

# **Standards for an Accredited Limited Scope X-ray Machine Operator Educational Program**

Effective January 1, 2021

*Adopted April 2020*



*Excellence in Education*

## Introductory Statement

The Joint Review Committee on Education in Radiologic Technology (JRCERT) **Standards for an Accredited Limited Scope X-ray Machine Operator Educational Program** 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.**

# Standards for an Accredited Limited Scope X-ray Machine Operator Educational Program

## Table of Contents

<b>Standard One: Accountability, Fair Practices, and Public Information .....</b>	<b>4</b>
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.	
<b>Standard Two: Institutional Commitment and Resources .....</b>	<b>13</b>
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.	
<b>Standard Three: Faculty and Staff.....</b>	<b>18</b>
The sponsoring institution provides the program adequate and qualified faculty that enable the program to meet its mission and promote student learning.	
<b>Standard Four: Curriculum and Academic Practices.....</b>	<b>26</b>
The program’s curriculum and academic practices prepare students for professional practice.	
<b>Standard Five: Health and Safety .....</b>	<b>38</b>
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.	
<b>Standard Six: Programmatic Effectiveness and Assessment: Using Data for Sustained Improvement .....</b>	<b>44</b>
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.	
<b>Glossary .....</b>	<b>50</b>
<b>Awarding, Maintaining, and Administering Accreditation .....</b>	<b>53</b>

## 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 Limited Scope X-ray Machine Operator Educational Program** and the avenue to pursue allegations of noncompliance with the **Standards**.
- 1.6 The program publishes program effectiveness data (state licensing 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.

**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.**

***Explanation:***

Institutional and program policies and procedures must be fair, equitably applied, and promote professionalism. Policies, procedures, and relevant information must be current, accurate, published, and made readily available to students, faculty, staff, and the public on the institution's or program's website to assure transparency and accountability of the educational program. For example, requiring the public to contact the institution or program to request program information is not fully transparent. Policy changes must be made known to students, faculty, and the public in a timely fashion. It is recommended that revision dates be identified on program publications.

At a minimum, the sponsoring institution and/or program must publish policies, procedures, and/or relevant information related to the following:

- admission and transfer of credit policies;
- tuition, fees, and refunds;
- graduation requirements;
- grading system;
- program mission statement, goals, and student learning outcomes;
- accreditation status;
- articulation agreement(s);
- academic calendar;
- clinical obligations;
- grievance policy and/or procedures.

Any policy changes to the above must be made known to students, faculty, and the public in a timely fashion.

In addition, programs must develop a contingency plan that addresses any type of catastrophic event that could affect student learning and program operations. Although the contingency plan does not need to be made readily available to the public, program faculty must be made aware of the contingency plan.

***Required Program Response:***

- Describe how institutional and program policies, procedures, and relevant information are made known to students, faculty, staff, and the public.
- Describe how policies and procedures are fair, equitably applied, and promote professionalism.
- Describe the nature of any formal grievance(s) and/or complaints(s) and their resolution.
- Provide publications that include the aforementioned policies, procedures, and relevant information, including the hyperlink for each.
- Provide a copy of the resolution of any formal grievance(s).

***Possible Site Visitor Evaluation Methods:***

- Review of institutional and program website
- Review of institutional and program materials
- Review of student handbook
- Review of student records
- Review of formal grievance(s) record(s), if applicable
- Interviews with institutional administration
- Interviews with faculty
- Interviews with staff
- Interviews with students

**1.2 The sponsoring institution and program have faculty recruitment and employment practices that are nondiscriminatory.**

***Explanation:***

Nondiscriminatory recruitment and employment practices assure fairness and integrity. Equal opportunity for employment must be offered to each applicant with respect to any legally protected status such as race, color, gender, age, disability, national origin, or any other protected class. Employment practices must be equitably applied.

***Required Program Response:***

- Describe how nondiscriminatory recruitment and employment practices are assured.
- Provide copies of employment policies and procedures that assure nondiscriminatory practices.

