

Standards for an Accredited Educational Program in Medical Dosimetry

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Adopted by:
**The Joint Review Committee on Education
in Radiologic Technology: April 2003**



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The Joint Review Committee on Education in Radiologic Technology promotes excellence in education and enhances quality and safety of patient care through the accreditation of educational programs.

The Joint Review Committee on Education in Radiologic Technology (JRCERT) is recognized by the United States Department of Education to accredit educational programs in radiography and radiation therapy. The JRCERT awards accreditation to programs demonstrating substantial compliance with these **STANDARDS-MD**.

Statement on Assessment of Program Effectiveness ¹

The Joint Review Committee on Education in Radiologic Technology (JRCERT) believes that the accreditation process offers a means of providing public assurance that a program meets standards and of stimulating programmatic improvement. The JRCERT **Standards for an Accredited Educational Program in Medical Dosimetry (STANDARDS-MD)** require a program to articulate its purposes; to demonstrate that it has adequate human, financial, and physical resources effectively organized for the accomplishment of its purposes; to document its effectiveness in accomplishing its purposes; and to provide assurance that it can continue to meet accreditation standards. A variety of assessment approaches in its evaluation processes strengthens a program's ability to document its effectiveness.

The JRCERT believes that assessment leads to programmatic improvement. The JRCERT does not prescribe a specific approach to assessment. That determination should be made by the program in terms of its own purposes and resources. Assessment is not an end in itself but a means of gathering information that can be used in evaluating the program's ability to accomplish its purposes. An effective assessment process provides information that assists program officials in making useful decisions about the program and in developing plans for its improvement.

The JRCERT expects programs to develop a system of planning and evaluation to demonstrate its effectiveness in relation to student achievement. The program is expected to describe and document student learning outcomes and the pursuit of academic excellence.

Introduction

The Standards for an Accredited Educational Program in Medical Dosimetry are directed at the assessment of program and student outcomes. Using these **STANDARDS-MD**, the goals of the accreditation process are to: protect the student and the public, stimulate programmatic improvement, provide protective measures for federal funding or financial aid, and promote academic excellence.

Each **STANDARD** is titled and includes a narrative statement, supported by objectives, describing the outcome required for compliance with the **STANDARD**. Selected key terms are underlined and defined in the Glossary to clarify the meaning. The definitions contained in the Glossary are considered a component of the **STANDARDS-MD** and, as such, must be satisfied to comply with the **STANDARDS-MD**.

¹This Statement is based on a similar Statement developed by the Commission on Institutions of Higher Education, North Central Association of Colleges and Schools. The JRCERT acknowledges, with thanks, the permission of the North Central Association for its use.

Standards for an Accredited Educational Program in Medical Dosimetry

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Standard One: Mission/Goals, Outcomes, and Effectiveness

The program, in support of its mission and goals, develops and implements a system of planning and evaluation to determine its effectiveness and uses the results for program improvement.

Objectives:

In support of **Standard One**, the program:

- 1.1 Has a mission statement that defines its purpose and scope.
- 1.2 Has written goals that outline what the program is designed to achieve.
- 1.3 Makes its mission statement and goals readily available to students, faculty, administrators, and the general public.
- 1.4 Develops and implements an assessment plan that identifies benchmarks for the measurement of outcomes in relation to its mission statement and goals and includes:
 - program completion rate;
 - clinical performance and clinical competence;
 - problem solving skills and critical thinking;
 - communication skills;
 - professional development and growth;
 - graduate satisfaction; and
 - employer satisfaction.
- 1.5 Documents outcomes consistent with each of the following JRCERT policies:
 - over the past five years, credentialing examination pass rate average of not less than 75% at first attempt; and
 - over the past five years, job placement rate of not less than 75% within six months of graduation.
- 1.6 Regularly solicits feedback from students, faculty, radiation oncologists, radiation physicists, graduates, employers, and other communities of interest.
- 1.7 Analyzes and uses feedback from communities of interest and outcome data for continuous improvement of its policies, procedures, and educational offerings.
- 1.8 Periodically evaluates its mission statement, goals, and assessment plan and makes revisions as necessary to achieve continuous quality improvement.

