



Allied Health
Department

Medical Dosimetry Program Manual

2026-2027

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WASHBURN

MEDICAL
DOSIMETRY

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Welcome

Dear Students,

Welcome to Washburn's Medical Dosimetry program! You are entering a field that plays a critical role in the treatment of cancer and other conditions by ensuring the accuracy and safety of advanced radiation therapy procedures. The work you do will leave a lasting impact that extends far beyond the treatment room.

The Medical Dosimetry program blends challenging academic coursework with meaningful, hands-on clinical training to help students master the core principles of treatment planning and grow into confident, capable professionals. Throughout the program, you will be supported by dedicated faculty and experienced radiation oncology experts who are committed to your success.

This Program Manual is designed to help you navigate the program; please read it thoroughly and refer to it often. In this document, you will find important information about:

- ✓ Medical Dosimetry as a profession
- ✓ Washburn Graduate Program policies
- ✓ Medical Dosimetry program structure and curriculum
- ✓ Academic and clinical expectations
- ✓ Medical Dosimetry program policies and procedures
- ✓ Resources and support services

If you ever have questions, need clarification, or want to provide feedback, please contact:

Amanda Lisher
Medical Dosimetry Program Director
785-670-3103
amanda.lisher@washburn.edu

Being a Professional Medical Dosimetrist

Being a medical dosimetrist requires technical knowledge, critical thinking skills, and *heart!* As a medical dosimetrist, you are responsible for developing safe, effective, and high-quality radiation therapy plans that will support your patients' survival and quality of life. Medical dosimetrists are fortunate to work in a field that is constantly evolving. Throughout your career, you will have opportunities to work with state-of-the-art technology and contribute to research that will shape the future of cancer treatment.

Essential Functions

Medical dosimetry is a specialized field of medicine that requires a specific set of skills and abilities.

Medical dosimetry students and practitioners **must**:

- ✓ Demonstrate strong math skills
- ✓ Be comfortable navigating computer programs and applications
- ✓ Possess excellent visual acuity, including the ability to recognize colors on computer screens and distinguish between anatomical structures in three-dimensional images
- ✓ Remain focused for long periods of time, often seated at a computer
- ✓ Be able to interact with individuals who are immunosuppressed or who may have a communicable disease

Additionally, medical dosimetrists should demonstrate an ability to:

- ✓ Communicate effectively and confidently
- ✓ Think critically and make ethical informed decisions
- ✓ Approach individuals with empathy, respect, and emotional maturity
- ✓ Demonstrate professional behaviors including integrity, accountability, and cooperation
- ✓ Manage time, multitask, and adapt to a variety of work environments

While most medical dosimetry involves computer-based treatment planning, the dosimetrist is often called on to assist with patient setups in simulation and during treatment delivery. *Recommended* physical criteria for medical dosimetrists include the ability to:

- ✓ Lift a 20-pound object over their head
- ✓ Push and pull, bend and stoop, and kneel or squat routinely
- ✓ Assist with patient transfers, including pushing wheelchairs and beds, and helping patients onto and off treatment tables
- ✓ Hear various equipment alerts, sounds, and signals for radiation safety purposes

Please note, the inability to perform any of the above physical activities does **not** preclude someone from being a successful medical dosimetrist. However, clinical sites and employers may have their own standards for the performance of medical dosimetry duties. While it is the policy of Washburn University to provide reasonable accommodations for students with disabilities, health impairments, and other

disabling conditions, students in the Medical Dosimetry program must be able to meet their clinical site's standards and expectations.

Scope of Practice and Practice Standards

The *Scope of Practice of a Medical Dosimetrist* and *Practice Standards for a Medical Dosimetrist* define the role of the medical dosimetrist in the radiation oncology department and provide guidance about professional standards and expectations. All medical dosimetrists, including students, must review and adhere to these documents.

The *Scope of Practice of a Medical Dosimetrist* and *Practice Standards for a Medical Dosimetrist* can be found on the American Association of Medical Dosimetrists (AAMD) website at <https://www.medicaldosimetry.org/about/scope-of-practice/>.

Code of Ethics

As the professional organization for medical dosimetrists, the American Association of Medical Dosimetrists (AAMD) has developed a *Code of Ethics* that represents the moral character and values that medical dosimetrists should aspire to. The *Code of Ethics* can be found on the AAMD website at <https://www.medicaldosimetry.org/about/aamd-mission-statement/>.

The *Principles of Ethics* for medical dosimetrists include:

1. Medical Dosimetrists are obliged to uphold the honor and dignity of their profession by exhibiting sound moral character and the highest degree of competence in their work.
2. Medical Dosimetrists must be honest and forthright at all times in their dealings with employers, clients, and patients. Remuneration expected should be consistent with the type and quality of service provided.
3. Patient privacy must be respected, and confidentiality of patient information must be maintained.
4. Medical Dosimetrists should strive continually to improve their knowledge and skills and participate in programs that lead to the improvement of the Medical Dosimetry profession and the health of the community.
5. Collegiality, openness, and mutual respect shall characterize the relationships among Medical Dosimetrists.
6. Medical Dosimetrists should conduct their affairs in a manner consistent with standards of excellence.

Certification

Students who successfully complete an accredited Medical Dosimetry academic program and clinical requirements are eligible to take the national certification exam. The exam is administered twice each calendar year by the Medical Dosimetry Certification Board (MDCB). Students are responsible for reading

and following all exam guidelines. More information about the certification exam can be found on the MDCB website at <https://mdcb.org/certification-exam-information>.

Continuing Education

In addition to certification, medical dosimetrists are required to participate in ongoing professional development. According to the MDCB, continuing education ensures that practitioners meet the criteria required to protect the well-being of patients they serve and provide quality patient care. Continuing professional development also helps address the rapid advances in technology, growth in knowledge, evolution of the industry, and limitations of academic degrees. Certified medical dosimetrists are required to complete 50 credits of continuing education every 5 years. More information about continuing education requirements can be found on the MDCB website at <https://mdcb.org/continuing-education>.

Washburn University Graduate Program Information

The Master of Science in Medical Dosimetry follows guidelines established in Washburn's Graduate Academic Catalog. The Graduate Catalog can be found on Washburn's website at <https://catalog.washburn.edu/graduate/>.

University Mission

Washburn creates educational pathways to success for everyone.

- ★ Educational - Rigorous and intellectually stimulating. Washburn will provide learners with quality opportunities to learn from expert faculty, engage in critical thinking and explore new ideas. Curriculum content includes skill development for life and career readiness.
- ★ Pathways - A variety of options for learners to pursue their educational, civic and career goals. This includes two-year and four-year degrees, Masters and Doctorate degrees, continuing education, technical certificates, diplomas and apprenticeships. Pathways also means learners will have flexibility to choose the path that best meets their individual needs and interests, including inter-university and K-12 partnerships.
- ★ Success - As determined by each learner's unique perspective, dreams and journey.
- ★ Everyone - People of all backgrounds and life experiences.

Equal Opportunity

Washburn University is committed to providing an environment for individuals to pursue educational and employment opportunities free from discrimination and/or harassment. The University prohibits discrimination on the basis of race, color, religion, age, national origin, ancestry, disability, sex, sexual orientation, gender identity, genetic information, veteran status, or marital or parental status. Each unit

within the University is charged with conducting its programs and activities in accordance with the University commitment to equal opportunity for all.

Non-discrimination Regulations and Procedures can be found on Washburn's website at <https://www.washburn.edu/statements-disclosures/equal-opportunity/index.html>.

Academic Policies

Students in the Medical Dosimetry program should be familiar with all Graduate Academic Policies. Links to relevant policies can be found in the Graduate Academic Catalog at <https://catalog.washburn.edu/graduate/academic-policies-programs/academic-policies/>.

Program, degree, and graduation requirements common to all graduate students at Washburn university include:

1. Master's degrees require a minimum of 30 semester hours of credit
2. Master's students must maintain a cumulative grade point average of at least B (3.0 grade point); courses with a posted grade of Pass will not count towards a graduate degree
3. At least two thirds of the semester hours required for the degree must be earned at Washburn University
4. All course work must be completed within eight (8) calendar years unless otherwise specified by the individual program

Washburn University Graduate Program Core Learning Outcomes

Washburn's graduate student learning outcomes are designed to ensure that all students completing master's and doctorate degrees acquire a set of core principles and skills that are applicable across disciplines. The following three outcomes have been identified as the graduate core learning outcomes:

1. **Ethics:** All graduate students will demonstrate an awareness of professional conduct toward all constituent groups
2. **Communication:** All graduate students will demonstrate the ability to express themselves clearly, accurately, and professionally
3. **Critical Thinking:** All graduate students will demonstrate the skill to evaluate information, make decisions, and solve problems

Student Services & Student Life

Washburn offers numerous resources for current and prospective students. Services and support are provided to *all* students regardless of their location; virtual meeting options are available to assist students who are not on campus.

Please visit the [Graduate Academic Catalog](#) to review information regarding:

- Admissions: <https://catalog.washburn.edu/graduate/student-services/admissions/>

- Registration and Enrollment: <https://catalog.washburn.edu/graduate/student-services/registration-enrollment/>
- Location Policy and Residency Requirements: <https://catalog.washburn.edu/graduate/student-services/location-policy-residency-requirements/>
- International Student Services: <https://catalog.washburn.edu/graduate/student-services/international-student-services/>
- Tuition and Fees: <https://catalog.washburn.edu/graduate/student-services/tuition-fees/>
 - The tuition schedule, including payment due dates and refund amounts, is available in the academic calendar at <https://www.washburn.edu/academics/academic-calendar-files/index.html>
- Financial Aid: <https://catalog.washburn.edu/graduate/student-services/financial-aid/>
- Office of Student Life: <https://catalog.washburn.edu/graduate/student-life/office-student-life/>
 - Career Engagement: <https://catalog.washburn.edu/graduate/student-life/office-student-life/career-engagement/>
 - Student Accessibility Services: <https://catalog.washburn.edu/graduate/student-life/office-student-life/student-accessibility-services/>
 - Student Health and Counseling Services: <https://catalog.washburn.edu/graduate/student-life/office-student-life/student-health-counseling-service/>
 - Veterans Transitions: <https://catalog.washburn.edu/graduate/student-life/office-student-life/veterans-transitions/>

Washburn’s academic calendar can be viewed at <https://www.washburn.edu/academics/academic-calendar-files/index.html>. Medical Dosimetry summer course dates and clinical schedules may not align exactly with the Washburn University academic calendar; however, clinical or didactic assignments will never be scheduled during *scheduled* university closure dates. Holidays and breaks will be listed in the clinical course syllabus and are included in the **Program Calendar**.

Medical Dosimetry Program Information

Washburn University’s Medical Dosimetry program is a 44-credit hour, online Master of Science degree designed to be completed over 14 months (4 consecutive semesters). This intensive program combines rigorous academic coursework with hands-on clinical training to prepare students for a career in medical dosimetry. Graduates of our program earn a Master of Science degree and are eligible to sit for the National Medical Dosimetry Certification Board (MDCB) exam.

Program Mission

The Medical Dosimetry Program at Washburn University provides quality education and support to develop medical dosimetrists who are confident, competent, and compassionate radiation oncology professionals.

Program Goals and Outcomes

Program Effectiveness Goals and Outcomes

Medical dosimetry faculty and program affiliates will:

1. Provide a comprehensive medical dosimetry curriculum that prepares graduates to pass the national certification exam.
 - a. Admitted students will complete the program and graduate.
 - b. Graduates who take the MDCB exam during the next testing cycle after graduation will pass on the first attempt.
 - c. Students will be satisfied with program courses and instructors.
 - d. Graduates will be satisfied with the overall quality of the program.
2. Ensure a supportive clinical experience that prepares graduates to serve the radiation oncology community as a practicing medical dosimetrist.
 - a. Graduates will be employed as medical dosimetrists.
 - b. Employers will be satisfied with program graduates' level of preparedness to perform medical dosimetry duties.
 - c. Students will be satisfied with the clinical experience.
 - d. Graduates will be satisfied with their level of preparedness to perform medical dosimetry duties.
3. Model a commitment to lifelong learning and service to the profession.
 - a. All program faculty will complete continuing education and maintain their medical dosimetry licensure.
 - b. Full-time program faculty will participate in at least 4 professional or curriculum development activities per academic year.
 - c. Full-time program faculty will participate in at least 5 service activities per academic year (University, School of Applied Studies, professional, or community).

Program Goals and Student Learning Outcomes

Medical dosimetry students will:

1. Demonstrate **clinical competence** and treatment planning abilities.
 - a. Students will acquire and interpret imaging, patient, and prescription information to prepare for treatment planning.
 - b. Students will demonstrate knowledge of 3D anatomy.
 - c. Students will produce treatable plans.
2. Demonstrate professional written and verbal **communication skills**
 - a. Students will demonstrate professional written communication skills.
 - b. Students will demonstrate professional verbal communication skills.
3. Apply **critical thinking** to complex treatment plans and clinical situations.

- a. Students will assess factors that influence treatment planning (dose-limiting structures, patient anatomy and positioning, treatment goals, etc.).
 - b. Students will reflect on their treatment planning performance.
 - c. Students will demonstrate the ability to adapt to changing or unexpected clinical situations.
4. Demonstrate **professionalism** and a commitment to lifelong learning.
 - a. Students will display professional conduct.
 - b. Students will demonstrate an understanding of ethics and professionalism.

Program Effectiveness Data

To enhance accountability and ensure transparency, the Medical Dosimetry program publishes key program effectiveness metrics on its website (<https://www.washburn.edu/academics/college-schools/applied-studies/departments/allied-health/dosimetry/quality-indicators.html>) and presents this data annually to the Medical Dosimetry Advisory Board. These metrics include the program completion rate, MDCB exam pass rate, and job placement rate. Program effectiveness data can also be accessed through the JRCERT website at <https://www.jrcert.org/>.

The first cohort of students will complete the program in summer 2027. Program effectiveness data will be collected and published approximately 6 months later, once data are available.

Accreditation

Washburn University is accredited by the Higher Learning Commission (HLC), a Commission of the North Central Association of Colleges and Schools.

The Medical Dosimetry program is currently an applicant program (seeking initial accreditation) with the Joint Review Committee on Education in Radiologic Technology (JRCERT):

20 North Wacker Drive, Suite 2850

Chicago, Illinois 60606-3182

(312) 704-5300

Website: <https://www.jrcert.org/>

Email: mail@jrcert.org

The mission of the JRCERT is to *promote excellence in education through the application of professional standards that endorse academic integrity and quality, as well as exemplary healthcare, through the accreditation of educational programs in radiography, radiation therapy, magnetic resonance, and medical dosimetry.*

The JRCERT Standards for an Accredited Educational Program in Medical Dosimetry are included in Appendix C; they can also be viewed at <https://www.jrcert.org/wp-content/uploads/2025/03/2021-Medical-Dosimetry-Standards.pdf>

Program Orientation

Medical Dosimetry students are required to attend Program Orientation at the Washburn University campus in Topeka, Kansas. Orientation is typically held just prior to the program's start date; it may occur later in the first summer semester but will always be held before students begin clinical education in the fall. During orientation, program faculty will review the Medical Dosimetry curriculum, policies and procedures, and expectations. A detailed schedule will be included in the *Welcome* packet, which is sent to new students in the spring, prior to the program start date. If travel to campus presents a challenge, students must discuss alternative arrangements with the program director in advance.

Program Faculty



Amanda Lisher, Assistant Professor/Program Director

RT(R) Washburn University, 2002

RT(R)(T) Washburn University, 2003

Bachelor of Health Science (BHS), Washburn University, 2003

Master of Science (MS)—Medical Dosimetry, U of Wisconsin La Crosse, 2015

Post-Graduate Teaching Certificate, Washburn University, 2020

The Medical Dosimetry Program Director is responsible for:

- ✓ Providing strategic direction and vision for the program in alignment with institutional goals
- ✓ Developing, implementing, and evaluating the didactic and clinical curriculum to ensure they meet professional and accreditation standards
- ✓ Recruiting, mentoring, and evaluating program faculty and clinical affiliates
- ✓ Monitoring student progress, providing academic advising, and ensuring access to support services
- ✓ Collaborating with clinical sites to ensure quality clinical education and appropriate student placements
- ✓ Maintaining program accreditation by ensuring adherence to JRCERT standards
- ✓ Collecting and analyzing data on student outcomes, clinical performance, and program effectiveness for continuous improvement
- ✓ Staying current with trends in medical dosimetry and maintaining active involvement in professional organizations

In addition to the Program Director, adjunct faculty and guest lecturers assist with teaching responsibilities and student assessment.

Advisory Committee

An advisory committee of representative stakeholders has been appointed to help maintain the quality of the Medical Dosimetry program. Committee members assist with the review and revision of program

materials and outcomes to ensure the curriculum remains current, comprehensive, and aligned with industry standards. The advisory committee will include a student representative from the current academic cohort. Student members are asked to gather feedback from classmates, attend all advisory board meetings, and share committee updates with the class. The Medical Dosimetry advisory board meets at least once a year.

Program Evaluation and Assessment

Medical Dosimetry faculty use evaluation data to assess how well the program is preparing students for clinical practice and certification. This data helps to identify strengths and areas for improvement in the curriculum, ensure compliance with accreditation standards, and make informed decisions about faculty development and clinical site partnerships. The following evaluation tools are used by the Medical Dosimetry program:

- ✓ Clinical supervisors and preceptors routinely evaluate students' treatment planning competency and professionalism during clinical education
- ✓ Students evaluate the quality of instruction, course design, and content delivery of program courses at the end of each semester; course evaluations are anonymous
- ✓ Students evaluate the quality of training, support, and resources provided by the clinical site at the end of each semester
- ✓ Graduates and their employers are surveyed 6 months after graduation to assess professional readiness and program effectiveness
- ✓ The program conducts an annual learning outcomes assessment; an action plan is developed for any learning outcome benchmarks that are not met
- ✓ Accreditation feedback from the JRCERT is reviewed and used to guide program enhancements
- ✓ Program data is shared with the Medical Dosimetry Advisory Board and used to support continuous program improvement efforts

Program Curriculum

Master of Science in Medical Dosimetry 44 Credit Hours	
First Summer (June-July):	
AL630: Foundations of Radiation Oncology	3 cr
AL632: Cross-sectional Anatomy in Medical Dosimetry	3 cr
<i>Semester total:</i>	<i>6 cr</i>
Fall (August-December):	
AL634: Oncology Principles I	3 cr
AL636: Radiation Oncology Treatment Planning I	4 cr

AL638: Radiation Physics	3 cr
AL640: Ethics & Professionalism in Medical Dosimetry	2 cr
AL660: Medical Dosimetry Clinical I*	4 cr
<i>Semester total:</i>	<i>16 cr</i>
Spring (January-May):	
AL644: Oncology Principles II	3 cr
AL646: Radiation Oncology Treatment Planning II	4 cr
AL648: Research Methodology in Medical Dosimetry	3 cr
AL650: Quality Improvement in Radiation Oncology	2 cr
AL665: Medical Dosimetry Clinical II*	4 cr
<i>Semester total:</i>	<i>16 cr</i>
Second Summer (June-July):	
AL670: Medical Dosimetry Clinical III*	3 cr
AL675: Medical Dosimetry Capstone	3 cr
<i>Semester total:</i>	<i>6 cr</i>
<i>*For the Medical Dosimetry program, 115-125 clock hours spent in clinic equates to 1 credit hour</i>	

Course descriptions are included in Appendix A and can also be found in the Graduate Academic Catalog at <https://catalog.washburn.edu/graduate/school-applied-studies/allied-health-graduate-programs/medical-dosimetry-ms/#degreerequirementstext>.

Credit Hour Calculations

The Medical Dosimetry program calculates credit hours for **online didactic courses** in accordance with Washburn University policy, as outlined in the School of Applied Studies Protocol Handbook. The Handbook states that the requirements for credit hour assignments are established in the U.S. Department of Education Regulation 34 CFR 600.2 and equate to 1 hour of faculty instruction and at least 2 hours of out of class student work each week for approximately 15 weeks per semester. Thus, each credit hour requires at least 3 hours of student work per week if spread over a 15-week semester (a 3-credit class requires 9 hours of work each week; a 4-credit class requires 12 hours of work each week, etc.). For condensed summer courses, the amount of time spent on classwork each week is doubled.

For **clinical education**, 115-125 clock hours spent in the clinic equates to 1 credit hour (a 4-credit hour clinical course will require a minimum of 460 clock hours in the clinic, etc.).

Arranging Accommodations

While it is the policy of Washburn University to provide reasonable accommodations for students with disabilities, health impairments, and other disabling conditions, students in the Medical Dosimetry program must be able to meet their clinical site's standards and expectations.

At Washburn, representatives with Student Accessibility Services are responsible for arranging accommodations and identifying resources for individuals with disabilities. Qualified students with disabilities **MUST** register and provide medical documentation from a qualified licensed professional with the office to be eligible for services. New requests for accommodations should be submitted prior to the start of the program. However, requests may be submitted at any time while in the program.

Please note that the Medical Dosimetry faculty are not permitted to make accommodation requests on behalf of a student. If you are a Medical Dosimetry student with a disability and you believe you will need accommodations or modifications to allow you to complete the program and job requirements, it is **your responsibility** to contact:

Washburn University Student Accessibility Services
 317 Plass Learning Resources Center
 Phone: 785-670-1622 / Fax: 785-670-1056
 Email: accommodations@washburn.edu

Outside Employment

The Medical Dosimetry curriculum is fast-paced and academically demanding. Due to the intensity of both the coursework and clinical requirements, students are strongly discouraged from maintaining outside employment while clinical education is in session (fall, spring, and second summer semesters). Full commitment to the program is essential to ensure academic success and professional readiness.

Students are not permitted to receive compensation for clinical hours. If a student is employed at the clinical facility, a strict schedule of clinical vs. employee time must be documented and adhered to.

Program Costs

Tuition and Fees

Students in the Medical Dosimetry program will pay the *traditional online graduate* tuition rate; there is no additional cost for out-of-state students. Washburn's tuition and fees are determined by the university's Board of Regents and are subject to change annually. To view the current online tuition rate and student fees, please visit the Business Office website at <https://www.washburn.edu/student-life/business-office/tuition-fees.html>.

If a student withdraws from one or more classes, tuition will be refunded to the student account based on the date of withdrawal at a percentage determined by the course start and end date. Medical

Dosimetry summer classes that do not begin and end on the standard term dates may refund on a different schedule. Refund dates and percentages can be found on the Business Office website at <https://www.washburn.edu/student-life/business-office/tuition-refunds.html>.

Textbooks

The cost of textbooks and materials will vary each year based on publisher and bookstore price changes. Currently, the total cost of textbooks is approximately \$1100. A textbook list and Washburn book order instructions are included in the Resources section of this manual.