***Possible Site Visitor Evaluation Methods:***

- Review of employee/faculty handbook
- Review of employee/faculty application form
- Review of institutional catalog
- Interviews with faculty

**1.3 The sponsoring institution and program have student recruitment and admission practices that are nondiscriminatory and consistent with published policies.**

***Explanation:***

Nondiscriminatory recruitment practices assure applicants have equal opportunity for admission. Defined admission practices facilitate objective student selection. In considering applicants for admission, the program must follow published policies and procedures. Statistical information such as race, color, religion, gender, age, disability, national origin, or any other protected class may be collected; however, the student must voluntarily provide this information. Use of this information in the student selection process is discriminatory.

***Required Program Response:***

- Describe how institutional and program admission policies are implemented.
- Describe how admission practices are nondiscriminatory.
- Provide institutional and program admission policies.

***Possible Site Visitor Evaluation Methods:***

- Review of published program materials
- Review of student records
- Interviews with faculty
- Interviews with admissions personnel, as appropriate
- Interviews with students



#### **1.4 The program assures the confidentiality of student educational records.**

***Explanation:***

Maintaining the confidentiality of educational records protects students' right to privacy. Educational records must be maintained in accordance with the Family Educational Rights and Privacy Act (FERPA). If educational records contain students' social security numbers, this information must be maintained in a secure and confidential manner. Space should be made available for the secure storage of files and records.

***Required Program Response:***

Describe how the program maintains the confidentiality of students' educational records.

***Possible Site Visitor Evaluation Methods:***

- Review of institution's/program's published policies/procedures
- Review of student academic and clinical records, including radiation monitoring reports
- Tour of program offices
- Tour of clinical setting(s)
- Interviews with faculty
- Interviews with clerical staff, if applicable
- Interviews with clinical preceptor(s)
- Interviews with clinical staff
- Interviews with students

**1.5** The program assures that students and faculty are made aware of the JRCERT **Standards for an Accredited Limited Scope X-ray Machine Operator Educational Program** and the avenue to pursue allegations of noncompliance with the **Standards**.

***Explanation:***

The program must assure students and faculty are cognizant of the **Standards** and must provide contact information for the JRCERT.

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.

***Required Program Response:***

- Describe how students and faculty are made aware of the **Standards**.
- Provide documentation that the **Standards** and JRCERT contact information are made known to students and faculty.

***Possible Site Visitor Evaluation Methods:***

- Review of program publications
- Review of program website
- Interviews with faculty
- Interviews with students

**1.6 The program publishes program effectiveness data (state licensing examination pass rate, job placement rate, and program completion rate) on an annual basis.**

***Explanation:***

Program accountability is enhanced, in part, by making its program effectiveness data available to the program's communities of interest, including the public. In an effort to increase accountability and transparency, the program must publish, at a minimum, its most recent five-year average state licensing examination pass rate data, five-year average job placement rate data, and annual program completion rate data on its website to allow the public access to this information. If the program cannot document five years of program effectiveness data, it must publish its available effectiveness data.

The program effectiveness data must clearly identify the sample size associated with each measure (i.e., number of first-time test takers, number of graduates actively seeking employment, and number of graduates).

Program effectiveness data is published on the JRCERT website. Programs must publish a hyperlink to the JRCERT website to allow students and the public access to this information.

***Required Program Response:***

- Provide the hyperlink for the program's effectiveness data webpage.
- Provide samples of publications that document the availability of program effectiveness data via the JRCERT URL address from the program's website.

***Possible Site Visitor Evaluation Methods:***

- Review of program website
- Review of program publications
- Interviews with faculty
- Interviews with students

**1.7 The sponsoring institution and program comply with requirements to achieve and maintain JRCERT accreditation.**

***Explanation:***

Programs must comply with all JRCERT policies and procedures to maintain accreditation. JRCERT policies are located at [www.jrcert.org](http://www.jrcert.org). In addition, substantive changes must be reviewed and approved by the JRCERT prior to implementation, with the exception of a change of ownership.