Standard Two: Program Integrity

The program demonstrates integrity in representations to communities of interest and the public, in pursuit of educational excellence, and in treatment of and respect for students, faculty, and staff.

Objectives:

In support of **Standard Two**, the program:

- 2.1 Adheres to high ethical standards in relation to students, faculty, and staff.
- 2.2 Has program faculty recruitment and employment practices that are nondiscriminatory with respect to any legally protected status such as race, color, religion, gender, age, disability, and national origin.
- 2.3 Publishes statements accurately reflecting the program's offerings.
- 2.4 Has due process procedures that are readily accessible, fair, and equitably applied.
- 2.5 Has a policy that assures timely and appropriate resolution of complaints regarding allegations of non-compliance with **JRCERT STANDARDS-MD** and maintains a record of such complaints and their resolution.
- 2.6 Regularly evaluates program policies, procedures, and publications and revises as appropriate.
- 2.7 Documents the continuing accreditation of the sponsoring institution.
- 2.8 Documents the continuing recognition of each clinical practice setting by applicable regulatory agencies.
- 2.9 Maintains JRCERT recognition of all clinical practice settings.
- 2.10 Maintains JRCERT recognition of all applicable faculty appointments.
- 2.11 Complies with requirements to achieve and maintain JRCERT accreditation.

Standard Three: Organization and Administration

Organizational and administrative structures support quality and effectiveness of the educational process.

Objectives:

In support of **Standard Three**, the program:

- 3.1 Has organizational and administrative structures that support the program's mission and student learning outcomes.
- 3.2 Establishes and maintains affiliation agreements with clinical practice settings.
- 3.3 Assures the security and confidentiality of student records, instructional materials, and other appropriate program materials.
- 3.4 Assures an appropriate relationship between program length and the subject matter taught and the objectives for the degree or credential offered.
- 3.5 Measures the length of all didactic and clinical courses in clock hours or credit hours.

Standard Four: Curriculum and Academic Practices

The program's curriculum and academic practices promote the synthesis of theory, use of current technology, competent clinical practice, and professional values.

Objectives:

In support of **Standard Four**, the program:

- 4.1 Maintains a master plan of education.
- 4.2 Follows a JRCERT recognized and accepted curriculum that prepares the student to practice in the professional discipline.
- 4.3 Provides a curriculum that promotes professional values, life-long learning, and competency in critical thinking and problem solving skills.
- 4.4 Provides a well-structured, competency based curriculum that supports the program's mission and goals.
- 4.5 Has a curriculum that reflects evaluation of affective, cognitive, and psychomotor domains.
- 4.6 Provides learning opportunities in current and developing medical dosimetry procedures.
- 4.7 Provides equitable learning opportunities.

Standard Five: Resources and Student Services

The program's learning resources, learning environments, and student services are sufficient to support its mission and goals.

Objectives:

In support of **Standard Five**, the program:

- 5.1 Provides classrooms, laboratories, clinical practice settings, administrative and faculty offices, and other facilities to support its mission and goals.
- 5.2 Has clinical practice settings that provide students with a variety and volume of procedures for competency achievement.
- 5.3 Reviews, evaluates, and maintains learning resources to assure the achievement of student learning outcomes and program goals.
- 5.4 Reviews, evaluates, and maintains student services to assure the achievement of student learning outcomes and program goals.

Standard Six: Human Resources

The program has sufficient qualified faculty and staff with delineated responsibilities to support program mission and goals.

Objectives:

In support of **Standard Six**, the program:

6.1 Documents that all faculty and staff possess academic and professional qualifications appropriate for their assignments.

- **Program Director:**

Holds, at a minimum, a masters degree;

Is proficient in curriculum design, program administration, evaluation, instruction, and counseling;

Documents the equivalent of three years full-time experience in medical dosimetry and/or radiation therapy;

Documents one year experience as an instructor in a JRCERT accredited program;

Holds Medical Dosimetrist Certification Board certification or equivalent; if the program director does not meet this qualification, an educational coordinator is required.