Additional Costs

In addition to tuition and textbooks, medical dosimetry students are responsible for the following expenses:

- Travel to Washburn University for program orientation (mandatory—prior to program start) and graduation (optional, but encouraged—Mid-May)
- Transportation to and from clinical sites
- Scrubs or business attire (based on clinical site requirements)
- Technology requirements (laptop with audio/visual capabilities, reliable internet access, and a scientific calculator)
- Health insurance
- Background check and drug screen (\$105)
- Physical exam
- Required immunizations (based on clinical site requirements)
- CPR certification and recertification fees
- Trajecsys software access, used for tracking clinical time and documentation (\$100)
- AAMD student membership (\$80—purchase in October)

Financial Assistance

Graduate students are eligible for financial aid and student loans. Visit the Financial Aid website at <https://www.washburn.edu/admissions/paying-for-college/financial-aid/index.html> to review aid options and filing deadlines. Contact a financial aid representative at (785) 670-1151 as soon as possible for assistance and additional information.

Scholarships for medical dosimetry education are available through professional organization foundations such as the [American Society of Radiologic Technologists \(ASRT\)](#) and [American Association of Medical Dosimetrists \(AAMD\)](#).

Technology Requirements

Due to the online nature of the Medical Dosimetry program, it is essential that students have consistent access to a reliable computer and high-speed internet connection. Although students are required to attend clinical rotations in person, all course materials, assignments, and evaluations are submitted through the program's online learning and clinical documentation systems, Desire2Learn (D2L) and Trajecsys. While a desktop computer is sufficient, a **laptop is strongly recommended**. *Chromebooks are not acceptable*; they will not support the variety of specialty software and programs students will encounter in class.

Occasionally, students will be asked to submit audio or video files with an assignment. In addition, to ensure the integrity of course exams, the Medical Dosimetry program requires students to download the [Respondus LockDown Browser](#), a free add-in that monitors students and restricts access to outside browser windows during an exam. For these reasons, a **webcam, microphone, and speakers are also necessary**.

Recommended computer technical specifications can be found on the Information Technology Services (ITS) website at <https://www.washburn.edu/its/online-education/tech-tips.html>.

Training videos and instructions for using D2L and Respondus LockDown Browser can also be found on the ITS website at <https://www.washburn.edu/its/online-education/index.html>.

For technical assistance or further guidance, please contact Washburn University Technology Support at support@washburn.edu or 785-670-3000.

Microsoft Office

Microsoft Windows-compatible file formats (e.g. Word, Excel, PowerPoint) are preferred for all Medical Dosimetry assignments. Office 365 programs are free for Washburn students and can be installed on up to five devices, including Mac computers.

Instructions for installing Office programs on personal devices can be found on the ITS website at <https://www.washburn.edu/its/software-training/office-365.html>.

Calculator Specifications

A **scientific calculator** is required to complete complex treatment planning calculations. There are several options available, here is an image of just one example:



Medical Dosimetry Program Policies

The Medical Dosimetry program adheres to academic policies set forth in Washburn University's [Graduate Catalog](#). As noted in the catalog, individual program policies may be more stringent than university policies. As is fitting for a professional health care program, the Medical Dosimetry policies reflect a high standard of academic achievement and personal conduct.

Academic Policies

Academic Integrity

The medical dosimetry profession relies on the integrity and ethical conduct of our treatment planners. At Washburn University, academic integrity is essential to our learning community. Students in the Medical Dosimetry program are expected to be honest, responsible, and ethical in all academic work. Students will submit original work in each class and will use proper citation to give credit to outside sources. Students will avoid cheating, plagiarism, fabrication, and unauthorized collaboration. Faculty members are responsible for submitting suspected violations to the University. Violations of the Academic Integrity policy may result in disciplinary actions ranging from warnings to program dismissal; students retain the right to appeal (refer to the Appeal Process included in this document).

Academic Impropriety Policy

Washburn University's Academic Impropriety Policy describes academically unethical behavior in more detail and explains the actions that may result when such behavior occurs. The Academic Impropriety Policy is in Section 7.VIII of the Washburn University Faculty Handbook, which can be found at <https://www.washburn.edu/faculty-staff/faculty-resources/faculty-handbook/faculty-handbook-section-7.html#VIII>.

Academic Action

Per the Academic Impropriety Policy, academic action is any action undertaken by faculty to prevent the continuation of a student's academically improper behavior or to offset, through an adjustment in the evaluation of the student's course performance, any possible advantage that might otherwise accrue to the student as a result of his or her academically improper behavior.

When it is determined that an academic impropriety has occurred, the faculty member teaching the course in which it occurred may make an appropriate adjustment to the student's grade.

Examples of academic actions that may be used by Medical Dosimetry faculty either to prevent the continuation of an impropriety or to offset the advantage gained through an impropriety include, but are not limited to:

1. Verbal warning to the student that he or she is acting improperly.

2. Voiding the student's examination, test or quiz, with or without the opportunity for a make-up. If a make-up is granted, it may include a grade reduction to offset the advantage the student gains from having additional time to study for the examination.
3. Adjusting the grade in an assignment to offset the advantage gained by the student by submitting the assignment late.
4. Giving a failing grade to or granting no credit for the work submitted.
5. Giving the student an F for the course.

Student Conduct Code, Procedures, and Appeals

Medical Dosimetry students must read and act in accordance with Washburn's Student Conduct Code, which can be found at https://www.washburn.edu/student-life/services/files/Student_Conduct_Code.pdf.

The University Student Conduct and Disciplinary Code is also addressed in Section 7.VII of the Washburn Faculty Handbook, which can be found at <https://www.washburn.edu/faculty-staff/faculty-resources/faculty-handbook/faculty-handbook-section-7.html#undefined>.

Maintaining the Integrity of Online Assessments

The Medical Dosimetry program has implemented testing security measures to ensure the integrity of student assessment in the online environment.

- ✓ The [Respondus LockDown Browser](#) will be required for all summative quizzes and exams. This free computer add-in is a security measure that limits browser access so that only the examination window can be opened. More information about the Respondus LockDown Browser can be found in the *Resources* section of this manual.
- ✓ The Respondus LockDown proctoring system will require a microphone and web camera. Students must present their Washburn ID card to the system prior to taking an examination; a digital photograph of the ID card and the student will be captured as the exam is initiated. The student will be video monitored and recorded during the exam.
- ✓ All images and recordings are stored in the learning management system (D2L), and are only accessible to program faculty. Faculty will review recordings for any signs that the integrity of the quiz or exam has been compromised; concerns will be discussed with the student.

Exam Testing Expectations

When taking an online exam, guidelines must be followed. Failure to do so will result in Conduct Review and possible Corrective Action. Corrective action may include, but is not limited to, re-testing, grade reduction, and exam failure.

1. Students must have their Washburn University ID card available to show to the camera.
2. No other people are permitted in the testing room.

3. No communication with other individuals is permitted during exams, including electronic communication. The only exception is if a student needs to contact a faculty member or support in the event of technical difficulties.
4. Students are not permitted to leave the testing room.
5. There should not be any resources on the tabletop, work area, or walls of the testing room. Remove all textbooks, eBooks, notes, papers, Post-It notes, calendars, mobile devices etc. unless they are specifically permitted in the written guidelines for a given exam (for example scratch paper or a calculator may be permitted in some cases).
6. Accessing applications like Word, Excel, PowerPoint or other websites will be prevented.
7. Music playing, headphones, and earbuds are not permitted.
8. If students have a second monitor, it will be inaccessible; the system will cause the screen to turn to a solid color during the exam.
9. There should be no additional computers running in the testing room.
10. The webcam must be focused on the test-taker at all times.
11. Nothing can cover the lens of the camera at any time during the test.
12. If a test permits scratch paper, the student will have to show the blank paper at the beginning of the test. A reminder to do this is provided at the start of each exam.

Graduation Requirements

To successfully graduate and earn the Master of Science in Medical Dosimetry, students must:

- Complete all program courses with a passing grade (80% or higher)
- Complete the program with a cumulative graduate GPA of at least 3.0
- Complete all clinical competencies
- Apply to graduate at the beginning of the spring semester (students who will complete their degree requirements in the summer are eligible to attend the spring graduation ceremony in May); instructions can be found at <https://www.washburn.edu/student-life/policies-forms/forms/application-degree.html>

Grade Scale and Computation

The Medical Dosimetry grade scale is as follows:

95-100%	A
90-94.9%	A-
85-89.9%	B
80-84.9%	B-
70-79.9%	C (Probationary)
Below 70%	Failing (Dismissal)

Grades are calculated to the nearest tenth (one decimal place) and are not rounded.

Specific course requirements, activities, and assessments are included in each course syllabus.

Grade Appeal

A student who believes the grade awarded by an instructor is based upon reasons other than the student's academic performance may appeal the grade received in a course. The procedure for a grade appeal can be found in the Graduate Academic Catalog at

<https://catalog.washburn.edu/graduate/academic-policies-programs/academic-policies/grade-appeal-procedure/>.

Academic Requirements

Enrollment in Medical Dosimetry courses is granted based on acceptance to the program and satisfactory academic performance. Medical dosimetry is a specialized and high-responsibility health care profession; it requires strong critical thinking skills, precision, and attention to detail. To prepare for the vital role dosimetrists play in patient care, students are expected to maintain high academic standards throughout the program.

- In accordance with Washburn's Graduate Program Policy, students must maintain a cumulative GPA of at least 3.0 in graduate courses
- A minimum course grade of 80% (B-) or higher is required to pass Medical Dosimetry courses
- If the cumulative GPA drops below 3.0 and/or if a student earns below 80% in any one class, the student will be placed on **academic probation**
- If the cumulative GPA drops below 3.0 in consecutive semesters and/or if a student earns below 80% in more than one class, the student will be **dismissed** from the program

Academic Probation

The following conditions are grounds for academic probation:

- The cumulative GPA falls below 3.0 at the end of any semester
- A grade below 80% is earned in any individual course
- The student withdraws from any course
- Concerns regarding clinical performance or behavior

Students placed on academic probation are required to participate in academic counseling with program faculty. These sessions are designed to assess the student's academic and clinical progress and collaboratively determine the most effective plan for improvement and continued success in the program. Academic counseling sessions will be documented and will include:

- A review of academic and clinical performance: Discussion of grades, coursework, clinical performance, and areas of difficulty
- Time management and study habits: Strategies for organizing study time, meeting deadlines, and improving focus
- Goal setting: Establishing objectives to achieve academic and clinical goals

- Resource referral: Connecting students with tutoring, support, counseling, or other university resources
- Monitoring progress: Regular check-ins to assess progress and provide ongoing support

Withdrawal/Failure and Course Repeats

The Medical Dosimetry curriculum is carefully organized; each course builds on the concepts and competencies introduced in previous coursework. Failure to complete a course may have a significant impact on future success in the program. Students on academic probation should discuss the best course of action with program faculty prior to enrolling in subsequent courses.

- Medical dosimetry courses may be repeated only once
- Repeating a clinical course will be contingent on an available clinical site
- Courses are only offered one time per academic cohort; the ability to repeat a class with a subsequent cohort will be determined based on course capacity

If a student on academic probation withdraws from the Medical Dosimetry program prior to completion, they may reapply to the program at a later date. A full program application must be submitted for consideration.

Leave of Absence

Occasionally, students may need to take an extended leave of absence for personal or medical reasons. When possible, extended leave should not be scheduled during the last weeks of the semester. If a student will be absent for more than two consecutive weeks:

- ✓ The student must email the program director to request an extended leave of absence
- ✓ The program director will consult with the student, program faculty, and the clinical preceptor to develop a plan for the student's return after the leave of absence
- ✓ The program director will email the student and other relevant program representatives to document the leave of absence approval and the plan for return

Program Dismissal

Students may be dismissed from the Medical Dosimetry program based on substandard, unethical, or inappropriate clinical or academic performance. Dismissal will be at the discretion of the program director, based on feedback from the program faculty and/or the clinical preceptor. *Students who are dismissed from the Medical Dosimetry program are not eligible for readmission.*

Conditions that warrant consideration of dismissal include, but are not limited to:

- A failing grade in more than one course (below 80%)
- A cumulative GPA below 3.0 in two consecutive semesters
- Academic misconduct

- Negligent actions that endanger the safety or privacy of patients or radiation oncology staff
- Failure to comply with Washburn University and Medical Dosimetry Program policies

A reported violation or complaint will initiate the **Conduct Review and Corrective Action Process**.

Conduct Review and Corrective Action Process

The goal of the Conduct Review and Corrective Action Process is to promote a respectful, safe, and supportive learning environment. When concerns arise, the program will take appropriate steps to understand and address the issue. Corrective actions may include a warning, counseling, remedial work, or other interventions to help students stay on track academically and professionally.

When the program director observes or receives a report of behavior that may violate program expectations or policies, the **Conduct Review** process is as follows:

1. Within 5 business days of the report, the program director will investigate and document the concern
2. Within 14 business days of the report, the concern will be shared with the student via email and discussed with the student via a phone call or a meeting (virtual or in person)
3. If necessary, a second meeting will be scheduled with the student, program director, faculty, and the clinical preceptor (in the case of a clinical issue) to further discuss the concern; this meeting will occur within 5 business days of the initial student discussion
4. After the meeting, the program representatives will determine whether a policy was violated and what further actions, if any, are needed
5. A written summary of the meeting will be provided to all participants

Once the Conduct Review has been completed, appropriate **Corrective Actions** will be initiated, based on the frequency and severity of the concern:

1. For initial violations, a written warning will be issued to the student
2. If the issue persists, or for subsequent violations, the student will be placed on academic probation and the program director will develop a Remediation Plan and timeline to address the concern
 - a. Remediation may consist of academic counseling, additional coursework, additional clinical time, personal improvement plan, etc.
3. If the student's performance does not improve, or if the Remediation Plan is not completed as outlined, the student may be dismissed from the program

Exceptions

In the case of serious violations or negligent behaviors, the program director has the authority to bypass the initial warning and remediation and may move directly to program dismissal.

Additionally, clinical sites have the right to cancel a student's affiliation based on what they determine to be improper behavior.

Grievance Process

The Grievance Process is a method for students to call attention to and seek resolution for perceived unfair treatment, inappropriate behavior, or violation of rights by a faculty member, clinical preceptor, staff, or the university.

The Medical Dosimetry program aims to provide students with a clear and fair process to raise concerns or complaints related to administrative or personal matters. Program faculty will make every reasonable effort to ensure issues are addressed promptly, confidentially, and without fear of retaliation.

The Medical Dosimetry Grievance Process is as follows:

1. When possible, students are encouraged to discuss concerns with the person or group involved prior to initiating a formal grievance
2. If informal resolution is not possible, the student should discuss the issue with the program director; grievances should be reported within 21 days of the occurrence
3. Following receipt of the report, the program director will have 21 days to investigate, take action (if necessary), and report back to the student
4. If satisfactory results are not obtained, the student has 7 days to submit a written petition to the chairperson of Allied Health; the chairperson has 14 days to respond
5. If the student still has not received satisfactory results, the student has 7 days to submit a written petition as a final appeal to the Associate Dean, School of Applied Studies; the Associate Dean has 10 days in which to respond
6. If the issue cannot be resolved within the School of Applied Studies, students may contact the Student Life Office to discuss alternative options; information on Resolving Problems can be found at <https://www.washburn.edu/student-life/services/resolving-problems.html>

Formal complaints related to **discrimination and harassment** (verbal, physical, sexual, emotional, etc.) should also be filed directly with the university. Complaints will be reviewed and addressed by the Equal Opportunity Director/Title IX Coordinator. Instructions for filing a formal complaint can be found at <https://www.washburn.edu/statements-disclosures/equal-opportunity/how-to-file-a-complaint.html>.

Washburn's Equal Educational and Employment Opportunity Policy includes more information about the types of behaviors that are considered discriminatory and prohibited, and the process for addressing complaints. Please use the following link to access the policy: <https://www.washburn.edu/faculty-staff/human-resources/wuprpm/WUPRPM-Procedures-and-Regs/A.%20GeneralTopicsRegs.pdf>.

University policies regarding [Student Conduct](#), [Academic Impropriety](#), and [Grade Appeals](#) were described earlier in this document.

JRCERT Grievance Process

The Medical Dosimetry program adheres to accreditation guidelines set forth by the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 North Wacker Drive, Suite 2850 Chicago, Illinois 60606-3182, (312) 704-5300, Email: mail@jrcert.org.

A copy of the current Medical Dosimetry Program Standards can be viewed at <https://www.jrcert.org/wp-content/uploads/2025/03/2021-Medical-Dosimetry-Standards.pdf>. A list of the Standards is also included in Appendix C.

Standard 1.5 explains: *Any individual associated with the program has the right to submit allegations against a JRCERT-accredited program if there is reason to believe that the program has acted contrary to JRCERT accreditation standards and/or JRCERT policies. Additionally, an individual has the right to submit allegations against the program if the student believes that conditions at the program appear to jeopardize the quality of instruction or the general welfare of its students.*

Contacting the JRCERT must not be a step in the formal institutional or program grievance policy/procedure. The individual must first attempt to resolve the complaint directly with institutional/program officials by following the grievance policy/procedures provided by the institution/program. If the individual is unable to resolve the complaint with institutional/program officials or believes that the concerns have not been properly addressed, the individual may submit allegations of noncompliance directly to the JRCERT.

Program Procedure

1. If at any time a student believes the Washburn University Medical Dosimetry program is not acting in accordance with JRCERT accreditation standards, a written complaint should be submitted to the program director. The program will investigate the complaint, consult with the Allied Health Chairperson and the Dean of School of Applied Studies, and provide a written response to all parties within 21 days of receiving the complaint.
2. If the student does not feel there has been a resolution, the student has the right to contact the JRCERT. All parties must make a sincere, good-faith effort to resolve the issue before the JRCERT is contacted. This is an appropriate, professional consideration, and the JRCERT will expect that every effort has been made prior to filing a formal complaint.
3. In the event that the program has allegations or concerns regarding non-compliance with the standards and the JRCERT, after its due process, agrees that the complaint is valid, the program will make every effort to immediately correct the issue.

Information about reporting allegations can be found on the JRCERT website at <https://www.jrcert.org/accreditation-for-students/allegations/>.

Appeal Process

Washburn University and the Medical Dosimetry faculty are committed to ensuring that students are treated fairly and are given the opportunity to appeal program decisions. The Appeal Process should be used to request review and possible changes to a specific academic or disciplinary decision that has already been made.

The Medical Dosimetry Appeal Process is as follows:

1. Within 10 days of a program decision, the student must submit a written appeal request to the program director (amanda.lisher@washburn.edu). The request letter must include:
 - a. A clear statement explaining the issue and requesting reconsideration
 - b. Any new or clarifying information that was not previously addressed
 - c. An explanation of steps taken to address any concerns or deficiencies noted in the initial decision
2. Within 14 business days of receiving the appeal request, the program director will assemble a review committee that includes at least one other dosimetry faculty member and one Allied Health faculty member outside of the Medical Dosimetry program. The committee will meet to review and discuss the written appeal request.
3. Within 30 days of receiving the written appeal request, the review committee will provide the student with a written response detailing the outcome of the appeal and any conditions for overturning the initial decision, if applicable.

Note: The *Grade Appeal Process* is separate from this general appeals process and can be found in the [Graduate Academic Catalog](#).

School of Applied Studies (SAS) Student Program Status Appeals (SPSA) Policy

Students appealing a decision related to **non-acceptance** into a program or **program dismissal** should follow the steps outlined below.

A student must first attempt to resolve their dispute concerning program status through consultation with the program director or coordinator. The student must notify the program director or coordinator in writing of their intention to begin the appeal process. Such notification must be received within 10 working days of the day on which the student receives the notification of the decision related to acceptance into a program or termination of status in a program. If satisfaction is not obtained, the student may then appeal this decision to the chair of the department.

The Department Chair must be notified in writing by the student of their intention to continue the appeal process. Such notification must be received within 10 working days of the day on which the student was notified of the program director or coordinator's decision regarding the student's appeal. The process shall be terminated if notification is not received within 10 working days. Following a meeting with the

chair of the department, if the student is still not satisfied with the outcome, they may appeal to the Student Program Status Appeals Committee (SPSA).

The Associate Dean of the School of Applied Studies must be notified in writing by the student of their intention to continue the appeal process. Such notification must be received within 10 working days of the day on which the student was notified of the department chair's decision regarding the student's appeal. The process shall be terminated if notification is not received within 10 working days.

Upon receiving an appeal from the student, the university representative at each level (program director, department chair, or Dean) will reach and communicate a decision to the student as soon as possible, but not more than 30 working days from receipt of the appeal, unless exceptional circumstances occur and are communicated to the student. Meetings may be held remotely if any entity makes such a request.

The SPSA committee will be composed of faculty from the SAS with the Associate Dean presiding as chair of the committee. Members of the committee will be appointed by the Dean. The Dean will seek to appoint members who do not have a conflict of interest with the petitioner, however, all appointments are final and cannot be challenged. The committee will include four members and represent a minimum of two departments. The associate dean will not be a voting member of this committee.

It is critical that the student understand the following:

- The burden of proof rests with the student; the student is responsible for presenting evidence to support their argument
- The decision of the SPSA is final

In this final stage of the appeal process, the student must complete the following steps:

1. The student submits a letter of appeal to the SPSA. In that letter of appeal, the student must:
 - a. Specifically detail what program policy is being challenged
 - b. State clearly how that policy was applied to the student
 - c. Articulate all arguments which support the student's appeal
2. The department chair will submit any materials related to her/his recommendation, including if applicable, materials submitted by the program director.
3. The SPSA will schedule a meeting for argument to be heard by both the student and the program director or chair.
4. The student will be allowed to make a presentation to the committee; however, only arguments stated in the appeal letter will be heard. The program director/chair will be allotted an equal amount of time to present. The amount of time allotted is at the discretion of the committee as long as both parties have equal time allowed. No one other than these individuals will be allowed to make a presentation at the hearing.

5. The student is allowed to bring a person with them for support. If the student decides to bring another person with them to the hearing, then the student must sign a consent form in compliance with FERPA and the privacy of student records. The support person in attendance with the student may not address the committee though the student may ask for their advice during the hearing.
6. A committee vote of more than 50% (e.g. 3 out of 4) is required to support the student's petition.
7. The chair of the SPSA will notify the student and the department chair of the decision of the Committee in writing.
8. The decision of the SPSA will be final and there will be no more appeals.

FERPA and Confidentiality of Student Records

Protection of students' right to privacy is a program priority. [The Family Educational Rights and Privacy Act \(FERPA\)](#) exists to protect each student's right to privacy and to provide each student with the right to inspect and review his/her education records. Following FERPA guidelines means the Medical Dosimetry program can't share information about you beyond your directory information unless you say so. Information about FERPA can be found on Washburn's website at <https://www.washburn.edu/statements-disclosures/ferpa/index.html>.