JRCERT accreditation requires that the sponsoring institution has the primary responsibility for the educational program and grants the terminal award. Sponsoring institutions may include educational programs established in colleges, universities, vocational/technical schools, hospitals, or military facilities. The JRCERT does not recognize a healthcare system as the program sponsor. A healthcare system consists of multiple institutions operating under a common governing body or parent corporation. A specific facility within the healthcare system must be identified as the sponsor. The JRCERT requires each program to have a separate accreditation award and does not recognize branch campuses. The JRCERT does not recognize a consortium as an appropriate sponsor of an educational program.

The JRCERT requires programs to maintain a current and accurate database. The program must maintain documentation of all program official qualifications, including updated curricula vitae and current ARRT certification and registration, or equivalent documentation. This documentation is not required to be entered into the Accreditation Management System (AMS). Newly appointed institutional administrators, program officials, and clinical preceptors must be updated through the AMS within thirty (30) days of appointment.

***No Required Program Response***

***Possible Site Visitor Evaluation Method:***

Review of a representative sample of program official qualifications

## **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.

**2.1 The sponsoring institution provides appropriate administrative support and demonstrates a sound financial commitment to the program.**

***Explanation:***

The program must have sufficient institutional support and ongoing funding to operate effectively. The program's relative position in the organizational structure helps facilitate appropriate resources and enables the program to meet its mission.

The sponsoring institution should provide the program with administrative/clerical services as needed to assist in the achievement of its mission.

***Required Program Response:***

- Describe the sponsoring institution's level of commitment to the program.
- Describe the program's position within the sponsoring institution's organizational structure and how this supports the program's mission.
- Describe the adequacy of financial resources.
- Describe the availability and functions of administrative/clerical services, if applicable.
- Provide institutional and program organizational charts.

***Possible Site Visitor Evaluation Methods:***

- Review of organizational charts of institution and program
- Review of published program materials
- Review of meeting minutes
- Interviews with institutional administration
- Interviews with faculty
- Interviews with clerical staff, if applicable

**2.2 The sponsoring institution provides the program with the physical resources needed to support the achievement of the program's mission.**

***Explanation:***

Physical resources include learning environments necessary to conduct teaching and facilitate learning. The sponsoring institution must provide faculty with adequate office and classroom space needed to fulfill their responsibilities. Faculty office space should be conducive to course development and scholarly activities. Space must be made available for private student advisement and program meetings. Classrooms must be appropriately designed to meet the needs of the program's curriculum delivery methods.

Resources include, but are not limited to, access to computers, reliable and secure Internet service, instructional materials (computer hardware and/or software, technology-equipped classrooms, simulation devices, and other instructional aides), and library resources.

Laboratories must be conducive to student learning and sufficient in size. The sponsoring institution must provide the program with access to a fully energized laboratory. An energized laboratory on campus is recommended. The program may utilize laboratory space that is also used for patient care. In the event patient flow disallows use of the laboratory space, the program must assure that laboratory courses are made up in a timely manner. A mobile unit and/or simulation software cannot take the place of a stationary/fixed energized laboratory.

The JRCERT does not endorse any specific physical resources.

***Required Program Response:***

Describe how the program's physical resources, such as offices, classrooms, and laboratories, facilitate the achievement of the program's mission.

***Possible Site Visitor Evaluation Methods:***

- Tour of the classroom, laboratories, and faculty offices
- Review of learning resources
- Interviews with faculty
- Interviews with students

### **2.3 The sponsoring institution provides student resources.**

***Explanation:***

Student resources refer to the variety of services and programs offered to promote academic success. The institution and/or program must provide access to information for personal counseling, requesting accommodations for disabilities, and financial aid.

The JRCERT does not endorse any specific student resources.

***Required Program Response:***

- Describe how students are provided with access to information on personal counseling, disability services, and financial aid.
- Describe how the program utilizes other student resources to promote student success.

***Possible Site Visitor Evaluation Methods:***

- Tour of facilities
- Review of published program materials
- Review of surveys
- Interviews with faculty
- Interviews with students



**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.**

***Explanation:***

If the program has elected to participate in Title IV financial aid and the JRCERT is identified as the gatekeeper, the program 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; and
- inform students of responsibility for timely repayment of Title IV financial aid.