- **Educational Coordinator:**

Holds, at a minimum, a baccalaureate degree;

Is proficient in curriculum development, supervision, instruction, evaluation, and counseling;

Documents the equivalent of two years full-time experience in the professional discipline;

Holds Medical Dosimetrist Certification Board certification or equivalent.

- **Didactic Program Faculty:**

Is qualified to teach the subject;

Is knowledgeable of course development, instruction, evaluation, and academic counseling;

Holds appropriate professional credentials, if applicable.

- Clinical Preceptor(s):

Is proficient in supervision, instruction, and evaluation;

Documents the equivalent of two years full-time experience in the professional discipline;

Holds Medical Dosimetrist Certification Board certification or equivalent.

- Clinical Staff:

Holds Medical Dosimetrist Certification Board certification or equivalent.

6.2 Documents administrative, faculty, and clinical staff responsibilities are delineated and support the fulfillment of the program's mission and goals.

- Program Director:

Organizes, administers, reviews, develops, and assures program effectiveness;

Conducts on-going program assessment;

Participates in budget planning;

Evaluates and assures clinical education effectiveness;

Maintains current knowledge of the professional discipline and educational methodologies through continuing professional development;

Assumes the leadership role in the continued development of the program.

- Educational Coordinator:

Cooperates with the program director in design and implementation of the curriculum;

Correlates clinical education with didactic education;

Coordinates clinical education and evaluates its effectiveness;

Evaluates students;

Cooperates with the program director in periodic review and revision of clinical course materials;

Maintains current knowledge of the professional discipline and educational methodologies through continuing professional development;

Maintains current knowledge of program policies, procedures, and student progress.

- **Didactic Program Faculty:**

Prepare and maintain course outlines and objectives, instruct and evaluate students, and report progress;

Cooperate with the program director in periodic review and revision of course materials;

Maintain appropriate expertise and competencies through continuing professional development.

- **Clinical Preceptor(s)**

Is knowledgeable of program goals;

Understands the clinical objectives and clinical evaluation system;

Provides students with clinical instruction/supervision;

Evaluates students' clinical competence;

Maintains competency in the professional discipline and in instructional and evaluative techniques through continuing professional development;

Maintains current knowledge of program policies, procedures, and student progress.

- **Clinical Staff:**

Understand the clinical competency system;

Support the educational process;

Maintain current knowledge of program policies, procedures, and student progress.

- 6.3 Provides an adequate number of faculty to meet all educational, program, administrative, and accreditation requirements.
- 6.4 Provides support services to meet all educational, program, and administrative requirements.
- 6.5 Provides program faculty with opportunities for continued professional development.
- 6.6 Evaluates didactic program faculty and clinical faculty performance regularly to assure instructional responsibilities are performed.

Standard Seven: Students

The program's and sponsoring institution's policies and procedures serve and protect the rights, health, and educational opportunities of all students.

Objectives:

In support of **Standard Seven**, the program:

- 7.1 Has student recruitment and admission practices that are consistent with published policies of the program and sponsoring institution.
- 7.2 Uses student recruitment and admission practices that are non-discriminatory with respect to any legally protected status such as race, color, religion, gender, age, disability, and national origin.
- 7.3 Makes available to prospective students accurate information about admission policies, transfer credit, tuition and fees, refund policies, academic calendars, academic policies, graduation requirements, and student services.
- 7.4 Makes available to enrolled students accurate information about admission policies, transfer credit, tuition and fees, refund policies, academic calendars, academic policies, grading policies, graduation requirements, and student services.
- 7.5 Provides timely and supportive academic, behavioral, and clinical advisement to students enrolled in the program.
- 7.6 Provides student academic and clinical activities that are educationally valid and support attainment of student learning outcomes.
- 7.7 Safeguards the health and safety of students associated with educational activities through implemented policies and procedures in regard to workplace hazards, harassment, communicable diseases, and substance abuse.
- 7.8 Limits required clinical and academic involvement for students to not more than 40 hours per week.

Standard Eight: Radiation Safety

Program policies and procedures are in compliance with federal and state radiation protection laws.