Under FERPA, students have the right to access and review their official educational records, files, and related data. To do so, students must provide reasonable advanced notice of their intent to inspect the records. Access may be arranged during regular business hours, and could require the presence of a university official. The process for requesting document review is as follows:

1. Notify the program director in writing (letter or email) that you wish to review the documents submitted.
2. Within five business days, the program director will respond to schedule a face-to-face meeting or video conference (e.g. Teams, Zoom) to allow you to review the documents.
3. During the meeting, you will be allowed no more than 10 minutes per form for review.
4. You may take notes but may not make copies, take screenshots, or photograph the forms.

Student records and personal information will be kept in strict confidence by the faculty of the program. Information about the student will only be shared with outside parties after obtaining written authorization from the student.

Social Media

Social media can provide students with an opportunity to collaborate and communicate in various, and many times, beneficial and effective means. For program purposes, social media can be defined, but not limited to the following: Texting, blogs, emails, eLearning communications, and proprietary platforms such as X, LinkedIn, Facebook, YouTube, Reddit, Tumblr, Instagram, Threads, Snapchat, TikTok, etc. Web content is, by definition, public information and as such, no confidential or personally identifying

patient information will be published at any time. Postings on these networks that exude any unprofessional behavior should be avoided as it may reflect negatively on the University, the program, and also the profession that a student represents. In addition, postings on these networks should also not reflect negatively on the clinical institution, clinical staff, or any individuals. Recent court decisions have upheld dismissal of students from academic programs where the actions could be deemed as materially disruptive to the education process, i.e. actions that could impact the future viability of the program, such as clinical sites being uncomfortable accepting students because of current behaviors.

It is important for students to understand that many state and national organizations providing licensure, certification, and registration have established policies and procedures regarding patient confidentiality standards. Failure to protect patient privacy is considered an ethics infraction and may have an impact on one's future professional practice. Remember the following guidelines often referenced by others concerning the use of social media: Be respectful, be careful, be responsible, and be accountable. What students post online is not kept personal and is almost always permanent.

Be aware that in many instances around the country, involving both employees and students, such communications are not discovered because the institution is lurking online trying to find these things, but eventually someone who gains access to the post tells someone who is connected to the institution and at that point, the institution and clinic program cannot ignore what is being posted.

Washburn University's Social Media Policy can be found in the Policies, Regulations, and Procedures Manual at <https://www.washburn.edu/faculty-staff/human-resources/wuprpm/WUPRPM-Procedures-and-Regs/A.%20GeneralTopicsRegs.pdf>.

Health and Safety Policies

Washburn University is committed to providing a safe and healthy environment for its students, faculty, and staff and offers a range of services to support the physical and mental well-being of its community members. Students can read more about campus safety and security measures on the Washburn website at <https://www.washburn.edu/student-life/health-safety/index.html>. Policies that are of interest to distance education students include:

- ✓ **iAlert** (<https://www.washburn.edu/student-life/services/ialert/index.html>): iAlert will be used to notify students of closings due to emergency situations threatening the safety and security of campus. If Washburn University is closed, Medical Dosimetry students are not required to attend clinical.
- ✓ **Counseling services** (<https://www.washburn.edu/student-life/services/counseling/index.html>): Counseling services are available to all Washburn students at no cost; remote visits are an option for distance education students.
- ✓ **Online security** (<https://www.washburn.edu/its/accounts-access-mgmt/security.html>): Learn about avoiding email scams, protecting your devices and where to get help if you've been hacked.

- ✓ **Emergency Operations Plan** (https://www.washburn.edu/student-life/health-safety/safety-planning/files/PLAN_Sept_28_2011%20_1.pdf)

Health Insurance

Medical Dosimetry students must maintain health insurance coverage for the duration of the program. Students will be asked to submit a copy of their insurance card with coverage information prior to the program start date. The program will routinely request documentation of current health insurance coverage; a lapse in coverage will cause a student to be put on academic probation until health insurance is obtained. Students should notify the program director if any changes in health insurance coverage occur.

Washburn University offers health coverage for enrolled students and their family members at a reasonable cost. Information about university health plans can be found at <https://www.washburn.edu/student-life/services/health-services/files/Washburn-health-insurance-benefits-flyer.pdf>.

Injuries received at a clinical site during assigned clinical education will be treated at the student's expense.

Liability Insurance

Washburn University provides all enrolled students in the Medical Dosimetry program and other Allied Health programs with liability insurance. Students may obtain additional liability coverage if they choose.

Wellness Checks

Verified Credentials

The Medical Dosimetry program has partnered with Verified Credentials, LLC to validate student health records and conduct pre-entrance background checks and drug screens. Students will not be permitted to begin the program until all health, immunization, background, and drug screen checks have been completed.

Screening

Students must demonstrate that they are physically healthy and can perform the duties of a medical dosimetrist, with or without modifications, as indicated in the **Essential Functions Form**. Enrolled students may complete physical examinations at University Student Health Services free of charge. However, students are required to pay for any required laboratory work.

In addition to the completed physical examination, students will submit proof of immunization by submitting copies of their immunization records or titer results to Verified Credentials.

When students pay the fee to access Verified Credentials, a personal identification number (PIN) is purchased and will be used to obtain and successfully pass a 10-panel drug screen within 30 days.

Failure to complete the drug screen within the 30-day window will require the student to purchase a second PIN. A failed drug screen will lead to a standard retesting process. If failure of the drug screen is confirmed, a **Screening Discrepancy Review** will be initiated.

Background Check

A criminal background check will be required of all accepted Medical Dosimetry students prior to the program start date. Successful completion of the Medical Dosimetry program requires participation in clinical practicum courses. Students can only be placed in clinical practicum courses after a background check (at their expense) has been completed which discloses they do not present a criminal history of:

- ✓ Convictions of laws regulating controlled substances*
- ✓ Convictions at the felony level of crimes as defined under Kansas Criminal Code (K.S.A. 21-3101 et seq.) and amendments thereto, which are crimes against persons, crimes against property, or sex offenses
- ✓ Conviction of an offense requiring registry as a sex offender under the Kansas Offender Registry Act or any federal, military or other state law-requiring registry
- ✓ Conviction at the felony level of crimes involving moral turpitude which include but are not limited to: Perjury, bribery, embezzlement, theft, and misuse of public funds

*Exception: Individuals who have been convicted of a misdemeanor illegal drug offense *may* be permitted to participate in the clinical practicum, depending on the outcome of a **Screening Discrepancy Review**.

Screening Discrepancy Review

1. If a background check or drug screening report demonstrates a discrepancy, the program director will contact the university representative who has access to the details of these reports
2. The university representative will determine the cause of the discrepancy and communicate it to the program director
3. Medical Dosimetry program officials will review the nature of the discrepancy, and will determine whether the student will be permitted to continue in the program based on the following guidelines:
 - a. Discrepancies will be reviewed in accordance with state and [federal regulations](#) on mandatory exclusions
 - b. If the offense is related to a mandatory exclusion or if the offense is a misdemeanor illegal drug offense and the student is currently on probation for the offense, the student will not be permitted to start the program
 - c. If the offense is not related to a mandatory exclusion, or if the offense is a misdemeanor illegal drug offense and the student is NOT currently on probation for the offense, the student *may* be permitted to begin the program—the decision is left to the clinical site:

- i. To continue in the Medical Dosimetry program, the student must disclose the offense to the clinical preceptor at the assigned clinical site
- ii. The program director will follow up with the clinical preceptor at the assigned clinical site about the student's disclosure
- iii. If the disclosure prohibits student placement at the clinical site, the student will not be permitted to start the program
- iv. If the disclosure does NOT prohibit student placement at the clinical site, the student will be permitted to start the program

*Students are advised to research the **Ethical Standards and Ethics Complaint Procedures of the MDCB** (<https://mdcb.org/about-mdcb/ethical-standards>). Please note that Medical Dosimetry faculty are obligated to report ethical violations to the MDCB.

Alcohol and Drug Policy

As a recipient of federal student financial aid, Washburn University complies with all applicable U.S. Department of Education regulations regarding substance abuse. In accordance with these regulations, Washburn University and the Medical Dosimetry program strictly prohibit the unlawful possession, use, or distribution of illicit drugs and alcohol by students and employees on university property or as part of any university-sponsored activity (which includes clinical education). Violations of this policy may result in disciplinary action, up to and including program dismissal, as well as potential criminal prosecution under local, state, or federal law.

Washburn University is required to provide notice to all students upon enrollment of the possibility of losing eligibility for federal financial aid due to a drug-related violation of Federal or State laws. More information can be found at <https://www.washburn.edu/admissions/paying-for-college/financial-aid/Files/Non%20AY%20Specific%20Files/Drug%20Offenses%20and%20Financial%20Aid.pdf>.

Washburn University's **Statement of Prevention of Alcohol Abuse and Drug Use on Campus and in the Workplace** can be reviewed at <https://www.washburn.edu/admissions/paying-for-college/financial-aid/Files/Non%20AY%20Specific%20Files/Drug-Free-Workplace-and-Campus.pdf>. In accordance with this statement, the Medical Dosimetry program is permitted to conduct drug screening as a condition of clinical placement.

Sanctions for Alcohol and Drug Policy violations can be found in the Student Conduct Code at <https://www.washburn.edu/student-life/policies-forms/forms/Sanctions-for-Alcohol-and-Drug-Violations.pdf>.

Policy Changes

To ensure stability and fairness throughout the program year, Medical Dosimetry faculty strive to avoid implementing policy changes while students are actively in session. To maintain transparency and consistency, any changes to program policies are communicated through multiple channels:

1. To current students and clinical affiliates through prompt email notifications, D2L course announcements, and optional online information sessions
2. To incoming students and the public through dated document revisions and website updates
3. To faculty through department meetings and email notifications
4. To the Allied Health Department and external stakeholders through discussion of policy changes at Advisory Committee meetings

Clinical Education

Clinical education is a cornerstone of the Medical Dosimetry program. It provides students with the opportunity to apply classroom knowledge in real-world clinical environments, under the supervision of experienced professionals. This hands-on training is essential for developing the skills, judgement, and professionalism required for safe and effective patient care. Clinical education enables Medical Dosimetry students to:

- ✓ Apply knowledge by connecting classroom learning with clinical practice
- ✓ Develop technical skills through hands-on experience with treatment planning systems, imaging modalities, and dosimetric calculations
- ✓ Practice critical thinking by assessing clinical scenarios, evaluating treatment plans, and making informed decisions
- ✓ Demonstrate professionalism through ethical behavior, accountability, and effective communication
- ✓ Understand and apply safety protocols to minimize risk and ensure quality care
- ✓ Build confidence by progressively taking on more responsibility (under supervision) to prepare for independent practice
- ✓ Grow personally and professionally through structured feedback and performance evaluations, which will ensure readiness for board certification and employment

Clinical Placement

Washburn Medical Dosimetry is a newly established and growing program with a limited number of established clinical site agreements in place. Currently, it is the student's responsibility to identify and secure a clinical site that meets the program's accreditation and educational requirements and is willing to host them for the duration of their clinical training. Students will not be accepted into the program unless a clinical affiliation agreement has been signed, and the site is approved by the JRCERT.

Please note that an informal agreement or formal affiliation with a clinical site does not guarantee admission to the program. Admission decisions are made during the program application review

process, and clinical sites make the final determination each year regarding whether they will host a student.

Roles and Responsibilities

The goal of the Medical Dosimetry program is to provide a structured and supportive clinical education experience that promotes the development of confident, competent, and collaborative professionals. Success in the program relies on everyone—faculty, clinical preceptors and staff, and students—fulfilling their responsibilities and contributing to a positive, patient-centered learning environment. To achieve this:

Medical Dosimetry Program Faculty will:

- ✓ Maintain current knowledge of medical dosimetry practices and educational methodologies
- ✓ Provide a structured, supportive learning environment
- ✓ Ensure clinical sites and staff are adequately prepared to host students
- ✓ Seek feedback to improve the clinical experience
- ✓ Respond to concerns in a timely and appropriate manner

Clinical Preceptors will:

- ✓ Maintain current knowledge of the Medical Dosimetry program goals, policies, and evaluation system; be a resource for clinical staff regarding the program structure and expectations
- ✓ Manage the student's clinical schedule including modality rotations and assignment of direct supervision
- ✓ Understand and enforce the Direct Supervision Policy at all times
- ✓ Provide supervision, clinical instruction, encouragement, and timely feedback
- ✓ Complete competency evaluations and assessment documents as needed
- ✓ Communicate regularly with program faculty to coordinate learning objectives and address student progress or concerns
- ✓ Provide feedback to help program faculty improve the clinical experience
- ✓ Demonstrate current knowledge of the profession, clinical competence, and a commitment to lifelong learning

Clinical Staff (certified medical dosimetrists, medical physicists, radiation therapists, radiation oncologists, etc.) will:

- ✓ Be familiar with the Medical Dosimetry program structure, policies, and evaluation system
- ✓ Understand the Direct Supervision Policy and provide direct supervision of medical dosimetry students as needed
- ✓ Complete competency evaluations as needed
- ✓ Maintain a supportive and respectful learning environment
- ✓ Encourage students to practice critical thinking and problem-solving

- ✓ Provide students with constructive feedback and guidance
- ✓ Demonstrate current knowledge of the profession, clinical competence, and a commitment to lifelong learning

Medical Dosimetry students are expected to:

- ✓ Complete all didactic course requirements and be prepared for clinical duties
- ✓ Participate actively in clinical activities; seek learning opportunities
- ✓ Request and apply feedback to improve clinical performance
- ✓ Adhere to program and clinical site policies and professional standards
- ✓ Understand and apply effective safety measures including direct supervision during patient care procedures, radiation safety and ALARA principles, and MRI safety
- ✓ Communicate effectively with clinical supervisors, instructors, and the entire radiation oncology team
- ✓ Reflect on clinical experiences and strive for professional growth
- ✓ Provide feedback to help program faculty improve the clinical experience

Chain of Command

The chain of command refers to the structured hierarchy of authority and responsibility within the radiation oncology department. This structure ensures that communication, decision-making, and accountability flow in an organized and efficient manner. In medical dosimetry, a common chain of command is as follows:

1. Staff Medical Dosimetrist: Designs and develops radiation treatment plans under the supervision of the radiation oncologist and medical physicist; reports to the...
2. Chief Medical Dosimetrist: In larger departments, the Chief Medical Dosimetrist manages the team of dosimetrists; reports to the...
3. Medical Physicist: Oversee the technical aspects of radiation oncology, including equipment calibration, plan verification, and quality assurance; reports to the...
4. Chief Medical Physicist: In larger departments, the Chief Medical Physicist oversees the entire medical physics division, which includes the dosimetry team; reports to the...
5. Radiation Oncology Department Director: Manages the entire radiation oncology team, including dosimetry, radiation therapy, nursing, and ancillary staff; reports to the...
6. Radiation Oncologist: Responsible for all aspects of a patient's care, including prescribing and approving a course of radiation treatment

In a clinical education situation, the chain of command provides a safe, supportive learning environment for students. Medical Dosimetry students are expected to work within their scope of practice and experience, as defined by the Medical Dosimetry program and the clinical site policies. Students must always be supervised by a licensed oncology professional; clinical supervisors, instructors, and preceptors are available to answer questions and provide clarification. To the best extent possible,

students should use the following chain of command when seeking information, discussing mistakes, sharing concerns, or reporting grievances:

1. Immediate Clinical Supervisor (the licensed professional providing direct supervision at the time)
2. Clinical Site Clinical Preceptor
3. Medical Dosimetry Program Clinical Instructor
4. Medical Dosimetry Program Director
5. School of Applied Studies Allied Health Department Chair

Clinical Education Plan

In the Medical Dosimetry program, didactic coursework provides the foundational knowledge—such as anatomy, radiation physics, treatment planning, and safety principles—that students will apply during their clinical rotations. Clinical practice offers students the opportunity to reinforce and expand this knowledge through hands-on experience with patient cases, treatment planning systems, and interdisciplinary collaboration. Objectives and requirements for each Medical Dosimetry course are included in the corresponding syllabus and reviewed with students at the beginning of each semester.

During clinical education, the focus is on learning; **students should never be relied upon as staff dosimetrists**. Medical Dosimetry **students must be directly supervised** by a licensed radiation oncology professional at all times. Clinical supervisors must be in the area and available to provide guidance and answer questions as needed. **All tasks and treatment plans completed by a student must be reviewed and approved by a licensed supervisor prior to being used for clinical or treatment purposes.**

While didactic courses are organized in a somewhat linear manner, with each course building upon topics covered in previous semesters, it is understood that clinical education does not always follow the same timeline. Students may encounter procedures, technologies, or treatment planning techniques in the clinical setting before they are introduced in the classroom. Students are encouraged to take full advantage of every opportunity to observe and learn a new skill.

During the first summer semester, to prepare students to enter the clinic, didactic courses include an introduction to cross-sectional anatomy and a review of radiation safety principles, patient care practices, and the structure of the radiation oncology department.

Students will complete 3 consecutive semesters of clinical education, starting in the fall semester. Most clinical time should be spent in the dosimetry office working on treatment planning tasks; however, students will rotate through various spaces in the radiation oncology department to gain experience in all aspects of treatment planning and delivery. Participation in department meetings, including tumor board conferences and chart rounds, is expected.

The correlation between didactic concepts and the preferred schedule of clinical experiences is outlined below:

Fall Semester		
Didactic Course	Topics Covered	Clinical Experiences
AL634: Oncology Principles I	Radiobiology Epidemiology & etiology of cancer Treatment modalities	Clinical orientation (1-2 days) Clinic observation (scheduling, nursing, physician visits, etc.) (2-3 days) Tumor conferences (routinely)
AL636: RadOnc Treatment Planning I	General treatment planning principles Beam modification devices Electron beam planning Monitor unit calculations Special calculations and dose corrections	Dosimetry training (majority of clinical time) Chart rounds (routinely)
AL638: Radiation Physics	Atomic structure Characteristics of radiation X-ray and particle interactions Nuclear reactions and modes of decay Radiation dose measurement Radiation detection devices National standards for calibration and dose measurement	Physics—radiation dose measurements (as available)
AL640: Ethics & Professionalism	Ethical theories and principles Legal terms and examples Continuum of care Professional development Accreditation Diversity and culture	Department meetings (routinely)
AL660: Clinical I	Principles of X-ray production Imaging modalities and their role in treatment planning Virtual simulation Respiratory motion management IGRT	Simulation rotation (1 week) Radiation therapy observation (2-3 days) Dosimetry training (majority of clinical time)
Spring Semester		
Didactic Course	Topics Covered	Clinical Experiences
AL644: Oncology Principles II	Epidemiology, diagnosis, and management of various cancer disease sites	Chart rounds (routinely) Tumor conferences (routinely)
AL646: RadOnc Treatment Planning II	Properties of radionuclides Brachytherapy Proton therapy SRT, SRS, SBRT Craniospinal irradiation Total body and total skin electron radiation Intra-operative radiation therapy	Brachytherapy rotation (as available) Special procedures (as available) Dosimetry training (majority of clinical time)
AL648: Research Methodology	Research considerations AMA writing style Research design and data collection Statistics and data analysis Disseminating research	Discuss research ideas and opportunities with dosimetry/physics team
AL650: Quality Improvement	Continuous quality improvement Policies and procedures Internal and external auditing organizations	Physics—Treatment plan QA procedures (routinely) Physics—Machine QA (as available)

	Personnel monitoring Safety reports Commissioning and quality assurance	Radiation safety or Quality meetings (as available) Chart checks (1-2 per week)
AL665: Clinical II	Data acquisition and treatment planning preparation Treatment delivery considerations	Simulation rotation (2 weeks) Dosimetry training (majority of clinical time)
Summer Semester		
Didactic Course	Topics Covered	Clinical Experiences
AL670: Clinical III	Professional development MDCB exam application and preparation Clinical competency	Dosimetry training (majority of clinical time) Brachytherapy rotation (as available) Special procedures (as available) Chart rounds (routinely) Tumor conferences (routinely)
AL675: Capstone	Research project, QA project, or Mock board exam	Dosimetry training (majority of clinical time)

Observations and Simulations

If a student is unable to observe or participate in a procedure at their designated clinical site, an observation at another site may be arranged. If an observation site is not a JRCERT-recognized clinical affiliate of Washburn University and the Medical Dosimetry program, the student is not permitted to participate in or assist with the observed procedure in any capacity.

If a student is unable to complete a treatment planning competency due to not having a patient data set available, the activity may be completed via a simulated scenario or practice data set. Students must request permission from the clinical preceptor and instructor to use an old or practice data set for treatment planning competencies. Up to 3 competencies may be performed under simulated conditions (on a practice patient data set or via a course planning assignment).

Clinical Schedule

Each clinical course credit hour equates to approximately 115 clock hours of clinical time.

Students are allowed 40 hours of personal and 16 hours of discretionary time off during the program.

Total program clinical hours = 1264 (minimum) - 1320 (maximum)

First Summer Semester

No clinical education; online didactic courses only

Fall Semester

AL660: Medical Dosimetry Clinical I (4 credit hours):

32 hours of clinical per week, 15-week semester = 480 clock hours

40 hours of clinical, intercession following finals week = 40 clock hours

Holidays: Labor Day, Fall break, Thanksgiving
 Total clinical time = 496 clock hours (maximum)

Spring Semester

AL665: Medical Dosimetry Clinical II (4 credit hours):
 32 hours of clinical per week, 15-week semester = 480 clock hours
 40 hours of clinical, intercession prior to semester start = 40 clock hours
 Holidays: Martin Luther King, Jr. Day, Spring Break
 Total clinical time = 488 clock hours (maximum)

Second Summer Semester

AL670: Medical Dosimetry Clinical III (3 credit hours):
 40 hours of clinical per week, 8-week semester = 320 clock hours
 40 hours of clinical, intercession prior to semester start = 40 clock hours
 Holidays: Memorial Day, Juneteenth, Independence Day
 Total clinical time = 336 clock hours (maximum)

Program Calendar

Medical Dosimetry 2026-2027 Program Calendar	
2026	
May 21-22	On-campus program orientation at Washburn
May 26	First summer didactic courses begin
June 1	Last day to receive 100% tuition refund (summer)
June 8	Last day to receive 50% tuition refund (summer)
June 19	Juneteenth Holiday
July 1	Last day to withdraw from summer courses
July 3	Independence Day Holiday
July 16	Last day of summer courses
August 15	First day of fall didactic courses
August 17	First day of fall clinicals (32 hours per week)
August 28	Last day to receive 100% tuition refund (fall)
September 4	Last day to receive 40% tuition refund (fall)
September 7	Labor Day Holiday, no clinicals
September 11	Last day to receive 20% tuition refund (fall)
October 12 – 13	Fall Break, no clinicals
October 24	Open registration for spring semester begins (tentative)
November 25 – 27	Thanksgiving Holiday, no clinicals
November 27	Last day to withdraw from fall courses
Nov 30 – Dec 4	Success week, no clinicals except to make up time
December 7 – 11	Finals week, no clinicals except to make up time
December 14 – 18	Fall Intercession, 8 hours of clinical Mon-Fri (40 hours total)

December 21 – 31	Winter Break, no clinicals
2027	
January 1 – 8	Winter Break, no clinicals
January 11 – 15	Spring Intercession, 8 hours of clinical Mon-Fri (40 hours total)
January 16	First day of spring didactic courses
January 18	Martin Luther King, Jr. Holiday, no clinicals
January 19	First day of spring clinicals (32 hours per week)
January 29	Last day to receive 100% tuition refund (spring)
February 5*	Last day to submit Application for Graduation Last day to receive 40% tuition refund (spring)
February 12	Last day to receive 20% tuition refund (spring)
March 15 – 19	Spring Break, no clinicals
April 30	Last day to withdraw from spring courses
May 3 – 7	Success week, no clinicals except to make up time
May 10 – 14	Finals week, no clinicals except to make up time
May 15	Graduation Ceremony (Master of Science hooding)
May 17 – 21	Summer Break, no clinicals
May 24 – 28	Summer intercession, 8 hours of clinical Mon-Fri (40 hours total)
May 31	Memorial Day Holiday, no clinicals
June 1	Second summer didactic courses begin
June 1	First day of summer clinicals (40 hours per week)
June 7	Last day to receive 100% tuition refund (summer)
June 14	Last day to receive 50% tuition refund (summer)
June 18	Juneteenth Holiday, no clinicals
July 5	Independence Day Holiday, no clinicals
July 7	Last day to withdraw from summer courses
July 22	Last day of summer courses
July 23	Last day of summer clinicals, end of program!