The program must comply with all USDE requirements to participate in Title IV financial aid.

***Required Program Response:***

- Describe how the program informs students of their responsibility for timely repayment of financial aid.
- Provide evidence that Title IV financial aid is managed and distributed according to the USDE regulations to include:
  - recent student loan default data and
  - results of financial or compliance audits.

***Possible Site Visitor Evaluation Methods:***

- Review of records
- Interviews with administrative personnel
- Interviews with faculty
- Interviews with students

### **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.

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

#### ***Explanation:***

An adequate number of faculty promotes sound educational practices. Full- and part-time status is determined by, and consistent with, the sponsoring institution's definition. Institutional policies and practices for faculty workload and release time must be consistent with faculty in other comparable health sciences programs in the same institution. Faculty workload and release time practices must include allocating time and/or reducing teaching load for educational, accreditation, and administrative requirements expected of the program director and clinical coordinator.

A full-time program director is required. If the sponsoring institution has a radiography program, the program director of the radiography program may also be identified as the program director of the LXMO program. A full-time equivalent clinical coordinator is required if the program has more than fifteen (15) students enrolled in the clinical component of the program. If the sponsoring institution has a radiography program, the clinical coordinator of the radiography program may also be identified as the clinical coordinator of the LXMO program. The clinical coordinator position may be shared by no more than four (4) appointees. If a clinical coordinator is required, the program director may not be identified as the clinical coordinator. The clinical coordinator may not be identified as the program director.

A minimum of one clinical preceptor must be designated at each recognized clinical setting. The same clinical preceptor may be identified at more than one site as long as a ratio of one full-time equivalent clinical preceptor for every ten (10) students is maintained. The program director and clinical coordinator may perform clinical instruction; however, they may not be identified as clinical preceptors.

#### ***Required Program Response:***

- Describe faculty workload and release time in relation to institutional policies/practices and comparable health sciences programs within the sponsoring institution.
- Describe the adequacy of the number of faculty and clinical preceptors to meet identified accreditation requirements and program needs.
- Provide institutional policies for faculty workload and release time.

#### ***Possible Site Visitor Evaluation Methods:***

- Review institutional policies for faculty workload and release time
- Review of faculty position descriptions, if applicable
- Review of clinical settings
- Interviews with faculty
- Interviews with clinical preceptor(s)
- Interviews with students

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

<b>Position</b>	<b>Qualifications</b>
Program Director	Holds, at a minimum, a bachelor's degree;
	Proficient in curriculum design, evaluation, instruction, program administration, and academic advising;
	Documents three years' clinical experience in the professional discipline;
	Documents one years' experience as an instructor in a JRCERT-accredited program;
	Holds current American Registry of Radiologic Technologists (ARRT) certification and registration, or equivalent <sup>1</sup> , in radiography.
Clinical Coordinator	Holds, at a minimum, an associate degree;
	Proficient in curriculum development, supervision, instruction, evaluation, and academic advising;
	Documents two years' clinical experience in the professional discipline;
	Documents one year's experience as an instructor in a JRCERT-accredited program;
	Holds current American Registry of Radiologic Technologists (ARRT) certification and registration, or equivalent <sup>1</sup> , in radiography.
Full-time Didactic Faculty	Holds, at a minimum, an associate degree;
	Is qualified to teach the subject;
	Proficient in course development, instruction, evaluation, and academic advising;
	Documents two years' clinical experience in the professional discipline;
	Holds current American Registry of Radiologic Technologists (ARRT) certification and registration, or equivalent <sup>1</sup> , in radiography or state license as a limited scope X-ray machine operator for the state in which the program is located.
Adjunct Faculty	Holds academic and/or professional credentials appropriate to the subject content area taught;
	Is knowledgeable of course development, instruction, evaluation, and academic advising.
Clinical Preceptors	Is proficient in supervision, instruction, and evaluation;
	Documents two years' clinical experience in the professional discipline;
	Holds current American Registry of Radiologic Technologists (ARRT) certification and registration, or equivalent <sup>2</sup> , in radiography or state license as a limited scope X-ray machine operator for the state in which the program is located.
Clinical Staff	Holds current American Registry of Radiologic Technologists (ARRT) certification and registration, or equivalent <sup>2</sup> , in radiography or state license as a limited scope X-ray machine operator for the state in which the clinical setting is located.