Objectives:

In support of **Standard Eight**, the program:

- 8.1 Safeguards the health and safety of students associated with educational activities through the implementation of published policies and procedures that are in compliance with Nuclear Regulatory Commission regulations and state laws as applicable.
- 8.2 Has a pregnancy policy that is published and made known to accepted and enrolled female students that:
 - is consistent with applicable federal regulations and state laws;
 - includes notice of voluntary disclosure; and
 - provides options for student continuance in the program.
- 8.3 Assures that students use equipment and accessories, employ techniques, and perform procedures in accordance with accepted equipment use and radiation safety practices to minimize radiation exposure to patients, selves, and others.
- 8.4 Assures that all medical dosimetry procedures, other than fabrication of beam modifying and immobilization devices, are performed under the direct supervision of a qualified practitioner.
- 8.5 Assures that fabrication of beam modifying and immobilization devices are performed under the direct supervision of a qualified practitioner until a student achieves competency.
- 8.6 Assures that fabrication of beam modifying and immobilization devices are performed under the indirect supervision of a qualified practitioner after a student achieves competency.
- 8.7 Maintains documentation that learning environments are in compliance with applicable state and federal radiation safety laws.

Standard Nine: Fiscal Responsibility

The program and the sponsoring institution have adequate financial resources, demonstrate financial stability, and comply with obligations for Title IV federal funding, if applicable.

Objectives:

In support of **Standard Nine**, the program:

- 9.1 Has sufficient on-going financial resources to support the program's mission and goals.
- 9.2 Provides the program director an opportunity to participate in the budget planning process.
- 9.3 For those institutions and programs for which the JRCERT or a mixed accreditor serves as gatekeeper for Title IV financial aid, maintains compliance with USDE policies and procedures.

Glossary

Affiliation Agreement - A formal written understanding between an institution sponsoring the program and an independent clinical practice setting.

Assessment - The systematic collection, review, and use of information to improve student learning, educational quality, and program effectiveness.

Assessment Plan - Provides direction for actions and is a way to determine progress. At a minimum, an assessment plan should include goals, evaluation criteria and benchmarks, outcomes, and a plan of action.

Clinical Practice Setting - A facility, which is recognized by the JRCERT and meets the standards of major cancer center as defined by the American College of Radiology (ACR), responsible for delivering clinical education and evaluation of clinical competency. A minimum of one clinical preceptor is designated at each site.

Clinical Preceptor(s) - One full-time equivalent clinical preceptor for every five (5) students involved in the competency achievement process.

Clinical Staff - The ratio of students to staff shall always be no more than 2:1.

Communities of Interest - Institutions, organizations, groups and/or individuals interested in educational activities in medical dosimetry.

Competency Based - Requires student attainment of a specified level of proficiency.

Credentialing Examination Pass Rate - The number of graduates who pass the Medical Dosimetrist Certification Board credentialing examination compared with the number of graduates who take the examination.

Direct Supervision - Student supervision by a qualified practitioner, who reviews the procedure in relation to the student's achievement and reviews and approves the procedure or final product prior to implementation with a patient. Any procedure directly performed on a patient requires the physical presence of a qualified practitioner.

Due Process - The formal procedure for resolution of a grievance or complaint that identifies timeframes for completion of each step and provides for a final appeal to a source external to the program.

Educational Coordinator - Required if the program director is not credentialed in medical dosimetry or has five or more clinical practice settings or more than 10 students enrolled in the clinical component.

Gatekeeper - An agency with responsibility for oversight of the distribution, record keeping, and repayment of Title IV financial aid.

Goals - Ends or results the program wants to achieve.

Indirect Supervision - That supervision provided by a qualified practitioner on the premises and available to assist the student. A qualified practitioner must be immediately available, in the department, when a medical dosimetry procedure is being performed on a patient.

Job Placement Rate - The number of graduates employed in medical dosimetry compared to the number of graduates actively seeking employment in medical dosimetry.

Learning Environment - Places, surroundings or circumstances where knowledge, understanding, or skills are studied or observed such as classrooms, laboratories and clinical practice settings.