Note: Detailed information about tuition fees, deadlines, and payments can be found on the Business Office website at <https://www.washburn.edu/student-life/business-office/index.html>.

Trajecsys

Medical Dosimetry faculty will use the web-based [Trajecsys Report System™](#) to monitor, collect, and securely store student records and clinical assessments. Each enrolled student will be required to pay a one-time fee of \$100.00 for the use of this system during the 14-month program. Fees are subject to change without notice and may be subject to applicable state and local sales tax.

If a student withdraws from the program in the fall, full refunds from the Trajecsys system are available for 30 days following the initial time record filing or evaluation in the system; no refunds will be made thereafter.

Within Trajecsys, **students** will:

- ✓ Clock in and clock out each clinical day and maintain an accurate, up-to-date clinical time record
- ✓ Check monthly updates from the clinical instructor on the Trajecsys homepage
- ✓ Track the progress of competency evaluations
- ✓ Confirm review of competency and clinical performance evaluations
- ✓ Complete checklists and logs of skill-related activity
- ✓ Submit scheduled self-evaluations and site evaluations
- ✓ Access program and clinical policies

Within this system, **Clinical Preceptors and designated staff** will:

- ✓ Approve student time records
- ✓ Complete competency evaluations and performance evaluations
- ✓ Complete student checklists
- ✓ Review student log sheet activities for accuracy
- ✓ Access program and clinical policies

Within this system, the **Clinical Instructor** will:

- ✓ Monitor and approve student time records
- ✓ Review and approve competency evaluations and performance evaluations
- ✓ Monitor completion of student checklists and activities
- ✓ Provide monthly updates of student requirements on the Trajecsys homepage

Clinical Assessment

Clinical assessment enables Medical Dosimetry faculty to monitor student progress and respond when additional support or resources may be needed. It also serves as a method to evaluate the effectiveness of the clinical site in providing a supportive and educational environment. When concerns arise—whether related to student performance or site conditions—faculty can intervene to ensure students have the necessary tools and opportunities to succeed.

Clinical Evaluations

1. Clinical Competencies—Completed by clinical supervisors and preceptors; assess student treatment planning competency; minimum number required varies by semester
2. Clinical Performance Evaluations—Completed by clinical preceptors; assess student professionalism, communication, affective skills, critical thinking, and knowledge application; 3 per semester
3. Academic and Professional Development—Student self-reflection and evaluation of academic performance, clinical experience, skills, confidence, and goals; 1 per semester
4. Clinical Site Evaluations—Student evaluation of clinical site experience, including opportunity to actively participate, level of support, quality of teaching, and professionalism; 1 per semester

Clinical Course Grading

Clinical course grading will follow the same scale as didactic classes:

95-100%	A
90-94.9%	A-
85-89.9%	B
80-84.9%	B-
70-79.9%	C (Probationary)
Below 70%	Failing (Dismissal)

Clinical course grades reflect not only technical skill development, but also professional growth and readiness for practice. Course assignments will vary by semester, but will include a combination of:

Clinical Competencies	Case Studies
Clinical Performance Evaluations	Discussion Boards
Professional Development Advising	Quizzes
Participation in Clinical Site Activities	Presentations
Completion of Clinical Site Evaluations	Writing Assignments

Clinical Competencies

To graduate from the Medical Dosimetry program, students are required to complete a total of 25 mandatory treatment planning competencies and 3 elective treatment plans. The **Master Competency Checklist** is based on the AAMD Curriculum Guidelines. These competencies are organized by anatomic region, and while there is no required sequence for completing them, students must meet a minimum number of competencies each semester:

- Fall semester: 6 competencies required
- Spring semester: 12 competencies required
- Summer semester: 10 competencies required

Master Competency List

The Master Competency Checklist and minimum required competencies are included in each clinical course syllabus, located in the D2L course. A copy can also be found in the Forms section of this manual.

Mandatory Competencies (25)
Head and Neck
Primary Brain (3D Conformal or IMRT/VMAT)
Primary Bilateral Head and Neck with Nodes (IMRT/VMAT)
Thoracic
Primary Lung (3D Conformal or IMRT/VMAT)
Primary Esophagus (IMRT/VMAT)

Intact Breast Tangents (3D conformal)
Chest Wall Tangents with SCV and Axilla Nodes (3D Conformal or IMRT/VMAT)
Abdomen
Primary Abdomen (Pancreas, GE Junction) (3D Conformal or IMRT/VMAT)
Para-aortic or Nodal Irradiation (3D Conformal or IMRT/VMAT)
Pelvis
3-Field Pelvis with Wedges (3D Conformal)
4-Field Pelvis (3D Conformal)
Prostate (IMRT/VMAT)
Pelvis and Nodes SIB (IMRT/VMAT)
Extremities
Limb Melanoma/Sarcoma (3D Conformal or IMRT/VMAT)
Brachytherapy
Interstitial Implant
Intracavitary Implant
Other
Craniospinal Irradiation
Palliative Whole Brain
Palliative Spine
Lymphoma/Mantle
Electron Beam Planning
Fusion (MRI, PET, etc.)
Re-Irradiation (same anatomical site, can be palliative)
Composite Planning (new site near previously treated area, can be palliative)
Stereotactic Body Radiation Therapy (SBRT)
Stereotactic Radiosurgery (SRS)
Elective Planning Activities (Must complete 3)
Total Body Irradiation (TBI)
Total Skin Electron Irradiation (TSEI)
Proton Treatment Planning
Prone Breast
Bilateral Breast (3D Conformal or IMRT/VMAT)
Chest Wall with Expander (3D Conformal or IMRT/VMAT)
Whole Brain with Hippocampal Sparing
Protocol Planning
Pelvis with Prosthesis (IMRT/VMAT)
Thorax with Pacemaker (3D Conformal or IMRT/VMAT)
Multiple PTVs with a Single Isocenter (3D Conformal or IMRT/VMAT)
Same Day Simulation, Planning, and Treatment

Guidelines for Competency Evaluations

Students are encouraged to begin with basic 3D conformal treatment plans and gradually progress to more advanced techniques as their skills develop. It is unlikely that a student with no prior dosimetry experience will be ready to complete a treatment plan independently within the first 6 weeks of the fall semester. Students should not feel rushed to begin demonstrating competency; take the time to observe, ask questions, and practice before requesting a competency evaluation.

Competencies should be performed on new patient data sets whenever possible. Students must request permission from the clinical preceptor and instructor to use an old or practice data set for treatment planning competencies. Up to 3 competencies may be performed under simulated conditions (on a practice patient data set or via a course planning assignment).

Students are not allowed to utilize auto-contouring, auto-planning, or other automated treatment planning tools during competencies. It is important that students can demonstrate the ability to perform treatment planning tasks manually, without the aid of automated processes. Once competency has been documented, students may use the automated tools that are used by staff dosimetrists, if they are approved to do so by the clinical preceptor.

To complete a treatment planning competency, **students** will:

1. Keep the Master Competency Checklist at their workstation and refer to it often; pay attention to the simulation schedule and be prepared to request to take the lead when a competency site is available for planning.
2. Review the **Competency Evaluation Form** to make sure that they feel comfortable and confident performing all the necessary tasks and answering questions about the case.
3. Identify who the supervising dosimetrist or physicist will be for the competency evaluation; this is the person who will be completing the Competency Evaluation Form (the 'evaluator'). Note: This does not have to be the clinical preceptor. Students will notify the supervising individual that they would like to plan the case for competency evaluation and get their approval to proceed.
4. Complete treatment planning independently within a reasonable amount of time. Students should initiate discussions (with the physician, radiation therapists, etc.) regarding the case. The evaluator may answer questions but should not guide treatment planning decisions.
5. When treatment planning is complete, notify the evaluator that they are ready for plan review and competency evaluation. Ideally, the evaluator will review the plan with the student prior to final physician review; however, this is left at the discretion of the clinical site.
6. To achieve a successful competency evaluation, students must earn a 'Pass' for all applicable planning tasks listed on the evaluation form. If a task is marked 'fail', the competency is considered failed and must be repeated at a later date, on a new data set.
 - a. There is no penalty for failing a competency, but repeatedly asking for evaluation prior to being prepared may result in **Conduct Review** and possible **Corrective Action**.

7. Students must upload a **Competency Case Study** for each *successful* competency evaluation to the clinical course in D2L by the end of the clinical week.
8. After the evaluator completes the Competency Evaluation form in Trajecsys, students must review and acknowledge the completed form. Steps for how to do this are included in the Clinical Manual.

To complete a treatment planning competency, **evaluators** will:

1. Determine whether they feel comfortable with the student's ability to independently complete treatment planning for the identified patient.
2. Allow the student to take the lead on all aspects of planning. Be available to answer reasonable questions, but do not guide treatment planning decisions.
3. Observe the student reviewing the plan with the physician; take note of how the student communicates during the interaction.
4. Assess each aspect of treatment planning with the student and ask open-ended questions related to pathology, imaging, patient factors, planning decisions, treatment side effects, etc. Provide appropriate feedback and constructive comments to help students enhance their planning techniques.
5. Complete the Competency Evaluation Form in Trajecsys prior to the end of the business day. Evaluation forms should be submitted every time a competency is attempted, even if the result is a failed competency.

To complete a treatment planning competency, **clinical course instructors** will:

1. Grade competency submissions at least once each week during the semester. Case studies will be graded and given a numeric score based on an assigned rubric; Competency Evaluations will be marked pass/fail in the gradebook after they are reviewed and acknowledged by the student.

Clinical Education Policies

Medical dosimetry students are expected to adhere to all policies outlined by the program as well as those established by their clinical site. In cases where clinical site policies are more restrictive than program guidelines, students must follow the more rigorous standards. As a representative of Washburn University, and an aspiring dosimetry professional, students should always behave in a safe, professional, and respectful manner while in the clinical setting.

Attendance

Consistent attendance during clinical rotations is essential to student success in the Medical Dosimetry program. Clinical experiences are carefully designed to develop technical skills, critical thinking, and professional competence—skills that cannot be fully acquired outside of the clinical environment. The program **Clinical Schedule** was outlined earlier in this document. The following policies further specify clinical attendance expectations.

Attendance Guidelines

1. The number of required weekly and semester clinical hours is included in each clinical course syllabus.
2. Students are expected to report for clinical duty in accordance with the **Clinical Schedule Worksheet** that was approved by the clinical preceptor and instructor prior to the start of the semester. Any deviations from the agreed-upon schedule must be approved and documented in advance.
3. Students must be supervised by a qualified radiation oncology professional during clinical hours; supervising staff must be on-site and available to the student at all times.
4. Students may not attend clinicals for more than 10 hours per day or 40 hours per week.
5. Students will clock in and out using Trajecsys.
6. Students are to remain on the clinical site premises while clocked in. Intentionally leaving the clinical site during scheduled hours while remaining clocked in constitutes falsifying records and will result in immediate dismissal from the program.
7. Daily clinical time does not include lunch or breaks; students must clock out during breaks. The length of the lunch break is determined by the clinical site. If a student is in clinic more than 6 hours in a day, a 30-minute lunch break will automatically be deducted from the clinical time. Students do not earn compensation time for a missed lunch break. Total daily clinical hours minus breaks must equal the number of hours indicated in the Clinical Schedule Worksheet.
8. Each semester's clinical schedule includes a one-week intercession period. As a result, the clinical calendar may not align exactly with the Washburn University academic calendar; however, clinical assignments will never be scheduled during *scheduled* university closure dates. The university academic calendar can be viewed at <https://www.washburn.edu/academics/academic-calendar-files/index.html>. Holidays and breaks will be listed in the clinical course syllabus and are included in the **Program Calendar**.
9. Students are **not permitted** to be compensated (paid as employees) during scheduled clinical hours.

Inclement Weather

Clinical weather closures are determined by the clinical site, not by whether Washburn University is closed due to inclement weather in Topeka.

1. If a clinical site is closed due to inclement weather, students at that site are excused from clinical hours that day. Students are permitted to miss up to 16 hours for inclement weather; additional time away due to weather closures will have to be made up. Clinical site closures must be communicated to the clinical instructor and verified by the clinical preceptor.
2. If a clinical site is open, but a student is unable to travel to the clinic, they must use personal time or make up the missed time later to cover the absence. Students must notify the clinical preceptor that they will be absent within one hour of clinical start time.

Clinical Absences

Absences from clinical rotations result in missed learning opportunities and reduce the time available to meet required clinical competencies. Additionally, a strong attendance record reflects a student's professionalism and reliability—qualities highly valued by future employers.

1. The minimum number of clinical hours required per semester is listed in the corresponding clinical course syllabus. Students must complete the minimum number of clinical hours to successfully pass the course.
2. Whenever possible, absences should be scheduled and approved by the clinical preceptor and clinical instructor in advance.
3. In the case of an unexpected and unscheduled absence, students must notify the clinical preceptor that they will be absent within one hour of clinical start time.
4. Students are expected to arrive in their designated work area prior to the clinical start time each day. Arriving more than 10 minutes after the start time constitutes tardiness. Students are allowed **one excused tardy** per semester.
5. Excessive unscheduled absences or tardiness will result in **Conduct Review** and possible **Corrective Action**. Corrective actions may include a documented warning, reduced clinical course grade, and program dismissal.

Personal Time Off (PTO)

Students are allowed 5 days (40 hours) of personal time off (PTO) during the program. Personal time must be scheduled and approved by the clinical preceptor and clinical instructor in advance.

Discretionary Time

In addition to PTO, students are allowed 2 days (16 hours) of excused discretionary time off during the program year. Discretionary time off does not have to be made up. Students may use discretionary time for absences due to:

1. Funeral attendance
2. Jury duty
3. Interview days
4. Military duty
5. Scheduled medical appointments and procedures
6. Inclement weather
7. Unexpected clinical site closure

Conference Attendance and Applications Training

Students are encouraged and permitted to attend professional conferences and vendor applications training. One day of conference attendance or training will equate to one day of clinical time; travel days do not count as clinical time. Conferences and vendor training must pertain to medical dosimetry

treatment planning and must be scheduled and approved by the clinical preceptor and clinical instructor in advance.

Scholarships are available for students who are interested in attending conferences or applications training. Please visit the AAMD Foundation website at <https://aamdfoundation.org/scholarships/> to learn more.

Compensation Time

Occasionally, students may need to arrive early or stay late in the clinic to observe or complete an activity. Time that extends beyond the scheduled clinical hours by more than 15 minutes will be compensated back to the student.

1. Compensation time will not be given for a missed lunch break.
2. Per JRCERT accreditation guidelines, students are not permitted to be in the clinic more than 10 hours per day or 40 hours per week.
3. No more than 2 hours of compensation time can be earned each month.
4. Students are strongly encouraged to use the compensation time within the month it is earned; compensation time will not be carried over to the next semester.
5. Students should notify the clinical preceptor and clinical instructor prior to using compensation time.

'Banking' Hours

'Banking' clinical hours is permitted only under extenuating circumstances (maternity or paternity leave, extended medical absence, etc.) and must be approved in advance by the clinical instructor, program director, and clinical preceptor. The process allows students to accrue additional clinical education hours prior to a planned absence. Approval is contingent upon the student's demonstrated need and satisfactory clinical progress, including the achievement of required clinical competencies. Per JRCERT accreditation guidelines, students are not permitted to bank hours by remaining in the clinic more than 10 hours per day or 40 hours per week.

Make-Up Hours

The minimum number of clinical hours required per semester is listed in the corresponding clinical course syllabus. Students must complete the minimum number of clinical hours to successfully pass the course. If a student does not meet the minimum number of clinical hours prior to the last day of class for the semester, clinical time must be made up prior to the beginning of the next semester.

1. All clinical competencies and evaluations must be completed before the final day of the academic semester; assessments may not be completed during make-up time.
2. Make-up time must be scheduled and approved in advance by the clinical preceptor and clinical instructor.
3. Make-up time is not permitted during holidays or scheduled university closures.

4. Per JRCERT accreditation guidelines, students are not permitted to be in the clinic more than 10 hours per day or 40 hours per week.
5. All university, program, and clinical site policies apply during make-up time, including the **direct supervision** policy.

Direct Supervision

In accordance with JRCERT accreditation standards, direct supervision is defined as oversight by a credentialed practitioner—such as a certified medical dosimetrist, credentialed medical physicist, licensed radiation oncologist, or registered radiation therapist—during all aspects of clinical procedures. Direct supervision is required regardless of whether or not a student has demonstrated competency.

The following Direct Supervision clinical education guidelines must be followed at all times:

1. A credentialed professional must be **physically** present during any **direct patient contact**, including simulation procedures, fabrication of immobilization devices, or any other patient-facing tasks. Under no circumstances may a student provide indirectly supervised or unsupervised care or treatment to any patient.
2. A credentialed professional must be present in the clinic and immediately available to students during clinical education hours.
3. **All calculations and treatment plans completed by Medical Dosimetry students must be reviewed and approved by a credentialed practitioner prior to implementation.**
4. Calculations and treatment plans must be verified and signed by a certified dosimetrist or medical physicist prior to treatment delivery.

This policy is in place to ensure patient safety, uphold professional standards, and support student learning through guided clinical experiences.

If a student feels pressured by the clinical staff to perform duties without direct supervision, the student must contact the clinical instructor and/or program director to report the issue.

On-Site Clinical Education Requirement

The Washburn University Medical Dosimetry Program strongly supports the value of in-person clinical education. Students gain the highest quality learning experience when they are physically present in the clinical environment, where they can engage in case discussions, ask questions in real-time, and participate in daily department activities alongside other radiation oncology professionals.

1. Students are required to be physically present at their assigned clinical site during all scheduled clinical hours.
2. A credentialed professional, preferably a certified medical dosimetrist (CMD), must be on-site to provide direct supervision at all times.

3. The clinical preceptor must be present in the clinic for a minimum of 16 hours per week while the student is on-site.

Remote Supervision

The Medical Dosimetry Program strongly prefers that students receive direct, on-site supervision from certified medical dosimetrists or other qualified radiation oncology professionals during all clinical education activities. Direct supervision ensures immediate guidance, promotes patient safety, and supports the highest standards of professional practice.

However, the program recognizes that circumstances may arise where remote supervision is necessary, such as when a certified practitioner is temporarily unavailable on-site. In these instances, remote supervision must be conducted in a manner that maintains patient safety and complies with institutional, state, and federal regulations. Remote supervision should include real-time communication and timely review of all treatment plans and calculations prior to implementation. Remote supervision is **not permitted** during direct patient care interactions, such as simulation or treatment delivery activities.

The program will monitor remote supervision to ensure compliance with accreditation standards and to uphold the integrity of clinical education. If the supervising CMD or clinical preceptor is off-site and remote supervision or communication is necessary, the following guidelines must be followed:

1. The plan for remote supervision must be documented and approved by the clinical preceptor and clinical instructor in advance (ideally at the beginning of the semester).
2. Real-time communication (e.g. video conferencing, secure messaging) must be used to maintain active supervision and feedback.
3. The supervising CMD must be readily available to review work, answer questions, and provide guidance during clinical hours.
4. All remote communications must occur through clinic-approved and secure HIPAA-compliant platforms.
5. Documentation of remote supervision (plan reviews, approvals, feedback, etc.) must be maintained in accordance with program and clinical site policies.
6. Remote supervision does not replace the requirement for in-person supervision during direct patient contact or procedures involving patient safety.

Dress Code

The way we present ourselves communicates professionalism and respect to both patients and staff. Clothing and grooming choices should reflect the standards of the clinical environment and support a positive, trustworthy image. Dress and appearance expectations are determined by the policies of each clinical site and will be communicated to students during their clinical site orientation. While specific

requirements may vary, students are expected to maintain a professional appearance at all times. Dress code guidelines include, but are not limited to:

Clothing

- ✓ Solid-colored or neutral scrubs (if worn by dosimetrists at the clinical site)
- ✓ Professional business casual attire (slacks, blouse, button-down or polo shirt, etc.)
- ✓ Clean, wrinkle-free clothing
- ✓ White lab coat (if required by clinical site)
- ✗ No jeans, leggings, or shorts
- ✗ No t-shirts with logos or graphics
- ✗ No low-cut tops or crop tops
- ✗ No skirts above the knee

Footwear

- ✓ Closed-toe, non-slip shoes
- ✓ Clean and in good condition
- ✗ No sandals, flip-flops, or high heels

Accessories

- ✓ Minimal jewelry
- ✗ No dangling or excessive accessories
- ✗ No visible tattoos or body piercings (refer to clinical site policy)

Identification

- ✓ University or clinical site ID badge worn and visible at all times

Personal Hygiene and Grooming

- ✓ Daily bathing and use of deodorant
- ✓ Neatly groomed hair (tied back if long)
- ✓ Fingernails clean and trimmed
- ✗ No artificial nails or bright polish
- ✗ No strong fragrances

Confidentiality

Students in the Medical Dosimetry program work with medical records of actual patients in health care facilities and in the classroom. Students may receive direct or indirect information about current or former patients from other employees, other students, or faculty. Any information, whether written, oral, or electronic format, having any relevance to patient care, is strictly confidential and is to be maintained in a secure manner. Many state and national organizations providing licensure, certification, and

registration have established policies and procedures regarding patient-confidentiality standards. Failure to protect patient privacy is considered an ethics infraction and may have an impact on one's future professional practice. The confidentiality of the patients' records must be maintained for legal and ethical reasons, including confirmation that a patient is receiving treatment.