<sup>1</sup> Equivalent: an unrestricted state license for the state in which the program is located.

<sup>2</sup> Equivalent: an unrestricted state license for the state in which the clinical setting is located.

***Explanation:***

Faculty and clinical staff must possess academic and professional qualifications appropriate for their assignment. Clinical preceptors and clinical staff supervising students' performance in the clinical component of the program must document American Registry of Radiologic Technologists (ARRT) certification and registration (or equivalent) or other appropriate credentials (LXMO state license). Health care professionals with credentials other than ARRT certification and registration (or equivalent) may supervise students in specialty areas (e.g., Registered Nurse supervising students performing patient care skills, phlebotomist supervising students performing venipuncture, etc.).

***No Required Program Response.***

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

Position	Responsibilities must, at a minimum, include:
Program Director	Assuring effective program operations;
	Overseeing ongoing program accreditation and assessment processes;
	Participating in budget planning;
	Participating in didactic and/or clinical instruction, as appropriate;
	Maintaining current knowledge of the professional discipline and educational methodologies through continuing professional development;
	Assuming the leadership role in the continued development of the program.
Clinical Coordinator	Correlating and coordinating clinical education with didactic education and evaluating its effectiveness;
	Participating in didactic and/or clinical instruction;
	Supporting the program director to assure effective program operations;
	Participating in the accreditation and assessment processes;
	Maintaining current knowledge of the professional discipline and educational methodologies through continuing professional development;
	Maintaining current knowledge of program policies, procedures, and student progress.
Full-Time Didactic Faculty	Preparing and maintaining course outlines and objectives, instructing, and evaluating student progress;
	Participating in the accreditation and assessment process;
	Supporting the program director to assure effective program operations;
	Participating in periodic review and revision of course materials;
	Maintaining current knowledge of professional discipline;
	Maintaining appropriate expertise and competence through continuing professional development.
Adjunct Faculty	Preparing and maintaining course outlines and objectives, instructing and evaluating students, and reporting progress;
	Participating in the assessment process, as appropriate;
	Participating in periodic review and revision of course materials;
	Maintaining current knowledge of the professional discipline, as appropriate;
	Maintaining appropriate expertise and competence through continuing professional development.

Position	Responsibilities must, at a minimum, include:
Clinical Preceptor	Maintaining knowledge of program mission and goals;
	Understanding the clinical objectives and clinical evaluation system and evaluating students' clinical competence;
	Providing students with clinical instruction and supervision;
	Participating in the assessment process, as appropriate;
	Maintaining current knowledge of program policies, procedures, and student progress and monitoring and enforcing program policies and procedures.
Clinical Staff	Understanding the clinical competency system;
	Understanding requirements for student supervision;
	Evaluating students' clinical competence, as appropriate;
	Supporting the educational process;
	Maintaining current knowledge of program clinical policies, procedures, and student progress.

***Explanation:***

Faculty and clinical staff responsibilities must be clearly delineated and support the program's mission. The program director and clinical coordinator may have other responsibilities as defined by the sponsoring institution; however, these added responsibilities must not compromise the ability, or the time allocated, to perform the responsibilities identified in this objective. For all circumstances when a program director's and/or clinical coordinator's appointment is less than 12 months and students are enrolled in didactic and/or clinical courses, the program director and/or clinical coordinator must assure that all program responsibilities are fulfilled.

***Required Program Response:***

- Describe how faculty and clinical staff responsibilities are delineated.
- Describe how the delegation of responsibilities occurs to assure continuous coverage of program responsibilities, if appropriate.
- Provide documentation that faculty and clinical staff positions are clearly delineated.
- Provide assurance that faculty responsibilities are fulfilled throughout the year.

