virginia University Hospitals, Radiation Therapy Technology Education Program implemented the use of the Trajecsys Report System ®. This system is an electronic based program that contains the student's competency forms, proficiency forms, evaluation forms, and time record reports to monitor attendance.

This system has replaced the traditional paper clinical handbook. With regards to students utilizing this system, there is a one-time fee of $100.00 which is paid directly to Trajecsys. This fee is paid by doing the following.

- The student will be required to access the following website: http://www.trajecsys.com/payments.htm.

After accessing this website, each student will need to complete the online form and then click the "Buy Now" button. This will re-direct them to PayPal where the payment will be submitted.

- Note: Students do NOT have to have a PayPal account to use this. When the director from Trajecsys receives notification of payment from PayPal, the director will update them in the Admin Panel/Payments.

The registration process must be completed by July 1.

All Trajecsys data is formatted into report form for both students and educational staff to view and utilize as needed.

Christina M. Pugh, MA, R.T.(R)(T)

Education Coordinator

10/23/2024

Date

Trajecsys Student Registration

All Incoming Students:

All students are required to purchase the Trajecsys electronic clinical workbook. This system is used daily to clock in and out, as well as to complete daily log sheets. It includes announcements, clinical schedules, clinical instructor assignments, evaluations and competency exams.

To complete this process:

1. Access: http://www.trajecsys.com/programs/add_user.aspx

2. Start filling out the form by typing West Virginia University Hospitals, Inc – Radiation Therapy as your educational institution. It should pop up as an option once you type so many letters.

3. After filling out your name, it will ask if you are a, "current or new student?". Check the "Yes" button.

4. Next, select West Virginia.

5. Now you must create a username and password
    a) Username: You may select anything you like for this
    b) Password: You may select anything you like for this, but it has to satisfy the Trajecsys requirements.

6. Fill out the remainder of the form with your phone number, email, etc.

7. Go to http://www.trajecsys.com/payments.htm and make payment of $100.

8. Watch the Student Help Video Tutorial: http://www.screencast.com/t/jpdWy5Tms6

9. Read the entire Student Help Section and watch any videos or tutorials: http://www.trajecsys.com/programs/help.aspx#16

Should you have any problems during registration, please contact me directly so that I can resolve any issues.

Thanks.