- ✓ Students will maintain strict confidentiality of all health information of patients at clinical sites during and after their clinical rotations
- ✓ Students may neither use nor disclose health information of patients to which they have access, other than as expressly authorized by the clinical site
- ✓ Students may not record any patient-identifiable information on personal documents
- ✓ Students agree to keep all patient/client information confidential according to HIPAA Privacy laws
- ✓ Students who breach patient confidentiality, where sufficient evidence exists, may be dismissed from the Medical Dosimetry program

Cell Phone Policy

When using a cell phone, it is impossible for others to know whether you are accessing educational resources or engaging in personal activities. Even if the intent is academic, frequent or visible phone use can appear unprofessional and may raise concerns among patients, staff, and supervisors. To maintain a respectful and focused clinical atmosphere, student must adhere to the following cell phone guidelines:

1. Cell phones must be silenced or in 'do not disturb' mode during clinical hours.
2. Cell phone use is not permitted in patient care areas, treatment planning rooms, or during active clinical instruction. Students should only use personal phones during designated break times and in approved non-clinical areas.
3. Emergency calls should be taken away from work and patient care areas and kept brief.
4. Use of cell phones for clinical education purposes must be pre-approved by the clinical preceptor and used only when appropriate.
5. Taking photos, videos, or audio recordings in the clinical setting is strictly prohibited, unless authorized for educational purposes and in compliance with HIPAA and clinical site policies.
6. Use of social media during clinical hours, other than during break times, is unprofessional and not permitted.
7. Violation of the cell phone policy will result in **Conduct Review** and possible **Corrective Action**. Corrective actions may include a documented warning, reduced clinical course grade, and program dismissal.

Consensual and Familial Relationships

The Medical Dosimetry program follows the university guidelines on consensual and familial relationships, which can be found in section B.5 of the Washburn University Policies, Regulations, and Procedures Manual at <https://www.washburn.edu/faculty-staff/human-resources/wuprpm/WUPRPM-Procedures-and-Regs/B.%20Recruitment-EmploymentRegs.pdf>.

Washburn University prohibits any amorous relationship between students and educators, advisors, clinical preceptors or any other individuals in the clinical setting that hold positions of authority and manage, teach, supervise, advise, or evaluate the student in any way. Any individual aware of such a relationship is obligated to report it to the program director. In the event of a familial relationship between a student and any individual at the clinical setting or within the program, the relationship should be disclosed to the program director so a mitigation plan can be established to void issues of conflict of interest and the potential for exploitation or the appearance of exploitation or favoritism.

Substance Abuse Procedure

Students should review the **Alcohol and Drug Policy** located earlier in this document.

The Medical Dosimetry program follows the AAMD Code of Ethics, which requires every provider and student to maintain a competent level of professional practice. In accordance with this Code and Allied Health Department policy, students participating in clinical education must be unimpaired by the consumption of alcohol or controlled substances. Students who are found to be under the influence of drugs or alcohol are subject to disciplinary action up to and including program dismissal.

Procedure for Suspected Substance Use

1. **Reasonable Suspicion Criteria**—Reasonable suspicion that a student is under the influence of a substance may exist when:
 - a. A controlled substance, alcoholic, or cereal malt beverage is in the possession of the student or under his/her control (e.g., on their person, in a backpack, locker, or vehicle)
 - b. Observable behaviors or physical signs of suggested impairment, including, but not limited to: Increased drowsiness, decreased motor coordination, changes in pupil size, excitation, euphoria, odor of alcohol, intoxicated behavior without alcohol odor, increased or repeated errors, decreased concentration, memory problems, notable change in verbal communication (stuttering, loud, incoherent, slurred, etc.) or written communication, frequent or unexplained disappearance, irrational or aggressive behavior (verbal or physical) and/or disorientation
2. **Clinical Site Action**—If a student shows signs of possible impairment, the Clinical Preceptor or designated site contact will:
 - a. Evaluate whether possession or behavior change(s) constitute reasonable suspicion that a student is under the influence of controlled substance(s) or alcohol
 - b. Document the observed behaviors and any related findings
 - c. In the presence of a witness, request a list of current medications the student is taking (prescription and over-the-counter)
 - d. Notify the appropriate administrator at the health facility and the Medical Dosimetry program clinical instructor
 - e. Relieve the student from performing any further duties at the clinical facility

- f. In the presence of a witness, present the student with the **Consent/Refusal Form for Drug and Alcohol Testing** (located in the Forms section of this manual)
- g. If the student consents, testing will be arranged as soon as reasonably possible. If testing is not available on-site, the student will be taken to a qualified external testing facility. If testing cannot be completed the same day, it must be completed no later than the end of the following calendar day
- h. The student is responsible for all costs associated with drug or alcohol testing
- i. If there are concerns regarding the student's ability to safely transport themselves, the Clinical Preceptor will assist in coordinating transportation (e.g., Uber, Lyft, or similar ride service) to ensure the safety of the student and others. The cost of transportation will be the responsibility of the student
- j. If the student refuses to provide a sample for testing or fails to complete the test within the required timeframe (by the end of the following calendar day), the action will be treated as a violation of this policy. Failure to comply may be considered equivalent to a positive test result and will be referred to the Chair of the Allied Health Department for disciplinary action, which may include suspension or dismissal from the program

3. **Program-Initiated Testing**—In the event the clinical site does not request drug or alcohol screening, the Medical Dosimetry program reserves the right to require testing based on:
- a. Information reported by the clinical site about concerning behavior or suspected impairment
 - b. Student conduct that appears inconsistent with safe or professional clinical practice
 - c. A documented pattern of behavior suggesting possible substance use or impairment

All timelines, procedures, and consequences outlined in Section 2 (Clinical Site Action) also apply to program-initiated testing. This includes expectations for consent, completion of testing no later than the end of the following calendar day, responsibility for testing costs, transportation considerations, and disciplinary action in the event of refusal, failure to test, or a positive result.

Drug or alcohol testing, whether requested by the clinical site or initiated by the program, may include, but is not limited to, the following tests: Blood alcohol, urine drug screen for street/illegal drugs (amphetamines/methamphetamines, cocaine, class opiates, phencyclidine (PCP), marijuana, class barbiturates, and class benzodiazepines), urine drug screen for prescription drugs

4. **Post-Test Procedure**—After the student completes the consent form and the testing process, they will be dismissed from clinical duties for the remainder of the day. The student will not return to the clinical setting until test results are reviewed, and a determination is made by the clinical instructor. Follow-up communication will be provided to the student regarding the next steps. Clinical hours missed during this period must be made up if it is found that the student is cleared to return to clinical.

5. **Test Result Outcomes**—If test results are negative, the student may return to their clinical assignment following consultation with the clinical instructor. A positive test result will be reported to the Chair of the Allied Health Department for review and disciplinary action, which may include program suspension or dismissal.

All records related to suspected use, testing results, and disciplinary actions will be maintained in accordance with FERPA regulations and institutional policy. Information will only be shared with individuals directly involved in the review and disciplinary process.

6. **Students may appeal** any disciplinary action related to this policy by following the Grievance Policy for Student Program Status (located earlier in this document)

Clinical Misconduct

Medical Dosimetry students are expected to uphold a high level of personal and professional conduct while attending clinical education. If a supervising dosimetrist or clinical preceptor deems a student's conduct inappropriate, the student may be immediately removed from the clinical site. Examples of inappropriate behavior include, but are not limited to:

- ✓ Breach of patient confidentiality or HIPAA violations
- ✓ Disrespectful or unprofessional communication with staff, patients, or peers
- ✓ Failure to follow clinical protocols or safety procedures
- ✓ Insubordination or refusal to follow instructions from clinical supervisors
- ✓ Tardiness, absenteeism, or leaving the clinical site without permission
- ✓ Use of personal electronic devices in restricted areas or during patient care
- ✓ Any form of harassment, discrimination, or threatening behavior
- ✓ Being under the influence of drugs or alcohol while on duty

The Medical Dosimetry program procedure for clinical misconduct is as follows:

1. Clinical supervisors and/or preceptors must report misconduct incidents to the clinical instructor and program director before the end of the business day.
2. The report will initiate the **Conduct Review and Corrective Action Process**, outlined earlier in this document.
3. Students may not return to the clinical site until they have been given permission by the clinical preceptor and the program director.
4. Students will have to make up any clinical hours lost due to being sent home for inappropriate conduct. Personal time off and discretionary time may not be used to cover hours missed due to clinical misconduct.

School of Applied Studies Disruptive Student Policy

In the instance a student is asked to leave a clinical site due to misconduct, the (Medical Dosimetry) program director must notify the (Allied Health) department chair, who will notify the Dean's office and the Dean of Students. The program director will submit a report on the incident as soon as possible. Since the situation was serious enough to warrant removal from the clinical setting, the student will be informed that they may not return until the issue has been satisfactorily resolved. This constitutes suspension from the clinical site and begins a review process.

The Associate Vice President for Student Life shall be the principal officer responsible for implementing the Student Conduct Code (see below). The Associate Vice President or his/her designee shall provide due process for students by following the proper steps related to the initiation, investigation and disposition of complaints against a student. The Dean of Students will be informed of all actions, but a meeting with the Dean of Students will be dependent on the situation, the due process rights of the student, and the nature of the sanctions, if any, imposed on the student. If the violations are severe and conform to the disciplinary code violations of the university as determined by the Dean of Students, a student may be withdrawn from the clinical site and, possibly, the university.

Washburn University Policy

Medical Dosimetry students must act in accordance with Washburn's Student Conduct Code, which can be found at https://www.washburn.edu/student-life/services/files/Student_Conduct_Code.pdf. The Student Conduct Code applies to behaviors that take place on the campus, at Washburn University-sponsored events, and may also apply off-campus when the Associate Vice President for Student Life, or designee, determines that the off-campus conduct affects a substantial university interest on any Washburn University or Washburn Tech campus. Clinical education is considered a university-sponsored activity. Conduct violations that warrant disciplinary action include:

- ✓ Any situation where it appears that the student's conduct may present a danger or threat to the health or safety of themselves or others; and/or
- ✓ Any situation that significantly impinges upon the rights, property, or achievements of self or others or significantly breaches the peace and/or causes social disorder; and/or
- ✓ Any situation that is detrimental to the educational mission and/or interests of Washburn University

The Washburn University Student Conduct Code Process is outlined in the following document: <https://www.washburn.edu/student-life/policies-forms/forms/student-conduct-process-overview.pdf>. Student Conduct reporting forms can be found on the Student Life website at <https://www.washburn.edu/student-life/policies-forms/academic-policies.html>.

Sexual Harassment

As explained on [Washburn's Equal Opportunity—Discrimination](#) webpage, sexual harassment may occur if submission or rejection of such conduct is made a term or condition of an individual's employment or education or if employment or academic decisions are made based on an individual's submission to or rejection of such conduct. Sexual harassment may also occur if the conduct has the purpose or effect of unreasonably interfering with an individual's work or educational performance or it creates an intimidating, hostile, or offensive work, educational, or on-campus housing environment for the individual.

Students are asked to report any instances of sexual harassment to the clinical instructor and/or program director. For documentation purposes, the student will be asked to write a narrative description of the incident. Medical Dosimetry faculty will schedule a meeting to discuss the situation with the student and the clinical preceptor. If necessary, the Allied Health Chair and the Associate Dean of the School of Applied Studies may also be consulted.

Formal complaints related to sexual harassment may also be filed directly with the university. Complaints can be made electronically, by mail, or in person. Instructions for filing a formal complaint can be found at <https://www.washburn.edu/statements-disclosures/equal-opportunity/how-to-file-a-complaint.html>.

Reports of sexual harassment will be reviewed and addressed by the Equal Opportunity Director/Title IX Coordinator:

Michele White-Godinet
Morgan Hall, Room 200K
eodirector@washburn.edu
785-670-1509

The Equal Opportunity Office also provides supportive measures for students who have experienced harassment or discrimination; students do not have to file a formal complaint to receive supportive measures. Supportive measures are explained in the *Title IX Frequently Asked Questions* on the Washburn website at <https://www.washburn.edu/statements-disclosures/equal-opportunity/title-IX-FAQ.html>.

University Counseling Services offers free, confidential counseling to students on any topic, including experiences with sexual assault or relationship violence:
<https://catalog.washburn.edu/graduate/student-life/office-student-life/student-health-counseling-service/>.

Clinical Grievance Process

The Medical Dosimetry program recognizes that conflicts or disagreements may occasionally arise in clinical settings for various reasons. Whenever possible, students are encouraged to address and resolve minor concerns independently. In situations requiring further attention, students should follow the appropriate chain of command by first reporting to their direct supervisor or clinical preceptor.

If a student fears retaliation, if the issue impacts multiple students, or if the concern remains unresolved, the clinical instructor or program director will intervene to provide support. For more serious or ongoing concerns, students should follow the formal **Grievance Process** outlined earlier in this document.

Incident Reporting

Despite best efforts, clinical incidents—such as procedural errors, equipment malfunctions, or safety concerns—are not uncommon. Incident reporting is a professional obligation; prompt and accurate reporting is essential to ensure patient safety, support continuous improvement, and foster a culture of accountability and learning.

Medical Dosimetry students should follow these steps to report a clinical incident:

1. Ensure immediate safety: Prioritize the safety of patients and staff; follow clinical site emergency procedures if necessary.
2. Notify the clinical supervisor or preceptor: Report the incident to your direct supervisor as soon as possible and explain the incident.
3. Complete the clinical site's incident report: Follow the clinical site's specific procedures for documenting the incident.
4. Notify Medical Dosimetry faculty: Inform the clinical instructor of the incident within 24 hours of the event. A sample Incident Report Forms is located in the Forms section of this manual.
5. Participate in follow-up: Cooperate with any follow-up actions, including debriefings, evaluations, or corrective measures. Remember, the goal is to support learning and prevent future occurrences, not punishment.

Infectious Disease

Prior to beginning their clinical experience, students will review universal precautions and methods to reduce exposure to and infection from communicable diseases. During clinical orientation, students will also learn the procedure for reporting infectious diseases at their designated clinical site.

Patients

Students are expected to use standard universal precautions when providing care to patients with known infectious diseases. If exposure occurs or is suspected, students should report the incident to the clinical preceptor and submit a Clinical Incident Form (in Trajecsys) to the program faculty. Recommendations for further testing and follow-up will be made on a case-by-case basis.

Students

Many of our oncology patients are immunocompromised, and the medical dosimetry team often works in close proximity to one another. It is common courtesy and proper infection control to remain at home if you are not feeling well. Students with an infectious disease are **not** permitted to attend clinical education. Students must send an email within one hour of the clinical start time to inform the clinical preceptor and the program director that they will be absent. Students are permitted one day of absence for an illness. If a student misses more than one day due to symptoms from an infectious disease, they must submit a **Physician Release Form** to the clinical preceptor before returning to clinical duties.

Radiation Safety

The Medical Dosimetry program's radiation safety policies are designed to ensure the health and protection of students, patients, and the public. Students will review radiation safety practices prior to the start of their clinical experience.

The following radiation protection guidelines will be followed while in the clinic:

- ✓ During clinical orientation, students will visit with the Radiation Safety Officer (RSO) and become familiar with the department's radiation safety policies and procedures
- ✓ Students will wear a radiation monitoring device at all times; students will not be permitted to remain in the clinic if they are not wearing a monitoring device
- ✓ Students will practice basic ALARA (as low as reasonably achievable) principles; students are not allowed in the simulation or treatment rooms when radiation is present
- ✓ Students will wear appropriate lead shielding and additional monitoring devices (rings, etc.) when assisting with brachytherapy procedures

Treatment Planning Considerations

Medical dosimetrists play a vital role in reducing patient exposure to unnecessary radiation. During treatment planning, students should keep the following in mind:

- ✓ Medical dosimetry students will be supervised at all times; all clinical work and treatment plans will be reviewed prior to initiating treatment
- ✓ During simulation, the patient should be positioned to ensure comfort, reproducibility, and the most direct beam path to the target; immobilization devices should be properly utilized to limit patient motion during treatment
- ✓ Treatment goals and normal tissue constraints should be reviewed with the supervising medical dosimetrist and/or radiation oncologist prior to treatment planning
- ✓ Beam arrangements and field sizes should be selected to minimize the amount of tissue in the path of the radiation beam
- ✓ Errors or discrepancies should be communicated to the appropriate supervising staff person as soon as they are discovered

Personnel Monitoring Device

Clinical sites will issue a radiation monitoring device to each student assigned to the department. If the student is employed at the clinical site or at another facility, a separate 'employee' radiation monitoring device must be worn during work hours.

- ✓ Always wear the radiation monitoring device at collar level while in the clinic
- ✓ Radiation monitoring devices will be left in the department in the designated area when not being worn; they are not to be worn home
- ✓ Report any damage to or loss of monitoring devices to the Clinical Preceptor immediately
- ✓ Report equipment malfunctions to the radiation safety officer (RSO) immediately
- ✓ For occupational radiation workers [NRC 10 CFR Part 20](#) and [Kansas Administrative Regulation 28-35-212a](#) recommend the more limiting of either of the following doses:
 - Annual effective dose equivalent limit of 5 rem (0.05 Sv)
 - Annual eye dose equivalent of 15 rem (.15 Sv)
 - Annual shallow dose equivalent to the skin or extremities of 50 rem (0.5 Sv)
- ✓ The Medical Dosimetry program limits student whole body exposure to not more than .05 rem (50 mrem) per month

Each month or quarter, depending on the clinical site's standard interval, the radiation safety officer (RSO) at the clinical site will collect the monitoring device for processing and distribute a new monitoring device. The radiation monitoring report will be available at the clinical site without public release of personal identification, such as a Social Security number. After each collection:

1. Students will review the dose report with the radiation safety officer within 30 days of receiving the report
2. A copy of the student's dose reading will be submitted to the clinical instructor; reports will be uploaded to the D2L classroom
 - a. The uploaded report must not contain identifiable information for any other staff members
3. The clinical instructor will review dose reports as they are submitted
 - a. If the report values are less than 50 mrem/month, no action is necessary
 - b. If the report value exceeds 50 mrem/month, the clinical instructor will communicate with the clinical preceptor and the student to investigate the cause(s) of the excess dose
 - i. The clinical instructor will complete an incident report to document the dose reading, any identified causes, and corrective actions to prevent further exposures.
 - ii. The incident report will be reviewed with and signed by the student and the radiation safety officer at the clinical site

MRI Safety

Magnetic Resonance Imaging (MRI) utilizes powerful magnets and radio waves to generate images of the body. MRI imaging may be used during the radiation therapy treatment planning process or in the treatment room as a form of image-guided radiation therapy (IGRT).

The strong magnet used in MRI is always turned on and can be hazardous to individuals entering the MR environment if they have certain metallic, electronic, magnetic mechanical implants/devices/objects. Students with certain implanted devices, such as pacemakers, cochlear implants, defibrillators, neurostimulators, aneurysm clips, and some infusion pumps will not be allowed in the MRI environment.

To ensure the safety of students, each Medical Dosimetry student will be pre-screened during program orientation for a history of injuries and/or implanted devices. Individuals with bullets, shrapnel, or metallic fragments in the body could be at risk of these materials changing position and causing injury. The magnetic field of the scanner can also damage external hearing aids and cause a pacemaker to malfunction.

Loose metallic objects are especially prohibited in the MR room. These objects can become projectiles within the scanning room causing serious injury or death and/or equipment failure. Prior to entering the MR environment, students must remove all metallic objects. Prohibited items include, but are not limited to:

- ✗ Any article of clothing that has a metallic zipper, buttons, snaps, hooks, or under-wires
- ✗ Electronic devices such as beepers or cell phones
- ✗ Eyeglasses
- ✗ Hairpins, barrettes
- ✗ Hearing aids
- ✗ Jewelry (including body piercing jewelry), watches
- ✗ Keys
- ✗ Money clip, credit cards, bank cards, magnetic strip cards, coins
- ✗ Pens, safety pins, paper clips
- ✗ Pocket knife, nail clipper, tools
- ✗ Steel-toed boots/shoes

If there are questions or concerns regarding an implant, device, or object, please consult the supervising staff BEFORE entering the MR Environment.

Medical Dosimetry students must be directly supervised by a certified dosimetrist or other appropriately credentialed staff at all times. This direct supervision policy is no different when participating in a rotation that involves MRI imaging. Students must comply with the assigned clinical site's policies and procedures pertaining to MRI safety. Clinical preceptors may send a student home for failure to comply

with the site's MR safety policies and procedures. Failure to comply with the MRI safety policies will lead to counseling as described in the Conduct Review and Corrective Action Process.

Prior to entering the clinical setting, students must complete the **MRI Screening Questionnaire**, located in the **Forms** section of this manual. The questionnaire will be reviewed by the Medical Dosimetry program director prior to the first day of clinical education. The completed MRI Screening Questionnaire will be placed in the student's program file for documentation. The questionnaire will be shared with the clinical preceptor at the student's assigned clinical site. If the answer to any question in the questionnaire is "yes" or if there are questions or concerns regarding student safety due to potential dangers of implants or foreign bodies, the program director will work with the clinical preceptor to determine the student's eligibility to enter the MR environment. Additional screening may be required to ensure student safety.

If at any point in the program the status of the student's screening questionnaire responses should change, the student must notify the program director immediately to re-evaluate the student's continued eligibility to enter the MR environment.

Pregnancy Notice: The declared pregnant student who continues to work in and around the MR environment should not remain within the MR scanner room or Zone IV during actual data acquisition or scanning.

Pregnancy

The Medical Dosimetry program adheres to guidelines established by the U.S. Nuclear Regulatory Commission (NRC), which states that "Dose to an Embryo/Fetus," requires licensees to "ensure that the dose to an embryo/fetus during the entire pregnancy, due to occupational exposure of a declared pregnant woman, does not exceed 0.5 rem (5 mSv)." The NRC Regulatory Guide 8.13 regarding *Possible Health Risks to Children of Women Who are Exposed to Radiation During Pregnancy* is included in Appendix B.

Working in an environment where radiation is present increases the risk of prenatal exposure to radiation. Medical Dosimetry students should review the NRC Regulatory Guide and decide whether they are willing to accept this risk.

Declaring Pregnancy

Students are not required to formally declare a pregnancy; declaration is *voluntary*. Formal declaration of pregnancy must be submitted in writing to the program director; the **Declaration of Pregnancy Form** is included in the **Forms** section of this manual. Students also have the right to undeclare pregnancy at any time by submitting a revised Declaration of Pregnancy Form to the program director.

1. Upon receipt of the **Declaration of Pregnancy Form** and a positive declaration of pregnancy, the program director will schedule a meeting with the student and the radiation safety officer to review exposure precautions and additional radiation monitoring procedures.