***Possible Site Visitor Evaluation Methods:***

- Review of position descriptions
- Review of handbooks
- Interviews with institutional administration
- Interviews with faculty
- Interviews with clinical preceptors
- Interviews with clinical staff
- Interviews with students

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

***Explanation:***

Evaluating program faculty, including but not limited to program directors and clinical coordinators, assures that responsibilities are performed, promotes proper teaching methodology, and increases program effectiveness. The performance of program faculty must be evaluated and shared minimally once per year. Any evaluation results that identify concerns must be discussed with the respective individual(s) as soon as possible.

It is the prerogative of the program to evaluate the performance of clinical preceptors who are employees of clinical settings. If the program elects to evaluate the clinical preceptors, a description of the evaluation process should be provided to the clinical preceptors, along with the mechanism to incorporate feedback into professional growth and development.

***Required Program Response:***

- Describe the evaluation process.
- Describe how evaluation results are shared with program faculty.
- Describe how evaluation results are shared with clinical preceptors, if applicable.
- Provide samples of evaluations of program faculty.
- Provide samples of evaluations of clinical preceptors, if applicable.

***Possible Site Visitor Evaluation Methods:***

- Review of program evaluation materials
- Review of faculty evaluation(s)
- Review of clinical preceptor evaluation(s), if applicable
- Interviews with institutional administration
- Interviews with faculty
- Interviews with clinical preceptor(s), if applicable
- Interviews with students



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

***Explanation:***

Opportunities that enhance and advance educational, technical, and professional knowledge must be available to program faculty. Faculty should take advantage of the available resources provided on an institutional campus. Program faculty should not be expected to use personal leave time in order to attend professional development activities external to the sponsoring institution.

***Required Program Response:***

- Describe how professional development opportunities are made available to faculty.
- Describe how professional development opportunities have enhanced teaching methodologies.

***Possible Site Visitor Evaluation Methods:***

- Review of institutional and/or program policies for professional development
- Interviews with institutional administration
- Interviews with faculty

## **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 as a limited scope X-ray machine operator.
- 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 imaging 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.

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

***Explanation:***

The program's mission statement should clearly define the purpose or intent toward which the program's efforts are directed. The mission statement should support the mission of the sponsoring institution. The program must evaluate the mission statement, at a minimum every three years, to assure it is effective. The program should engage faculty and other communities of interest in the reevaluation of its mission statement.

***Required Program Response:***

- Describe how the program's mission supports the mission of the sponsoring institution.
- Describe how the program reevaluates its mission statement.
- Provide documentation of the reevaluation of the mission statement.

***Possible Site Visitor Evaluation Methods:***

- Review of published program materials
- Review of meeting minutes
- Interviews with institutional administration
- Interviews with faculty

#### **4.2 The program provides a well-structured curriculum that prepares students to practice as a limited scope X-ray machine operator.**

***Explanation:***

A well-structured curriculum must be comprehensive, current, appropriately sequenced, and provide for evaluation of student achievement. This allows for effective student learning by providing a knowledge foundation in didactic and laboratory courses prior to competency achievement. Continual refinement of the competencies achieved is necessary so that students can demonstrate enhanced performance in a variety of situations and patient conditions. The well-structured curriculum is guided by a master plan of education.

At a minimum, the curriculum should promote qualities that are necessary for students/graduates to practice competently, make ethical decisions, assess situations, provide appropriate patient care, communicate effectively, and keep abreast of current advancements within the profession. Programs must address all areas of the didactic component that will prepare students for examinations offered by the appropriate state agency(ies). Programs must have clinical policies/procedures to assure students are performing examinations consistent with Federal and state laws in which the clinical education setting(s) are located.

Use of a standard curriculum promotes consistency in limited X-ray machine operator education and prepares the student to practice in the discipline. All programs must follow a JRCERT-adopted curriculum. An adopted curriculum is defined as:

- the most recent American Society of Radiologic Technologists (ASRT) LXMO curriculum and/or
- another professional curriculum adopted by the JRCERT Board of Directors.

The JRCERT encourages innovative approaches to curriculum delivery methods that provide students with flexible and creative learning opportunities. These methods may include, but are not limited to, distance education courses, part-time/evening curricular tracks, service learning, and/or interprofessional development.