Learning Resources - Media and reference materials utilized to support and enhance the educational program and scholarly activity. A variety of learning resources are available to programs and students; however, if a print library is a primary resource, the library must have a variety of materials published within the last five years. The JRCERT does not endorse any specific learning resource.

Master Plan of Education - Documentation of the entire course of study that includes at a minimum: didactic and clinical curricula, program policies and procedures, and strategies for assessing program effectiveness.

Medical Dosimetrist Certification Board or Equivalent - Certification by the Medical Dosimetrist Certification Board (MDCB) as a dosimetrist or the American Board of Radiology (ABR) or the American Board of Medical Physicists as a medical physicist.

Medical Dosimetry Procedures - Treatment planning, dose calculations, brachytherapy planning and procedures, quality assurance procedures, and fabrication of beam modifying and immobilization devices.

Mission Statement - A means to communicate an educational vision and purpose.

Mixed Accreditor - An accrediting agency whose responsibilities for accreditation include situations where the agency accredits the only educational program in an institution. Where there are multiple educational programs in an institution, the agency selected as the institutional accreditor.

Outcomes - Results, end products, or actual consequences resulting from the educational process. Outcomes include what the students demonstrated/accomplished or what the program achieved.

Program Completion Rate - The number of students who complete the program compared to the number of students initially enrolled in the program.

Program Length - Duration of the program which may be stated as total academic or calendar year(s), or total semesters, trimesters, or quarters.

Qualified Practitioner - A medical dosimetrist possessing Medical Dosimetrist Certification Board (MDCB) certification or equivalent.

Recognized and Accepted Curriculum - Professional curriculum adopted by the JRCERT Board of Directors following review and recommendation by the JRCERT Standards Committee.

Sponsoring Institution - The facility or organization that has primary responsibility for the educational program and grants the terminal award. A sponsoring institution must be accredited by a recognized agency or meet equivalent standards. Educational programs may be established in: community and junior colleges; senior colleges and universities, hospitals, medical schools, postsecondary vocational/technical schools and institutions; military/governmental facilities; proprietary schools; and consortia (two or more academic or clinical institutions that have formally agreed to sponsor the development and continuation of an educational program). Consortia must be structured to recognize and perform the responsibilities and functions of a sponsoring institution.

Title IV Financial Aid - Monies for education loaned or granted by the Federal government, e.g. Perkins loans, Stafford loans, PLUS loans, Pell grants, Supplemental Educational Opportunity grants and work-study programs. Programs participating in Title IV financial aid must: maintain financial documents including audit and budget processes confirming appropriate allocation and use of financial resources; have a monitoring process for student loan default rates; have an appropriate accounting system providing documentation for management of Title IV financial aid and expenditures; inform students of responsibility for timely repayment of Title IV financial aid.

Awarding, Maintaining, and Administering Accreditation

A. Program/Sponsoring Institution Responsibilities

1. Applying for Accreditation

The accreditation review process conducted by the Joint Review Committee on Education in Radiologic Technology (JRCERT) can be initiated only at the written request of the chief executive officer or an officially designated representative of the sponsoring institution.

This process is initiated by submitting an application and self-study report, prepared according to JRCERT guidelines, to:

Joint Review Committee on Education in Radiologic Technology
20 North Wacker Drive, Suite 2850
Chicago, IL 60606-3182

2. Administrative Requirements for Maintaining Accreditation

- a. Submitting the self-study report or a required progress report within a reasonable period of time, as determined by the JRCERT.
- b. Agreeing to a reasonable site visit date before the end of the period for which accreditation was awarded.
- c. Informing the JRCERT, within a reasonable period of time, of changes in the institutional or program officials, program director, educational coordinator, and clinical preceptor(s).
- d. Paying JRCERT fees within a reasonable period of time.
- e. Returning, by the established deadline, a completed Annual Report.

Programs are required to comply with these and other administrative requirements for maintaining accreditation. Additional information on policies and procedures is available from the JRCERT.

Program failure to meet administrative requirements for maintaining accreditation may lead to being placed on Administrative Probationary Accreditation and ultimately to Withdrawal of Accreditation.

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