2. Following the meeting, the student must submit the **Pregnancy Decision Form** (included in the Forms section) to the program director, indicating her decision to proceed with one of the following options:
 - a. Remain in the Medical Dosimetry program without modifications to the class and clinical schedules
 - i. Students are strongly encouraged to discuss the potential risks of prenatal radiation exposure with their personal physician
 - ii. A pregnant student who elects to proceed in the program without modifications will adhere to all established program policies and follow the same educational and clinical schedule as other students in the cohort
 - iii. If birth occurs during the program year, post-partum maternity leave will be at least six weeks long; the length of maternity leave will be determined by the student's attending physician
 - iv. Prior to returning from maternity leave, students must submit the **Physician Release Form** to the program director
 - b. Remain in the Medical Dosimetry program with modifications to the class and/or clinical schedules to reduce the risk of radiation exposure and allow time off for post-partum care
 - i. Students should discuss changes to didactic class schedules (assignment due dates, exam dates, etc.) with individual course instructors
 - ii. The clinical instructor will coordinate changes to the clinical schedule to avoid time in high-exposure areas (such as brachytherapy); students may 'bank' clinical hours ahead of time to prepare for parental leave
 - iii. All educational and clinical requirements must be completed before a student is eligible for graduation from the Medical Dosimetry program and MDCB exam registration; schedule modifications may result in delays
 - iv. If birth occurs during the program year, post-partum maternity leave will be at least six weeks long; the length of maternity leave will be determined by the student's attending physician
 - v. Prior to returning from maternity leave, students must submit the **Physician Release Form** to the program director
 - c. Take a leave of absence from the Medical Dosimetry program
 - i. Medical Dosimetry courses are only offered one time each cohort year; a leave of absence will delay graduation and MDCB exam eligibility by at least one year
 - ii. Admitted students who elect to take a leave of absence due to pregnancy will be allowed to rejoin the program during the appropriate semester of the following cohort year (re-application is not required)
 - d. A declared pregnant student can change her modification status at any time by sending a revised Pregnancy Decision Form to the program director

3. All students who have declared pregnancy in writing, regardless of their decision about modifications, will abide by the following rules regarding radiation monitoring during pregnancy:
 - a. The declared pregnant student will sign clinical facility forms as necessary
 - b. The declared pregnant student will abide by the program and clinical facility radiation safety guidelines
 - c. The declared pregnant student will be provided with a second personnel radiation monitor with instructions to wear it at waist level and under the protective apron (when utilized)
 - d. The student will submit radiation monitor report data within Trajecsys for the first and second radiation monitoring devices. The submitted radiation monitoring report data associated with the second badge should reflect that it is a fetal dose monitor. If the second radiation monitoring device (fetal monitor) suggests the dose to the fetus may be approaching recommended limits, the individual will be removed from areas where radiation hazards exist. The NCRP recommends that fetal exposure be restricted to an equivalent dose of 0.05 rem per month.
4. Program documentation:
 - a. The program director will communicate directly with the clinical facility regarding pregnancy declarations and will follow up to ensure discussions have taken place between the student and clinical staff regarding radiation safety guidelines and facility-specific policies
 - b. All forms related to the declaration of pregnancy will be maintained in the student's program file
 - c. Copies of all forms related to the declaration of pregnancy will be shared with the clinical preceptor and radiation safety officer at the clinical facility
 - d. Conversations about the declaration of pregnancy, whether via email or telephone, will be documented and maintained in the student's program file

Policy Changes

To ensure stability and fairness throughout the program year, Medical Dosimetry faculty strive to avoid implementing policy changes while students are actively in session. To maintain transparency and consistency, any changes to program policies are communicated through multiple channels:

1. To current students and clinical affiliates through prompt email notifications, D2L course announcements, and optional online information sessions
2. To incoming students and the public through dated document revisions and website updates
3. To faculty through department meetings and email notifications
4. To the Allied Health Department and external stakeholders through discussion of policy changes at Advisory Committee meetings

Resources

Textbook List and Ordering Instructions

The textbook list includes the required books for the entire length of the program. Ideally, students should order all textbooks prior to the start of the summer semester. Book prices listed are direct from the publisher and may vary from prices provided by the university bookstore. If ordering from an outside source, students should verify that they are ordering the correct edition of each textbook. Since textbooks will be used for multiple courses, textbook rental is not recommended.

Medical Dosimetry Program Textbook List

Khan's Treatment Planning in Radiation Oncology, 5th Edition

Authors: Faiz M. Khan, Paul W. Sperduto, and John P. Gibbons

ISBN: 9781975162016

Publication Date: December 2021 **Publisher:** Wolters Kluwer

Publisher Price: [Vitalsource Interactive eBook \\$246.99 / Hardcover Book \\$259.99](#)

Washington and Leaver's Principles and Practice of Radiation Therapy, 6th Edition

Authors: Charles M. Washington and Megan Trad

ISBN: 9780443121784

Publication Date: April 2025 **Publisher:** Elsevier (Mosby)

Publisher Price: [\\$255.00](#)

Sectional Anatomy for Imaging Professionals, 5th Edition

Author: Monica Breedlove

ISBN: 9780323827881

Publication Date: December 2025 **Publisher:** Elsevier

Publisher Price: [\\$148.00](#)

The Physics & Technology of Radiation Therapy, 2nd Edition

Authors: Patrick N. McDermott and Colin G. Orton

ISBN: 9781930524989

Publication Date: November 2018 **Publisher:** Medical Physics Publishing

Publisher Price: [\\$165.00](#)

Introduction to Research and Medical Literature for Health Professionals, 5th Edition

Authors: J. Glenn Forister and J. Dennis Blessing

ISBN: 9781284153774

Publication Date: 2020 **Publisher:** Jones and Bartlett

Publisher Price: [\\$104.00](#) (look for discount code on Jones and Bartlett [student landing webpage](#))

Radiation Oncology Management Decisions, 4th Edition

Authors: K.S. Clifford Chao, Carlos A. Perez, and Tony J.C. Wang

ISBN: 9781496391094

Publication Date: September 2018 **Publisher:** Wolters Kluwer

Publisher Price: [Vitalsource Interactive eBook \\$111.99 / Paperback Book \\$117.99](#)

AMA Style Guide (Laminated trifold QuickStudy summary of AMA guidelines)

Author: Kyra Cerri

ISBN/SKU: 9781423248033

Publication Date: April 2022 **Publisher:** BarCharts

Publisher Price: [\\$8.00](#)

Recommended, not required:

AMA Manual of Style, 11th Edition

Author: JAMA Network Editors

ISBN: 9780190246556

Publication Date: March 2020 **Publisher:** Oxford University Press

Publisher Price: [\\$125.00](#)

Textbooks can be purchased online from the Ichabod Shop (<https://www.ichabodshop.com/home>).

To access your textbook list:

1. Log in to [My.Washburn.edu](https://my.washburn.edu)
2. Find the **MyCourses Resources** card
3. Under **Classes @ WU**, click **Find Your Books for Classes at Washburn Campus**
4. Follow the instructions to order textbooks for pickup or delivery
5. Please contact the Ichabod Shop at 785-670-1049 if you need assistance

IT Resources and Training

The following resources are available on the Information Technology Services (ITS) website:

- ✓ Recommended computer technical specifications: <https://www.washburn.edu/its/online-education/tech-tips.html>.
- ✓ Instructions for installing Microsoft Office programs on personal devices: <https://www.washburn.edu/its/software-training/office-365.html>.
- ✓ Training videos and instructions for using D2L and Respondus LockDown Browser: <https://www.washburn.edu/its/online-education/index.html>.

D2L support:

- ✓ 24/7 phone support at 1-866-888-1272
- ✓ 24/7 email to answer support questions at washburn@d2l.com
- ✓ Desire2Learn (D2L) reference materials are available online and can be accessed from the D2L Homepage after logging in.

For general technical assistance or further guidance, please contact Washburn University Technology Support at support@washburn.edu or 785-670-3000.

Respondus LockDown Browser

The Medical Dosimetry program requires the use of the Respondus LockDown Browser for online exams. Watch this [short video](#) to get a basic understanding of LockDown Browser and the webcam feature (which is required for some exams). The Student Quick Start Guide is included on the next page, for reference.

After viewing the video, download and install the LockDown Browser from this link:

<http://www.respondus.com/lockdown/information.pl?ID=229915312>.

Student training and help resources can be found on the Respondus website at

<https://web.respondus.com/student-help/>.

STUDENT QUICK START GUIDE

LockDown Browser® and Respondus Monitor®

• BRIGHTSPACE

WHAT IS RESPONDUS LOCKDOWN BROWSER?

LockDown Browser is a locked browser for use with quizzes in Brightspace. It prevents you from printing, copying, going to another URL, or accessing other applications during an assessment. If a Brightspace quiz requires that LockDown Browser be used, you will not be able to take the quiz with a standard web browser.

LockDown Browser should only be used for taking Brightspace quizzes. It should not be used in other areas of Brightspace.

BEGINNING A QUIZ

1. Close all programs, unless one is used to connect you to the Internet.
2. Log into Brightspace with a regular browser, select the course and navigate to the quiz.
3. If LockDown Browser has not previously been installed, you will be prompted to download and install the browser.
4. Return to the quiz and open it to launch LockDown Browser.
5. If prompted to close a blocked program (e.g. screen capture, instant messaging), choose **Yes**.

Note: Once a test has been started with Respondus LockDown Browser, you cannot exit until the test has been submitted for grading.

USING WITH A WEBCAM (Respondus Monitor)

You may be required to use LockDown Browser with a webcam, which will record you during an online, nonproctored exam. (The webcam feature is sometimes referred to as "Respondus Monitor.")

Your computer must have a functioning webcam and microphone. A broadband connection is also required.

If a quiz requires LockDown Browser **and** a webcam, follow the steps in the previous section. At this point, the Startup Sequence for the webcam begins.

- > You will first need to review and agree to the Terms of Use.
- > The **Webcam Check** will confirm that your webcam and microphone are working properly.
- > The remaining steps of the Startup Sequence will depend on settings chosen by your instructor. Follow the instructions and note your progress along the left side of the screen.
- > If you encounter a problem, select the **it's not working** link for troubleshooting tips and access to 24/7 Live Chat Help.

The quiz will begin after the Startup Sequence is complete. You cannot exit LockDown Browser until the quiz is submitted for grading.

PROBLEMS?

If you have problems downloading, installing, or taking an assessment with Respondus LockDown Browser, contact your instructor or your institution's help desk.

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Program Forms

Note: All clinical forms are located in the Evaluations menu in Trajecsys

1. Clinical Orientation Checklist
2. Clinical Schedule Agreement
3. Master Competency List
4. Clinical Competency Evaluation
5. Competency Case Study
6. Clinical Performance Evaluation
7. Academic and Professional Development Worksheet
8. Student Evaluation of Clinical Experience
9. MRI Screening Form
10. Physician Release for Return to Clinical Education
11. Medical Dosimetry Essential Functions
12. Declaration of Pregnancy
13. Pregnancy Decision Form
14. Consent Form for Drug and Alcohol Testing
15. Incident Report Form

Clinical Orientation Checklist

During the first week of clinical education at a new clinical site, students will participate in orientation. The Clinical Orientation Checklist is a list of basic policy and safety issues that must be discussed. Clinical sites may have more rigorous orientation and training processes; students are expected to complete all required orientation activities.

Instructions: The supervising staff member or clinical preceptor will provide department orientation, including a discussion of the items listed below. The staff member providing orientation must submit the Clinical Orientation Checklist in Trajecsyst by the end of the first week of clinical education. Students must acknowledge the form in Trajecsyst in order to earn credit for the orientation.

Orientation Checklist
<p>General</p> <ul style="list-style-type: none"> <input type="checkbox"/> Tour of facility and department <input type="checkbox"/> Location of break room/cafeteria, restrooms, personal storage areas <input type="checkbox"/> Parking arrangements <input type="checkbox"/> Introduction to radiation oncology staff and roles <input type="checkbox"/> Dress code, name badge policy <input type="checkbox"/> Patient transport procedures <p>Emergency Preparedness</p> <ul style="list-style-type: none"> <input type="checkbox"/> Emergency procedures and evacuation routes <input type="checkbox"/> Medical emergency procedures <input type="checkbox"/> Location of crash cart <input type="checkbox"/> Emergency phone numbers and codes (code blue, fire, bomb threat, etc.) <input type="checkbox"/> Incident reporting procedures <p>Health and Safety</p> <ul style="list-style-type: none"> <input type="checkbox"/> Hazardous materials, safety data sheet <input type="checkbox"/> MRI safety <input type="checkbox"/> Mold/block room safety (if applicable) <input type="checkbox"/> Infectious disease protocols <input type="checkbox"/> HIPAA and patient confidentiality policies <p>Radiation Safety</p> <ul style="list-style-type: none"> <input type="checkbox"/> Introduction to the Radiation Safety Officer (RSO) <input type="checkbox"/> Obtain personnel monitoring device <input type="checkbox"/> Location of radiation detection devices <input type="checkbox"/> Radioactive materials <input type="checkbox"/> Dosimetry student calculation and plan review expectations <p>Dosimetry</p> <ul style="list-style-type: none"> <input type="checkbox"/> Review of clinical schedule and expectations <input type="checkbox"/> Access to treatment planning systems <input type="checkbox"/> PACS and imaging systems overview <input type="checkbox"/> EMR access and documentation procedures <input type="checkbox"/> Login credentials and IT support contacts <input type="checkbox"/> Review of clinical workflow (simulation, contouring and image registration, treatment planning, plan review and approval, quality assurance) <input type="checkbox"/> Plan for direct supervision (who will provide and the schedule for direct supervision duties)

Students: Your signature on this form indicates that the policies have been explained to you; you have been given the opportunity to ask questions; and any questions have been answered to your satisfaction.

Clinical Schedule Agreement

Please review the full **Attendance Policy** that begins on page 46 of this manual.

During the fall and spring semesters, students are required to be in the clinic 32 hours every week; clinical time can be spread over all five days of the week. Summer clinicals are 40 hours per week.

Students must be supervised by a qualified radiation oncology professional during clinical hours; supervising staff must be on-site and available to the student at all times.

Students may not attend clinicals for more than 10 hours per day or 40 hours per week.

Students are not permitted to receive compensation for clinical hours. If a student is employed at the clinical facility, a strict schedule of clinical vs. employee time must be documented and adhered to.

Please refer to the Program Calendar for scheduled holidays and breaks.

The clinical schedule will be finalized prior to the semester start date. Students should consult with the clinical preceptor to determine the clinical schedule that will allow for direct supervision and the most productive learning time.

All schedule changes must be approved by the clinical preceptor in advance.

Student Name: _____

Clinical Site: _____

Semester and Year: _____

Clinical Schedule

Day of the Week:	Daily Hours:
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Total Weekly Hours:	

Master Competency List

Mandatory Competencies (25)	Date	Semester	Evaluator
Head and Neck			
Primary Brain (3D Conformal or IMRT/VMAT)		Fa Sp Su	
Primary Bilateral Head and Neck with Nodes (IMRT/VMAT)		Fa Sp Su	
Thoracic			
Primary Lung (3D Conformal or IMRT/VMAT)		Fa Sp Su	
Primary Esophagus (IMRT/VMAT)		Fa Sp Su	
Intact Breast Tangents (3D conformal)		Fa Sp Su	
Chest Wall Tangents with SCV and Axilla Nodes (3D Conformal or IMRT/VMAT)		Fa Sp Su	
Abdomen			
Primary Abdomen (Pancreas, GE Junction) (3D Conformal or IMRT/VMAT)		Fa Sp Su	
Para-aortic or Nodal Irradiation (3D Conformal or IMRT/VMAT)		Fa Sp Su	
Pelvis			
3-Field Pelvis with Wedges (3D Conformal)		Fa Sp Su	
4-Field Pelvis (3D Conformal)		Fa Sp Su	
Prostate (IMRT/VMAT)		Fa Sp Su	
Pelvis and Nodes SIB (IMRT/VMAT)		Fa Sp Su	
Extremities			
Limb Melanoma/Sarcoma (3D Conformal or IMRT/VMAT)		Fa Sp Su	
Brachytherapy			
Interstitial Implant		Fa Sp Su	
Intracavitary Implant		Fa Sp Su	
Other			
Craniospinal Irradiation		Fa Sp Su	
Palliative Whole Brain		Fa Sp Su	
Palliative Spine		Fa Sp Su	
Lymphoma/Mantle		Fa Sp Su	
Electron Beam Planning		Fa Sp Su	
Fusion (MRI, PET, etc.)		Fa Sp Su	
Re-Irradiation (same anatomical site, can be palliative)		Fa Sp Su	
Composite Planning (new site near previously treated area, can be palliative)		Fa Sp Su	
Stereotactic Body Radiation Therapy (SBRT)		Fa Sp Su	
Stereotactic Radiosurgery (SRS)		Fa Sp Su	

Elective Planning Activities (Must complete 3)	Date	Semester	Evaluator
Total Body Irradiation (TBI)		Fa Sp Su	
Total Skin Electron Irradiation (TSEI)		Fa Sp Su	

Proton Treatment Planning		Fa Sp Su	
Prone Breast		Fa Sp Su	
Bilateral Breast (3D Conformal or IMRT/VMAT)		Fa Sp Su	
Chest Wall with Expander (3D Conformal or IMRT/VMAT)		Fa Sp Su	
Whole Brain with Hippocampal Sparing		Fa Sp Su	
Protocol Planning		Fa Sp Su	
Pelvis with Prosthesis (IMRT/VMAT)		Fa Sp Su	
Thorax with Pacemaker (3D Conformal or IMRT/VMAT)		Fa Sp Su	
Multiple PTVs with a Single Isocenter (3D Conformal or IMRT/VMAT)		Fa Sp Su	
Same Day Simulation, Planning, and Treatment		Fa Sp Su	

Total Competencies Required: 28

Up to 3 competencies may be performed under simulated conditions (on a practice patient data set or via a course planning assignment).

Students are **not** allowed to utilize auto-contouring, auto-planning, or other automated treatment planning tools during competencies. It is important that students can demonstrate the ability to perform treatment planning tasks manually, without the aid of automated processes.

Planning Competencies Required per Semester (may complete more)

Fall Semester: 6

Spring Semester: 12—Total of 18 comps completed by the end of the semester

Summer Semester: 10—All 28 comps completed by the end of the semester

Clinical Competency Evaluation

Students and evaluators should review the **Guidelines for Competency Evaluations** included in the Medical Dosimetry Program Manual.

To submit a treatment planning competency, the supervising dosimetrist or physicist ('evaluator') must complete the Competency Evaluation Form in Trajecsys. Students must review and acknowledge the completed form regardless of final status (pass/fail).

Reminder: Students are not permitted to use auto-contouring, auto-planning, or other automated treatment planning tools during competencies.

Instructions for Evaluator: Please select the rating that best describes your student dosimetrist's level of performance. Please note, a 4 or 5 rating is not typical in the first semester. If any items are marked 'Unacceptable/Fail,' the competency is considered failed and must be repeated at a later date on a new data set. There is no penalty for failing a competency.

Rating Scale	
0-N/A	Not applicable (Item not counted toward average score)
1-Unacceptable	The student's treatment planning ability is unacceptable. (A 1-rating on any individual item constitutes a failed competency.)
2- Below Average	The student's treatment planning ability is below what is expected, but still acceptable. The student required quite a bit of guidance to complete the plan.
3- Average	The student's treatment planning ability is as expected based on their current level of experience. The treatment plan was completed in a safe and accurate manner within a reasonable amount of time.
4- Above Average	The student's treatment planning ability is equal to that of an entry-level dosimetrist. The student worked independently and required minimal guidance.
5- Excellent	The student's treatment planning ability is advanced; the student is demonstrating the skills of an experienced medical dosimetrist.

Treatment Site:						
Plan Preparation:	1	2	3	4	5	N/A
Acquired necessary images for fusion						
Loaded imaging studies and CT data set into the planning computer						
Performed satisfactory image fusion						
Correctly contoured appropriate anatomy and OARs						
Discussed the plan prescription, goals, and planning constraints with the physician prior to treatment planning						
Treatment Planning:	1	2	3	4	5	N/A
Isocenter placed appropriately						
Appropriate beam angles, beam energy, and modality (3D, IMRT, etc.) selected						
Blocks, modifiers (wedges, bolus, etc.), and weighting used appropriately						
Correct dose grid selected						

Plan Evaluation:	1	2	3	4	5	N/A
Accurately generated and evaluated plan DVH						
Planning target dose goals achieved/acceptable						
OAR dose constraints met/acceptable						
Hot spot location satisfactory						
Plan Review:	1	2	3	4	5	N/A
Plan reviewed and approved by credentialed dosimetrist or physicist						
Plan reviewed and approved by radiation oncologist						
Communicated clearly and effectively						
Made plan adjustments as requested						
Quality Measures:	1	2	3	4	5	N/A
Plan MU second check/verification calculation completed						
QA plan generated correctly (if applicable)						
Imaging/treatment aid preparation completed (IGRT, DRRs, bolus placement, etc.)						
Plan Documentation:	1	2	3	4	5	N/A
Appropriate plan data exported/printed						
Entered correct treatment parameters into the patient chart						
Completed clinical documents and billing correctly (if applicable)						
Overall Planning Performance:	1	2	3	4	5	N/A
Planning time reasonable						
Plan is feasible/deliverable						
Plan is appropriate based on treatment goals and patient condition						
Critical thinking: Student was able to answer case-related questions and explain decision-making process						
Professionalism: Student maintained composure, focus, and professionalism throughout the planning process						
Overall Plan Quality:						
<input type="checkbox"/> Excellent (thoughtful planning, no changes) <input type="checkbox"/> Very good (minor changes) <input type="checkbox"/> Acceptable (meets parameters but lacks finesse) <input type="checkbox"/> Unacceptable (repeat competency)						
Comments:						

Competency Case Study

Students must upload a Competency Case Study for each *successful* competency evaluation to the clinical course in D2L within 7 days of completing the competency.