***Required Program Response:***

- Describe how the program's curriculum is structured.
- Describe the program's clinical competency-based system.
- Describe how the program's curriculum is delivered, including the method of delivery for distance education courses. Identify which courses, if any, are offered via distance education.
- Describe alternative learning options, if applicable (e.g., part-time, evening and/or weekend curricular track(s)).
- Describe any innovative approaches to curriculum delivery methods.
- Provide the Table of Contents from the master plan of education.
- Provide current curriculum analysis grid.
- Provide samples of course syllabi.

***Possible Site Visitor Evaluation Methods:***

- Review of the master plan of education
- Review of didactic and clinical curriculum sequence
- Review of input from communities of interest
- Review of part-time, evening and/or weekend curricular track(s), if applicable
- Review of course syllabi
- Observation of a portion of any course offered via distance delivery
- Interviews with faculty
- Interviews with students

### **4.3 All clinical settings must be recognized by the JRCERT.**

#### ***Explanation:***

All clinical settings must be recognized by the JRCERT. Clinical settings must be recognized prior to student assignment. Ancillary medical facilities and imaging centers that are owned, operated, and on the same campus of a recognized setting do not require JRCERT recognition. A minimum of one (1) clinical preceptor must be identified for each recognized clinical setting.

If a facility is used as an observation site, JRCERT recognition is not required. An observation site is used for student observation of equipment operation and/or procedures that may not be available at recognized clinical settings. Students may not assist in, or perform, any aspects of patient care during observational assignments. Facilities where students participate in community-based learning do not require recognition.

#### ***Required Program Response:***

- Assure all clinical settings are recognized by the JRCERT.
- Provide a listing of ancillary facilities under one clinical setting recognition.
- Describe how observation sites, if used, enhance student clinical education.

#### ***Possible Site Visitor Evaluation Methods:***

- Review of JRCERT database
- Review of clinical records
- Interviews with faculty
- Interviews with clinical preceptors
- Interviews with clinical staff
- Interviews with students

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

***Explanation:***

Programs must have a process in place to assure timely, appropriate, and educationally valid clinical experiences to all admitted students. A meaningful clinical education plan assures that activities are equitable, as well as prevents the use of students as replacements for employees. Students must have sufficient access to clinical settings that provide a wide range of procedures for competency achievement, including mobile, surgical, and trauma examinations. The maximum number of students assigned to a clinical setting must be supported by sufficient human and physical resources. The number of students assigned to the clinical setting must not exceed the number of assigned clinical staff. The student to clinical staff ratio must be 1:1; however, it is acceptable that more than one student may be temporarily assigned to one technologist during infrequently performed procedures.

Clinical placement must be nondiscriminatory in nature and solely determined by the program. Students must be cognizant of clinical policies and procedures including emergency preparedness and medical emergencies.

Programs must assure that clinical involvement for students is limited to not more than ten (10) hours per day. If the program utilizes evening and/or weekend assignments, these assignments must be equitable, and program total capacity must not be increased based on these assignments. Students may not be assigned to clinical settings on holidays that are observed by the sponsoring institution. Programs may permit students to make up clinical time during the term or scheduled breaks; however, appropriate supervision must be maintained. Program faculty need not be physically present; however, students must be able to contact program faculty during makeup assignments. The program must also assure that its liability insurance covers students during these makeup assignments.

***Required Program Response:***

- Describe the process for student clinical placement including, but not limited to:
  - assuring equitable learning opportunities,
  - assuring access to a sufficient variety and volume of procedures to achieve program competencies, and
  - orienting students to clinical settings.
- Describe how the program assures a 1:1 student to clinical staff ratio at all clinical settings.
- Provide current clinical student assignment schedules in relation to student enrollment.

***Possible Site Visitor Evaluation Methods:***

- Review of published program materials
- Review of clinical placement process
- Review of course objectives
- Review of student clinical assignment schedules
- Review of clinical orientation process/records
- Review of student records
- Interviews with faculty
- Interviews with clinical preceptors
- Interviews with clinical staff
- Interviews with students



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

***Explanation:***

The program must provide learning opportunities in advanced imaging and/or therapeutic technologies. It is the program's prerogative to decide which advanced imaging and/or therapeutic technologies should be included in the didactic and/or clinical curriculum.