Case Study Formatting Requirements:

- Use 11th Edition AMA formatting guidelines
- Include a title page, in-text citations, and a reference page
- 12-point, serif font (Times New Roman, Georgia, Garamond, etc.), 1-inch margins
- Single-spaced, page numbers in the upper right corner of the page
- Essay form, with headings to match sections included below

Case Study Sections	Topics to Address
Patient History	<ul style="list-style-type: none"> • Medical and surgical history • Social history (demographics, career, family medical history, behavioral risk factors, pregnancy, etc.)
Diagnosis and Staging	<ul style="list-style-type: none"> • Anatomical site and presenting symptoms • Imaging studies • Biopsy and pathology results • Diagnosis, stage, grade of disease
Multidisciplinary Approach	<ul style="list-style-type: none"> • What is the full multidisciplinary plan for treatment? • What modalities (surgery, chemotherapy, hormone therapy, radiation, etc.) be used? • What is the timeline for treatment?
Radiation Treatment Plan	<ul style="list-style-type: none"> • Simulation, patient positioning, immobilization • Radiation dose prescription • Treatment modality and rationale • Treatment goals (curative? palliative?) • Imaging used for fusion and structure delineation • Discuss the target (GTV/CTV, ITV/PTV, margins, nodes, etc.) • Critical structures and dose constraints • Dose priorities (Does the dose to a target or OAR have to be compromised? Explain.) • What side effects are possible from this course of radiation treatment? • Plan evaluation (What methods were used to evaluate the dose? Were the goals met?)
Discussion	<p><i>Use literature to support your discussion and cite sources</i></p> <ul style="list-style-type: none"> • How does this case align with current research about the cancer's epidemiology, etiology, and presentation? Did the patient present with typical symptoms? Did the patient have common risk factors? Consider behavioral factors as well as the patient's age, gender, and ethnicity. • What are other possible treatment options for this diagnosis? • Why was the current treatment plan selected? What are the benefits? Explain planning decisions. • How did the patient's condition/position/immobilization impact treatment planning? Could improvements have been made? • Discuss daily treatment considerations (imaging, challenges, etc.) and patient support or resources that may be needed
Reflection	<ul style="list-style-type: none"> • What did you learn from this planning experience? • What challenges did you encounter? • What aspects did you feel most comfortable or confident about? • Any comments or questions?

Clinical Performance Evaluation

Clinical Performance Evaluations assess a student's affective skills, such as professional behavior, communication, ethical conduct, and attitude in the clinical setting. These evaluations ensure that students not only demonstrate technical competence but also exhibit the values and interpersonal skills essential for safe, compassionate, and effective treatment planning.

Clinical Performance Evaluations will be completed 3 times each semester; due dates are listed in the clinical course syllabus in D2L. Evaluations will be reviewed by the clinical instructor prior to being released to the student. Students may request a meeting to discuss any questions or concerns. Students must acknowledge the form in Trajecsys in order to earn credit for the evaluation.

Instructions for Evaluator: Please select the rating that best describes your student dosimetrist's level of performance, based on their current level of experience. Please note, a 4 or 5 rating is not typical in the first semester.

Rating Scale	
0-N/A	Not applicable (Criterion not counted toward average score)
1-Unacceptable	The student's level of performance is unacceptable. I would like to initiate a performance improvement discussion.
2- Below Average	The student's level of performance is below what is expected, but the student is making some progress.
3- Average	The student is performing as expected based on their current level of experience.
4- Above Average	The student is capable of working independently and is meeting the performance standards required of an entry-level medical dosimetrist.
5- Excellent	The student consistently performs at a high level, demonstrating the maturity of an experienced medical dosimetrist.

Professionalism		N/A	1	2	3	4	5
Attendance	Arrives on time and prepared						
	Communicates schedule changes appropriately						
	Adheres to scheduled break times and duration						
	Maintains focus; does not gossip or get distracted						
Initiative	Seeks opportunities to learn						
	Shows willingness to assist or perform clinical duties						
	Uses clinical time effectively and appropriately						
	Attends chart rounds, tumor board, etc. as available						
Appearance	Personal appearance is professional and appropriate						
	Workspace is organized and clean						
Attitude	Respectful to planning team and other staff						
	Respectful to patients, family, caregivers						
	Interacts well with a diverse mix of individuals						
	Willing to accept and apply constructive criticism						
	Follows instructions well						

	Is cooperative and courteous with others						
Practice Standards	Adheres to AAMD Scope of Practice						
	Adheres to MDCB Ethical Standards						
Communication		N/A	1	2	3	4	5
Verbal	Communicates effectively with physicians						
	Communicates effectively with physicists						
	Communicates effectively with medical dosimetrists						
	Communicates effectively with radiation therapists						
	Communicates effectively with department staff						
	Communicates effectively with patients						
	Tone is respectful						
	Speech is clear and concise						
	Student is approachable						
Written	Uses appropriate language and mechanics in patient charts, planning notes, and documentation						
	Data Acquisition	N/A	1	2	3	4	5
Patient Data	Can locate patient information in the EHR						
	Maintains confidentiality						
Simulation	Reviews patient chart to prepare for treatment planning						
	Assists with simulation tasks as needed						
Imaging	Identifies when imaging studies are needed for planning						
	Knows the process for requesting imaging studies						
	Able to perform image fusion						
Treatment Planning		N/A	1	2	3	4	5
Planning Skills	Adequately prepares for treatment planning (anticipates what is needed, reads chart, reviews tissue constraints)						
	Comfortable using treatment planning software						
	Understands the department/planning workflow						
	Planning approach is logical						
	Prioritizes planning tasks						
	Completes plans within a reasonable amount of time						
	Content and frequency of questions are appropriate						
	Planning skills are advancing as expected						
	Plan evaluation skills are advancing as expected						
	Reviews plan with physician independently						
Knowledge Application	Applies didactic knowledge during treatment planning (oncology, radiobiology, physics, radiation safety, etc.)						
	Responds to feedback; learns from mistakes						
	Applies prior learned concepts to new treatment sites						
	Can answer questions appropriately						
	Developing confidence in treatment planning skills						
Critical Thinking & Adaptability		N/A	1	2	3	4	5
Critical Thinking	Explains treatment planning decisions and rationale						

	Compares treatment plans to identify the 'better' option						
	Recognizes discrepancies and seeks clarification						
	Can evaluate individual cases in a broader context (identify similarities and differences, patterns, etc.)						
	Discusses solutions for complex patient scenarios						
	Reflects on planning performance and identifies areas for improvement						
Adaptability	Works well under pressure						
	Maintains composure when asked to make changes						
	Can troubleshoot common errors or issues						
Comments:							
Evaluator:							
Student:							

Academic and Professional Development Worksheet

Self-assessment encourages students to reflect on their progress, identify strengths, and recognize areas for improvement in both academic and clinical performance. Reflection promotes accountability, critical thinking, and lifelong learning—essential traits that support professional growth in medical dosimetry.

Academic and Professional Development will be completed at the end of each semester; the due date is listed in the clinical course syllabus in D2L.

Part One— Using the scale provided, please rate your semester performance in the listed areas:	
Rating Scale	
0-N/A	This did not apply to me this semester. (Criterion not counted toward average score)
1-Unacceptable	I did not do well this semester; I would like to discuss additional resources and support to get back on track.
2-Below Average	I did not do as well as I would have liked, but I survived! I know what I need to do to improve next semester.
3-Average	I met the requirements for this semester; I am making progress.
4-Above Average	I did really well this semester; I feel like I am ahead of the curve.
5-Excellent	I am crushing it! I am consistently performing at a high level; I feel ready for more advanced tasks and responsibilities.

Academics	N/A	1	2	3	4	5
Consistent and effective study routine						
Time management skills						
Preparation for course assignments and exams						
Participation in class discussions and activities						
Maintaining academic integrity						
Completing assignments and meeting deadlines						
Balancing academic workload with clinical duties						
Initiative in seeking help or clarification when needed						
Willingness to assist a classmate if needed						
Professionalism	N/A	1	2	3	4	5
Attendance (on time, on schedule, few changes or disruptions)						
Appearance (professional, clean, wearing name badge)						
Ethical behavior and integrity; adherence to practice standards						
Respect for patients, staff, supervisors, and peers						
Initiative (seeking opportunities to learn and/or help)						
Engagement (remaining on task, maintaining focus)						
Attitude (approachable, positive, motivated, cooperative)						
Communication	N/A	1	2	3	4	5
Quality of written class assignments and presentations						
Appropriate language and writing mechanics used in patient charts, planning notes, and other clinical documentation						

Clarity and professionalism in verbal communication						
Ability to articulate ideas and respond to feedback						
Collaboration with radiation oncologists, physicists, and therapists						
Treatment Planning	N/A	1	2	3	4	5
Preparation (read chart, acquire images, simulation, image fusion)						
Ability to navigate treatment planning software						
Prioritizing tasks and time management						
Accuracy and quality of treatment planning						
Application of didactic (classroom) knowledge during treatment planning						
Understanding of clinical/treatment planning workflow						
Critical Thinking and Adaptability	N/A	1	2	3	4	5
Ability to analyze and compare treatment plan options						
Explain and support treatment planning decisions and rationale						
Discuss solutions for complex patient scenarios						
Recognize discrepancies or errors and seek clarification						
Seeking and responding to feedback						
Evaluate individual cases in a broader context (identify similarities and differences, patterns, etc.)						
Adaptability (maintaining composure when situations change, willingness to learn and apply new methods and/or technology)						
Ability to troubleshoot common errors or issues						

Part Two—Please reflect on your academic and clinical performance over the past semester and answer the following questions:

Academic Performance

What study strategies have worked well for me this semester?

What challenges have I faced in my classes? How did I address them?

Clinical Experience

What planning tasks or treatment plans do I feel most comfortable with?

What planning tasks or treatment plans do I find most challenging?

How have I responded to feedback? What changes have I made?

<i>How would I describe my experience in medical dosimetry to this point?</i>
Professional Development
<i>How do I 'fit' in the department and on the planning team? What is my role?</i>
<i>What are my strengths as a student and a future dosimetrist?</i>
<i>What areas or skills do I need to improve?</i>
Additional Comments (Optional)

Part Three—Goal Setting: The Program Director will schedule a meeting with each student to discuss their Academic and Professional Development worksheet. During the meeting, the student will assess the status of existing goals and develop at least 3 measurable goals for the coming semester.	
Goals from previous semester:	Goal met?
	YES NO
	YES NO
	YES NO
Comments:	
Goals for next semester:	
Comments:	

By signing this form, I agree that I have reviewed and discussed the contents with the other individual listed. I have had the opportunity to ask questions, and they have been answered to my satisfaction.

Student Evaluation of Clinical Experience

Student evaluations of clinical sites provide valuable feedback on the quality of the learning experience, including mentorship, resources, instruction, and skills development. These evaluations help ensure that clinical environments support the program's educational goals, promote continuous improvement, and maintain high standards for future student placements.

Because there is usually only 1 student placed at a given clinical site, individual ratings and comments are not provided directly to each clinical site. Instead, a summary of responses from the **entire class** will be provided to all clinical preceptors. Each site should review the evaluation results and assess their performance in relation to the student feedback provided. If specific concerns arise, the clinical instructor will communicate with the student to discuss the issue. If necessary, the clinical preceptor will be consulted to discuss a plan for resolving or improving the concern.

Student Evaluations of Clinical Experience will be completed 1 time each semester; the due date is listed in the clinical course syllabus in D2L.

Instructions: Please select the rating that best describes your clinical site's performance in the areas listed and provide constructive comments in the *Additional Feedback* section at the end.

Learning Environment	Room for Improvement	As Expected	Exceeds Expectations
Availability of learning opportunities			
Variety and complexity of cases			
Access to technology and resources			
Efficiency and organization of the department			
Degree of welcome; positive interactions with all radiation oncology staff members			
Please explain any areas marked 'Room for Improvement':			
Supervision and Support	Room for Improvement	As Expected	Exceeds Expectations
Focus on teaching and learning as the clinical experience priority			
Clarity of expectations and responsibilities			
Presence of direct supervision			
Willingness of staff to teach and involve students			
Understanding of program goals and assessments (clinical preceptor and supervising individuals)			
Please explain any areas marked 'Room for Improvement':			
Skills Development	Room for Improvement	As Expected	Exceeds Expectations

Constructive feedback and guidance			
Engage in discussion, share alternative planning methods			
Encouragement of critical thinking and independence			
Exposure to interdisciplinary collaboration			
Opportunities to develop communication and professional skills			
Tolerance for mistakes			
Please explain any areas marked 'Room for Improvement':			
Professionalism	Room for Improvement	As Expected	Exceeds Expectations
Respect for patient confidentiality and dignity			
Ethical conduct modeled by staff			
Considerate of diverse learning styles and approaches			
Positive, encouraging, collaborative attitudes			
Please explain any areas marked 'Room for Improvement':			

Additional Feedback

Feedback guidelines: Constructive comments are honest, respectful, and specific. Provide examples whenever possible, focus on behaviors rather than personal traits, and make suggestions for how to improve. Remember, clinical sites will receive a comprehensive list of feedback from the entire class, not just from the student(s) assigned to their site. Clinical instructors will discuss specific concerns directly with students.

What, specifically, does the <u>clinical preceptor</u> do to help you (the student) develop and progress in the clinical setting?
What suggestions do you (the student) have to help the <u>clinical preceptor</u> to be more effective in instructing and mentoring medical dosimetry students?
What, specifically, does the <u>clinical site/staff</u> do or provide that helps you (the student) develop and progress in the clinical setting?
What suggestions do you (the student) have to help the <u>clinical site/staff</u> to be more effective in instructing and mentoring medical dosimetry students?
Additional comments:

MRI Screening Form

Magnetic Resonance Screening Form

Magnetic resonance (MR) is a medical imaging system in the radiology department that uses a magnetic field and radio waves. The magnetic field could potentially be hazardous to students entering the environment if they have specific metallic, electronic, magnetic, and/or mechanical devices in or on their body. Because of this, students must be screened to identify any potential hazards before entering the MRI environment during clinical education.

Pregnancy Notice: The declared pregnant student who continues to work in and around the MRI environment should not remain within the MR scanner room or Zone IV during actual data acquisition or scanning.

Please indicate if you have any of the following:	Yes	No
Aneurysm clip(s)		
Any injury involving metallic fragments or foreign body in the eye, other soft tissue, etc.		
Any type of prosthesis (eye, shoulder, etc.)		
Artificial heart valve, coil, filter, and/or stent		
Cardiac pacemaker or implanted cardioverter defibrillator or internal electrodes		
Ear (cochlear) implant, middle ear implant, and/or hearing aids		
Electronic implant or device		
External/internal drug pump for insulin or other medicine		
Eye injury from a metal object (examples: metal shavings from welding, metal slivers)		
Implanted post-surgical hardware (surgical clips, pins, rods, etc.)		
Injured by a metal object (shrapnel, bullet, BB, etc.)		
IV access port		
Medication patch		
Metallic removable dental work, braces, or retainers		
Neurostimulator or spinal cord stimulator		
Ornamental body piercing		
Spinal fixation device or spinal fusion		
Surgical clips, staples, surgical mesh, shunt, or stent		
Swan-Ganz or thermodilution catheter		
Tissue expander (breast)		
Other		

I attest that the above information is correct to the best of my knowledge. I have read and understand the entire contents of this form and have had the opportunity to ask questions regarding the information presented. Should any of this information change, I will notify the Medical Dosimetry program director and my clinical preceptor.

Student Signature and Date: _____

- The student has not identified any contraindications to entering MR Zone III or IV
- The student has identified contraindications to entering MR Zones III and IV. The student has been advised not to progress past MR Zone II unless screened by a MR Level II Technologist onsite at each clinical setting.

Clinical Instructor Signature and Date: _____

Physician Release for Return to Clinical Education

If a student is absent from clinical education for an extended period of time due to illness or another medical reason, a physician's consent is required before returning to clinical education. The release form must be completed by a licensed physician responsible for care related to the student's reason for absence.

Student Name:

Clinical Site:

Facility:

Business Phone Number:

I have reviewed the program's Essential Functions (on the next page) which detail the activities and abilities expected of a Medical Dosimetry student in the clinical setting. I have assessed the medical condition of the above-named student, and I recommend that:

- The student returns to clinical education duties **without** modifications or infection control precautions.
- The student returns to clinical education without modifications, but the following infection control **precautions are recommended** for the indicated length of time:

- The student returns to clinical education **with** modifications. The following modifications are recommended for the indicated length of time:

Physician's Signature:

Date:

Medical Dosimetry Essential Functions

Washburn’s Medical Dosimetry Essential Functions are based on the *American Association of Medical Dosimetrists (AAMD) Educational Program Curriculum Guidelines*, which advises the following required skills, behaviors, and physical requirements for medical dosimetrists:

	Standard	Examples of necessary activities (not inclusive)
Medical dosimetry applicants should possess the following general qualities:	<ul style="list-style-type: none"> • Critical thinking • Sound judgement • Excellent communication skills, both verbal and written • Emotional stability and maturity • Empathy and respect • Integrity and accountability • Professional behavior • Physical and mental stamina • Ability to learn and function in a wide variety of research and clinical settings • Ability to multitask 	<ul style="list-style-type: none"> • Interpreting physician prescriptions • Using judgement to develop a radiation treatment plan that is accurate, safe, and deliverable • Evaluating treatment plans to ensure goals are met • Discussing treatment plans with physicians and other oncology staff • Documenting accurately and clearly in written or electronic form • Completing tasks independently and on time • Collaborating with individuals from a variety of social and cultural backgrounds • Ability to emotionally withstand demanding academic and clinical requirements • Functioning effectively under stress
Medical dosimetry students must be able to:	<ul style="list-style-type: none"> • Demonstrate strong math skills, including knowledge of trigonometry or pre-calculus • Spend extended time seated at a computer • Demonstrate proficiency in computer operations • Distinguish between colors on computer screens and patient markings on skin • Visualize patient markings, equipment, and film while in dim lighting • Interact with immunosuppressed patients and patients who may have a communicable disease • Comprehend spatial relationships of objects and three-dimensional images 	<ul style="list-style-type: none"> • Understanding and performing complex algebraic equations • Recognizing computation errors • Maintaining focus and attention to treatment planning computer for extended periods of time • Interpreting patient anatomy in CT, MRI, and PET images • Distinguishing between colored isodose lines in the treatment planning system • Assisting radiation therapists with patient setups
Suggested physical requirements for medical dosimetry students and professionals include:	<ul style="list-style-type: none"> • Routinely lift 20 pounds over the head • Push and pull, bend and stoop, and kneel or squat routinely • Push standard wheelchairs or carts and assist in transferring patients onto and off treatment tables • Hear various equipment alerts, sounds, and signals 	<ul style="list-style-type: none"> • Assisting with plan quality assurance, including moving equipment on and off the treatment table • Transporting patients between the waiting room and treatment room • Assisting radiation therapists with moving patients from wheelchairs or hospital beds onto the treatment table • Hearing treatment machine ‘beam on’ audio indicators • Responding to patients activating the ‘emergency call’ buttons in bathrooms and waiting rooms

Applicants should also understand that medical dosimetry students and professionals may be exposed to low levels of ionizing radiation during their careers.

Declaration of Pregnancy

The Medical Dosimetry program strongly encourages students to formally declare when they are pregnant.

Notification is voluntary, but it is necessary in order to begin monitoring radiation dose to the fetus. In the absence of voluntary written disclosure, a student cannot be considered pregnant. To declare pregnancy, students must submit the completed and signed Declaration of Pregnancy to the program director. The program director will share the declaration with appropriate faculty and staff and the clinical site.

Students may undeclare their pregnancy status at any time by submitting a revised Declaration of Pregnancy form to the program director.

Student Name:

Date:

Clinical Site:

I am declaring that I am pregnant. I became pregnant in (month/year): _____

I am withdrawing my declaration of pregnancy. I am no longer pregnant.

Student Signature:

Date:

Program Director Signature:

Date:

Pregnancy Decision Form

The Medical Dosimetry program adheres to guidelines established by the U.S. Nuclear Regulatory Commission (NRC), which states that “Dose to an Embryo/Fetus,” requires licensees to “ensure that the dose to an embryo/fetus during the entire pregnancy, due to occupational exposure of a declared pregnant woman, does not exceed 0.5 rem (5 mSv).”

The NRC Regulatory Guide 8.13 regarding *Possible Health Risks to Children of Women Who are Exposed to Radiation During Pregnancy* is included in the Medical Dosimetry Program Manual. Working in an environment where radiation is present increases the risk of prenatal exposure to radiation. Medical Dosimetry students should review the NRC Regulatory Guide and decide whether they are willing to accept this risk.

The Pregnancy Decision Form is used to communicate the pregnant student’s understanding of the risk of prenatal radiation exposure, and her decision regarding how to proceed in the program.

Student Name and Date:

Clinical Site:

- I have submitted a formal Declaration of Pregnancy to the Medical Dosimetry program director
- I have read the NRC Regulatory Guide 8.13 *Possible Health Risks to Children of Women Who are Exposed to Radiation During Pregnancy*, which is included in the Medical Dosimetry Program Manual
- I have met with the program director, clinical preceptor, and radiation safety officer at my clinical site to discuss dose monitoring and exposure precautions. The meeting was held on (date): _____
- I fully understand the risk of prenatal exposure, my questions have been satisfactorily answered, and I choose to proceed with my Medical Dosimetry education as indicated below:
 - I am pregnant and choose to continue my clinical and didactic education **without modification or interruption**. I accept full responsibility for this decision. I will not hold Washburn University or any of its representatives, including clinical affiliates, liable for any complications that occur during pregnancy, delivery, or postnatal growth of my baby.
 - I am pregnant and choose to continue my clinical and didactic education **with modifications** to the class and/or clinical schedules to reduce the risk of radiation exposure and allow time off for post-partum care. I understand that modification may result in delays, and that all educational and clinical requirements must be completed before I will be eligible for graduation from the Medical Dosimetry program and the MDCB exam. I will discuss appropriate modifications with the program director and clinical preceptor.
 - I am pregnant and choose to take a **leave of absence** from the Medical Dosimetry program. I understand that a leave of absence will delay my graduation and MDCB exam eligibility by at least one year. I understand that I will be allowed to rejoin the program during the appropriate semester of the following cohort year, and that I must communicate my intent to return to the program prior to the start of the next cohort.

Student Signature and Date:

Program Director Signature and Date:

Consent Form for Drug and Alcohol Testing

In accordance with federal regulations, Washburn University and the Medical Dosimetry program strictly prohibit the unlawful possession, use, or distribution of illicit drugs and alcohol by students and employees on university property or as part of any university-sponsored activity, including clinical education. Violations of this policy may result in disciplinary action, up to and including program dismissal, and potential criminal prosecution under local, state, or federal law.

Student Name and Date:

Clinical Site:

A supervising staff member at my clinical facility has expressed reasonable suspicion to believe that I am under the influence of alcohol or controlled substances. In accordance with the Medical Dosimetry program Substance Abuse Procedure, I have been presented this consent form for drug and alcohol testing.

I choose to:

- Give consent to provide a urine and/or blood sample for the purpose of testing for the presence of controlled substances at a designated laboratory. I understand that I am responsible for payment of laboratory testing fees. I authorize the release of the test results to the Washburn University Medical Dosimetry program director. I understand that test results may be shared with a small number of relevant individuals, such as the clinical instructor, clinical preceptor, and Allied Health Department Chair. I understand that tampering with samples, providing false information on a specimen's chain of custody form, or failing to pass a controlled substance screening will result in disciplinary action up to and including program dismissal.
- Refuse consent to provide a urine and/or blood sample for the purpose of reasonable cause testing. I understand that refusal to participate in testing may result in dismissal from my clinical site, and that reasonable suspicion of being under the influence is grounds for disciplinary action up to and including program dismissal.

Student Signature:

Clinical Supervisor/Preceptor Signature:

Witness Signature:

Date and Time:

Incident Report Form

Incident reporting is a professional obligation; prompt and accurate reporting is essential to ensure patient safety, support continuous improvement, and foster a culture of accountability and learning. If an adverse event occurs during clinical education, students should follow the steps outlined in the Incident Reporting Policy included in the Medical Dosimetry Program Manual.

Student Name and Date of Birth:

Clinical Site:

Incident Information:
Date and time of incident:
Location:
Name and role of person reporting the incident:
Name(s) and role(s) of individual(s) involved (including witnesses):
Incident Description:
Explain what occurred:
How was the incident discovered?
What immediate actions were taken (if any)?
Patient Factors:
What was the potential or actual impact on patient safety (if any)?
Was the patient informed? Why or why not?
Contributing Factors:
What factors contributed to the incident (human, technical, process/system failures, etc.)?
Follow-Up and Recommendations:
Has a clinical site incident report been filed? If the answer is 'no,' please explain.
What corrective actions have been taken or are planned?
What steps will be taken to prevent the incident from happening again?
Comments:

Appendix

A. Medical Dosimetry Course Descriptions

AL630: Foundations of Radiation Oncology

This course is a review of radiation oncology practices that will prepare students for a successful clinical experience. Topics include patient care techniques, radiation safety, information technology, and radiation oncology equipment.

AL632: Cross-sectional Anatomy for Medical Dosimetry

This course will provide students with an understanding of cross-sectional anatomy that is necessary for accurate radiation oncology treatment planning. At the end of the course, students will be able to identify the location and function of various anatomical structures in multiple modalities, including radiographs, CT, MRI, and PET-CT.

AL634: Oncology Principles I

This course will introduce students to the role of radiation oncology in cancer care. Topics include a review of radiobiology principles, etiology and pathophysiology of cancer, and the multidisciplinary approach to cancer treatment.

AL636: Radiation Oncology Treatment Planning I

In this course, students will review basic dosimetry principles such as isodose distributions, factors that influence dose distribution, beam arrangements and treatment techniques, electron beam dosimetry, and monitor unit calculations.

AL638: Radiation Physics

This course is a review of radiation physics principles and their application in radiation oncology treatment planning. Topics covered include atomic structure, radiation interactions, radioactive decay, and dose measurement.

AL640: Ethics & Professionalism in Medical Dosimetry

In this course, students will explore accreditation requirements and professional expectations for practicing medical dosimetrists. Topics include ethical principles, legal considerations, the continuum of care in radiation oncology, and professional development.

AL660: Medical Dosimetry Clinical I

Throughout this course, students will gain practical experience in the radiation oncology clinic. Imaging, data acquisition, and treatment planning concepts are introduced, and students will begin practicing anatomical contouring and basic treatment calculations. This course may be repeated, up to a total of 4 credit hours.

AL644: Oncology Principles II

In this course, students will learn about the epidemiology, diagnosis, and management of specific cancer disease sites. Topics include clinical presentation, detection and staging, multimodality treatment options, and radiation oncology considerations.

AL646: Radiation Oncology Treatment Planning II

This course covers the properties and therapeutic use of radionuclides, brachytherapy treatment planning, and special applications of radiation oncology including but not limited to proton therapy, stereotactic radiotherapy, total body irradiation, and intra-operative radiation therapy.

AL648: Research Methodology in Medical Dosimetry

This course will introduce students to research methods, including how to identify a research topic, types of research studies, and data collection and analysis. By the end of the course, students will be able to write a literature review on a topic that is relevant to radiation oncology practice.

AL650: Quality Improvement in Radiation Oncology

This course emphasizes the importance of continuous quality improvement measures in radiation oncology. Topics include quality assurance methods for personnel, equipment, and treatment planning software. Special attention will be given to Task Group Reports that guide quality assurance of radiation equipment.

AL665: Medical Dosimetry Clinical II

In this course, students will continue developing practical skills in the radiation oncology clinic. Students will practice more advanced treatment planning methods, including site-specific and brachytherapy procedures. This course may be repeated, up to a total of 4 credit hours.

AL670: Medical Dosimetry Clinical III

In this clinical rotation, students will focus on enhancing professional skills such as effective communication, time-management, and participating in clinic workflows. This course will also introduce students to the role of clinical trials in cancer management.

AL675: Medical Dosimetry Capstone

This course serves as the final, comprehensive experience for students in the Medical Dosimetry program. Students will complete *either* a research study in their clinic *or* a comprehensive mock board exam. Additional details can be found in the Medical Dosimetry Program Manual.

B. Pregnancy: Regulatory Guidance

U.S. Nuclear Regulatory Commission

REGULATORY GUIDE 8.13; Reviewed 10/2011

(Draft was issued as DG-8014; Revision 3, June 1999)

Instruction Concerning Prenatal Radiation Exposure

A. Introduction

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

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

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

Other sections of the NRC’s regulations also specify requirements for monitoring external and internal occupational dose to a declared pregnant woman. In 10 CFR 20.1502, “Conditions Requiring Individual Monitoring of External and Internal Occupational Dose,” licensees are required to monitor the occupational dose to a declared pregnant woman, using an individual monitoring device, if it is likely that the declared pregnant woman will receive, from external sources, a deep dose equivalent in excess of 0.1 rem (1 mSv). According to Paragraph (e) of 10 CFR 20.2106, “Records of Individual Monitoring Results,” the licensee must maintain records of dose to an embryo/fetus if monitoring was required, and the records of dose to the embryo/fetus must be kept with the records of dose to the declared pregnant woman. The declaration of pregnancy must be kept on file, but may be maintained separately from the

dose records. The licensee must retain the required form or record until the Commission terminates each pertinent license requiring the record.

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

B. Discussion

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

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

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

C. Regulatory Position

1. Who Should Receive Instruction?

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

2. Providing Instruction

The occupational worker may be given a copy of this guide with its Appendix, an explanation of the contents of the guide, and an opportunity to ask questions and request additional information. The information in this guide and Appendix should also be provided to any worker or supervisor who may be

affected by a declaration of pregnancy or who may have to take some action in response to such a declaration.

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

3. Licensee's Policy on Declared Pregnant Women

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

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

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

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

5. Substantial Variations Above a Uniform Monthly Dose Rate

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

D. Implementation

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

Unless a licensee or an applicant proposes an acceptable alternative method for complying with the specified portions of the NRC's regulations, the methods described in this guide will be used by the NRC staff in the MEDICAL DOSIMETRY STUDENT HANDBOOK 40 evaluation of instructions to workers on the radiation exposure of pregnant women.

References

1. USNRC, "Instruction Concerning Risks from Occupational Radiation Exposure," Regulatory Guide 8.29, Revision 1 PDF Icon, February 1996.
2. National Council on Radiation Protection and Measurements, Limitation of Exposure to Ionizing Radiation, NCRP Report No. 116, Bethesda, MD, 1993. INSTRUCTION CONCERNING PRENATAL RADIATION EXPOSURE

Appendix: Questions and Answers Regarding Prenatal Radiation Exposure

1. Why am I receiving this information?

The NRC's regulations (in 10 CFR 19.12, "Instructions to Workers") require that licensees instruct individuals working with licensed radioactive materials in radiation protection as appropriate for the situation. The instruction below describes information that occupational workers and their supervisors should know about the radiation exposure of the embryo/fetus of pregnant women. The regulations allow a pregnant woman to decide whether she wants to formally declare her pregnancy to take advantage of lower dose limits for the embryo/fetus. This instruction provides information to help women make an informed decision whether to declare a pregnancy.

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

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

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

If you choose to declare your pregnancy in writing, the licensee must take measures to limit the dose to your embryo/fetus to 0.5 rem (5 millisievert) during the entire pregnancy. This is one-tenth of the dose that an occupational worker may receive in a year. If you have already received a dose exceeding 0.5 rem (5 mSv) in the period between conception and the declaration of your pregnancy, an additional dose of 0.05 rem (0.5 mSv) is allowed during the remainder of the pregnancy. In addition, 10 CFR 20.1208, "Dose

to an Embryo/Fetus,” requires licensees to make efforts to avoid substantial variation above a uniform monthly dose rate so that all the 0.5 rem (5 mSv) allowed dose does not occur in a short period during the pregnancy.

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

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

A lower dose limit for the embryo/fetus of a declared pregnant woman is based on a consideration of greater sensitivity to radiation of the embryo/fetus and the involuntary nature of the exposure. Several scientific advisory groups have recommended (References 1 and 2) that the dose to the embryo/fetus be limited to a fraction of the occupational dose limit.

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

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

6. Are there any risks of genetic defects?

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

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

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

The NRC has reviewed the available scientific literature and concluded that the 0.5 rem (5 mSv) limit provides an adequate margin of protection for the embryo/fetus. This MEDICAL DOSIMETRY STUDENT HANDBOOK 42 dose limit reflects the desire to limit the total lifetime risk of leukemia and other cancers. If this dose limit is exceeded, the total lifetime risk of cancer to the embryo/fetus may increase

incrementally. However, the decision on what level of risk to accept is yours. More detailed information on potential risk to the embryo/fetus from radiation exposure can be found in References 2-10.

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

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

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

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

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

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

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

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

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

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

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

No. The lower dose limits for pregnant women apply only if you have declared your pregnancy in writing. The United States Supreme Court has ruled (in *United Automobile Workers International Union v. Johnson Controls, Inc.*, 1991) that "Decisions about the welfare of future children must be left to the

parents who conceive, bear, support, and raise them rather than to the employers who hire those parents” (Reference 7). The Supreme Court also ruled that your employer may not restrict you from a specific job “because of concerns about the next generation.” Thus, the lower limits apply only if you choose to declare your pregnancy in writing.

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

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

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

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

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

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

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

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

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

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

18. Where can I get additional information?

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

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

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

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

References for Appendix

1. National Council on Radiation Protection and Measurements, Limitation of Exposure to Ionizing Radiation, NCRP Report No. 116, Bethesda, MD, 1993.
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3. USNRC, "Instruction Concerning Risks from Occupational Radiation Exposure," Regulatory Guide 8.29, Revision 1, February 1996.(1) (Electronically available at <http://www.nrc.gov/reading-rm/doccollections/reg-guides/>)
4. Committee on the Biological Effects of Ionizing Radiations, National Research Council, Health Effects of Exposure to Low Levels of Ionizing Radiation (BEIR V), National Academy Press, Washington, DC, 1990.
5. United Nations Scientific Committee on the Effects of Atomic Radiation, Sources and Effects of Ionizing Radiation, United Nations, New York, 1993.
6. R. Doll and R. Wakeford, "Risk of Childhood Cancer from Fetal Irradiation," *The British Journal of Radiology*, 70, 130-139, 1997.
7. David Wiedis, Donald E. Jose, and Timm O. Phoebe, "The Rock and the Hard Place: Employer Liability to Fertile or Pregnant Employees and Their Unborn Children--What Can the Employer Do?" *Radiation Protection Management*, 11, 41-49, January/February 1994.
8. National Council on Radiation Protection and Measurements, Considerations Regarding the Unintended Radiation Exposure of the Embryo, Fetus, or Nursing Child, NCRP Commentary No. 9, Bethesda, MD, 1994.
9. National Council on Radiation Protection and Measurements, Risk Estimates for Radiation Protection, NCRP Report No. 115, Bethesda, MD, 1993.
10. National Radiological Protection Board, Advice on Exposure to Ionising Radiation During Pregnancy, National Radiological Protection Board, Chilton, Didcot, UK, 1998.
11. M.L. Thomas and D. Hagemeyer, "Occupational Radiation Exposure at Commercial Nuclear Power Reactors and Other Facilities, 1996," TwentyNinth Annual Report, NUREG-0713, Vol. 18, USNRC, 1998.

C. JRCERT Standards for an Accredited Educational Program in Medical Dosimetry

Introductory Statement

The Joint Review Committee on Education in Radiologic Technology (JRCERT) **Standards for an Accredited Educational Program in Medical Dosimetry** are designed to promote academic excellence, patient safety, and quality healthcare. The **Standards** require a program to articulate its purposes; to demonstrate that it has adequate human, physical, and financial resources effectively organized for the accomplishment of its purposes; to document its effectiveness in accomplishing these purposes; and to provide assurance that it can continue to meet accreditation standards.

The JRCERT is recognized by both the United States Department of Education (USDE) and the Council for Higher Education Accreditation (CHEA). The JRCERT Standards incorporate many of the regulations required by the USDE for accrediting organizations to assure the quality of education offered by higher education programs. Accountability for performance and transparency are also reflected in the **Standards** as they are key factors for CHEA recognition.

The JRCERT accreditation process offers a means of providing assurance to the public that a program meets specific quality standards. The process not only helps to maintain program quality but stimulates program improvement through outcomes assessment.

There are six (6) standards. Each standard is titled and includes a narrative statement supported by specific objectives. Each objective, in turn, includes the following clarifying elements:

- **Explanation** - provides clarification on the intent and key details of the objective.
- **Required Program Response** - requires the program to provide a brief narrative and/or documentation that demonstrates compliance with the objective.
- **Possible Site Visitor Evaluation Methods** - identifies additional materials that may be examined and personnel who may be interviewed by the site visitors at the time of the on-site evaluation in determining compliance with the particular objective. Review of supplemental materials and/or interviews is at the discretion of the site visit team.

Regarding each standard, the program must:

- Identify strengths related to each standard
- Identify opportunities for improvement related to each standard
- Describe the program's plan for addressing each opportunity for improvement
- Describe any progress already achieved in addressing each opportunity for improvement
- Provide any additional comments in relation to each standard

The self-study report, as well as the results of the on-site evaluation conducted by the site visit team, will determine the program's compliance with the Standards by the JRCERT Board of Directors.

Standard One: Accountability, Fair Practices, and Public Information

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

Objectives:

- 1.1 The sponsoring institution and program provide students, faculty, and the public with policies, procedures, and relevant information. Policies and procedures must be fair, equitably applied, and readily available.
- 1.2 The sponsoring institution and program have faculty recruitment and employment practices that are nondiscriminatory.
- 1.3 The sponsoring institution and program have student recruitment and admission practices that are nondiscriminatory and consistent with published policies.
- 1.4 The program assures the confidentiality of student educational records.
- 1.5 The program assures that students and faculty are made aware of the JRCERT Standards for an Accredited Educational Program in Medical Dosimetry and the avenue to pursue allegations of noncompliance with the Standards.
- 1.6 The program publishes program effectiveness data (credentialing examination pass rate, job placement rate, and program completion rate) on an annual basis.
- 1.7 The sponsoring institution and program comply with the requirements to achieve and maintain JRCERT accreditation.

Standard Two: Institutional Commitment and Resources

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

Objectives:

- 2.1 The sponsoring institution provides appropriate administrative support and demonstrates a sound financial commitment to the program.
- 2.2 The sponsoring institution provides the program with the physical resources needed to support the achievement of the program's mission.
- 2.3 The sponsoring institution provides student resources.
- 2.4 The sponsoring institution and program maintain compliance with United States Department of Education (USDE) Title IV financial aid policies and procedures, if the JRCERT serves as gatekeeper.

Standard Three: Faculty and Staff

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

Objectives:

3.1 The sponsoring institution provides an adequate number of faculty to meet all educational, accreditation, and administrative requirements.

3.2 The sponsoring institution and program assure that all faculty and staff possess the academic and professional qualifications appropriate for their assignments.

3.3 The sponsoring institution and program assure the responsibilities of faculty and clinical staff are delineated and performed.

3.4 The sponsoring institution and program assure program faculty performance is evaluated and results are shared regularly to assure responsibilities are performed.

3.5 The sponsoring institution and/or program provide faculty with opportunities for continued professional development.

Standard Four: Curriculum and Academic Practices

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

Objectives:

4.1 The program has a mission statement that defines its purpose.

4.2 The program provides a well-structured curriculum that prepares students to practice in the professional discipline.

4.3 All clinical settings must be recognized by the JRCERT.

4.4 The program provides timely, equitable, and educationally valid clinical experiences for all students.

4.5 The program provides learning opportunities in advanced and/or therapeutic technologies.

4.6 The program assures an appropriate relationship between program length and the subject matter taught for the terminal award offered.

4.7 The program measures didactic, laboratory, and clinical courses in clock hours and/or credit hours through the use of a consistent formula.

4.8 The program provides timely and supportive academic and clinical advisement to students enrolled in the program.

4.9 The program has procedures for maintaining the integrity of distance education courses.

Standard Five: Health and Safety

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

Objectives:

- 5.1 The program assures the radiation safety of students through the implementation of published policies and procedures.
- 5.2 The program assures that students employ proper safety practices.
- 5.3 The program assures that a credentialed practitioner approves all medical dosimetry calculations and treatment plans prior to implementation.
- 5.4 The program assures that direct patient contact procedures (e.g., simulation, fabrication of immobilization devices, etc.) are performed under the direct supervision of a credentialed practitioner.
- 5.5 The sponsoring institution and/or program have policies and procedures that safeguard the health and safety of students.

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

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

Objectives:

- 6.1 The program maintains the following program effectiveness data:
- Five-year average credentialing examination pass rate of not less than 75 percent at first attempt within the next testing cycle after graduation,
 - Five-year average job placement rate of not less than 75 percent within twelve months of graduation, and
 - Annual program completion rate.
- 6.2 The program analyzes and shares its program effectiveness data to facilitate ongoing program improvement.
- 6.3 The program has a systematic assessment plan that facilitates ongoing program improvement.
- 6.4 The program analyzes and shares student learning outcome data to facilitate ongoing program improvement.
- 6.5 The program periodically reevaluates its assessment process to assure continuous program improvement.

D. Medical Dosimetry Program Position Descriptions

Program Director

Required Minimum Qualifications:

1. Completion of a relevant master's degree plus 12 post-master credit hours from an academic institution accredited by an institutional accrediting agency recognized by the U.S. Department of Education (USDE)
2. Proficient in curriculum design, evaluation, instruction, program administration, and academic advising
3. At least 3 years' clinical experience as a certified medical dosimetrist (CMD)
4. At least 3 years' post-secondary teaching experience
5. At least 2 years' experience as an instructor in a JRCERT-accredited program
6. Current Medical Dosimetrist Certification Board (MDCB) certification
7. Demonstrated dedication to developing inclusive teaching practices that engage students from all backgrounds

Preferred Qualifications:

1. A relevant doctorate degree from an academic institution accredited by an institutional accrediting agency recognized by the U.S. Department of Education (USDE)
2. Experience in program administration and assessment
3. Experience teaching online courses
4. Effective organizational and interpersonal skills

Essential Functions:

Program Director responsibilities include—

1. Fulfill expectations associated with tenure-track appointment for teaching, service and scholarship
2. Teach 12-credit hours per semester (either in-person or online, according to departmental needs) or equivalent full workload as outlined in the faculty handbook
3. Teach and develop didactic and/or clinical Allied Health Department courses, as appropriate, in assigned modalities (e.g., face-to-face, online, hybrid, Zoom, etc.)
4. Advise students, maintain office hours in accordance with SAS and university policy, attend meetings, and engage in service activities in the Allied Health Department, the School of Applied Studies, the university, the profession, and the community
5. Assure effective program operations and oversee ongoing program accreditation and assessment processes
6. Participate in budget planning

7. Maintain current knowledge of the professional discipline and educational methodologies through continuing professional development
8. Assume the leadership role in the continued development of the program
9. Perform additional job-related duties as assigned or as appropriate

Clinical Coordinator

Required Minimum Qualifications:

1. Completion of a relevant master's degree from an academic institution accredited by an institutional accrediting agency recognized by the U.S. Department of Education (USDE)
2. Proficient in curriculum development, supervision, instruction, evaluation, and academic advising
3. At least 2 years' clinical experience as a certified medical dosimetrist (CMD)
4. At least 1 years' experience as an instructor in a JRCERT-accredited program
5. Current Medical Dosimetrist Certification Board (MDCB) certification

Preferred Qualifications:

1. Demonstrated dedication to developing inclusive teaching practices that engage students from all backgrounds
2. Experience teaching online courses
3. Effective organizational and interpersonal skills

Essential Functions:

Clinical Coordinator responsibilities include—

1. Teach 30-credit hours across the academic year (either in-person or online, according to departmental needs) or equivalent full workload as outlined in the faculty handbook
2. Teach didactic and/or clinical Allied Health Department courses, as appropriate, in assigned modalities (e.g., face-to-face, online, hybrid, Zoom, etc.)
3. Advise students, maintain office hours in accordance with SAS and university policy, attend meetings, and engage in service activities in the Allied Health Department, the School of Applied Studies, the university, the profession, and the community
4. Correlate and coordinate clinical education with didactic education and evaluate its effectiveness
5. Maintain current knowledge of program policies, procedures, and student progress, and support the Program Director to assure effective program operations
6. Participate in accreditation and assessment processes
7. Maintain current knowledge of the professional discipline and educational methodologies through continuing professional development
8. Perform additional job-related duties as assigned or as appropriate

Adjunct Faculty

Required Minimum Qualifications:

1. Holds academic and/or professional credentials appropriate to the subject area being taught (MDCB, ABR, ABMP, etc.)
2. Is knowledgeable of course development, instruction, evaluation, and academic advising

Preferred Qualifications:

1. Experience teaching online courses
2. Effective organizational and interpersonal skills

Essential Functions:

Adjunct Faculty responsibilities include—

1. Preparing and maintaining course outlines and objectives as needed
2. Instructing and evaluating students and reporting progress
3. Participating in the assessment process, as appropriate
4. Participating in periodic review and revision of course materials
5. Maintaining current knowledge of the professional discipline, as appropriate
6. Maintaining appropriate expertise and competence through continuing professional development

Clinical Preceptor

Required Minimum Qualifications:

1. Proficient in supervision, instruction, and evaluation of students
2. At least 2 years' clinical experience as a certified medical dosimetrist (CMD)
3. Current Medical Dosimetrist Certification Board (MDCB) certification, or equivalent (American Board of Radiology or American Board of Medical Physicists, etc.)

Preferred Qualifications:

1. Supervisory experience in a healthcare discipline
2. Experience with online courses
3. Effective organizational and interpersonal skills

Essential Functions:

Clinical Preceptor responsibilities include—

1. Maintaining knowledge of the program mission and goals
2. Understanding the clinical objectives and clinical evaluation system and evaluating students' clinical competence
3. Providing students with clinical instruction and supervision
4. Participating in the assessment process, as appropriate
5. Maintaining current knowledge of program policies, procedures, and student progress

6. Monitoring and enforcing program policies and procedures

Clinical Staff

Required Minimum Qualifications:

1. Current Medical Dosimetrist Certification Board (MDCB) certification, or equivalent (American Board of Radiology or American Board of Medical Physicists, etc.)

Essential Functions:

Clinical Staff responsibilities include—

1. Understanding the clinical competency system
2. Understanding the requirements for student supervision
3. Evaluating students' clinical competence, as appropriate
4. Supporting the educational process
5. Maintaining current knowledge of program clinical policies, procedures, and student progress