Programs are not required to offer clinical rotations in advanced imaging and/or therapeutic technologies; however, these clinical rotations are strongly encouraged to enhance student learning.

Students assigned to imaging modalities such as computed tomography, magnetic resonance, interventional procedures, and sonography, are not included in the calculation of the approved clinical capacity unless the clinical setting is recognized exclusively for advanced imaging modality rotations. Once the students have completed the imaging assignments, the program must assure that there are sufficient physical and human resources to support the students upon reassignment to the radiography department.

***Required Program Response:***

Describe how the program provides opportunities in advanced imaging and/or therapeutic technologies in the didactic and/or clinical curriculum.

***Possible Site Visitor Evaluation Methods:***

- Review of clinical rotation schedules, if applicable
- Interviews with faculty
- Interviews with students

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

***Explanation:***

Program length must be consistent with the terminal award. The JRCERT defines program length as the duration of the program, which may be stated as total academic or calendar year(s), total semesters, trimesters, or quarters.

***Required Program Response:***

Describe the relationship between the program length and the terminal award offered.

***Possible Site Visitor Evaluation Methods:***

- Review of course catalog
- Review of published program materials
- Review of class schedules
- Interviews with faculty
- Interviews with students

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

***Explanation:***

Defining the length of didactic, laboratory, and clinical courses facilitates the transfer of credit and the awarding of financial aid. The formula for calculating assigned clock/credit hours must be consistently applied for all didactic, laboratory, and clinical courses, respectively.

***Required Program Response:***

- Describe the method used to award credit hours for didactic, laboratory, and clinical courses.
- Provide a copy of the program's policies and procedures for determining credit hours and an example of how such policies and procedures have been applied to the program's coursework.
- Provide a list of all didactic, laboratory, and clinical courses with corresponding clock or credit hours.

***Possible Site Visitor Evaluation Methods:***

- Review of published program materials
- Review of class schedules
- Interviews with institutional administration
- Interviews with faculty
- Interviews with students

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

***Explanation:***

Appropriate academic and clinical advisement promotes student achievement and professionalism. Student advisement should be both formative and summative and must be shared with students in a timely manner. Programs are encouraged to develop written advisement procedures.

***Required Program Response:***

- Describe procedures for student advisement.
- Provide sample records of student advisement.

***Possible Site Visitor Evaluation Methods:***

- Review of students' records
- Interviews with faculty
- Interviews with clinical preceptor(s)
- Interviews with students

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

***Explanation:***

Programs that offer distance education courses must have processes in place that assure that the students who register in the distance education courses are the same students that participate in, complete, and receive the credit. Programs must verify the identity of students by using methods such as, but not limited to, secure logins, passcodes, proctored exams, and/or video monitoring. These processes must protect the student's privacy.

***Required Program Response:***

- Describe the process for assuring the integrity of distance education courses.
- Provide published institutional/program materials that outline procedures for maintaining the integrity of distance education courses.

***Possible Site Visitor Evaluation Methods:***

- Review of published institutional/program materials
- Review the process of student identification
- Review of student records
- Interviews with institutional administration
- Interviews with faculty
- Interviews with students

## **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 each energized laboratory is in compliance with applicable state and/or federal radiation safety laws.
- 5.3 The program assures that students employ proper safety practices.
- 5.4 The program assures that medical imaging procedures are performed under the appropriate supervision of qualified clinical staff.
- 5.5 The sponsoring institution and/or program have policies and procedures that safeguard the health and safety of students.

## **5.1 The program assures the radiation safety of students through the implementation of published policies and procedures.**

### ***Explanation:***

Appropriate policies and procedures help assure that student radiation exposure is kept as low as reasonably achievable (ALARA). The program must monitor and maintain student radiation exposure data. All students must be monitored for radiation exposure when using equipment in energized laboratories as well as in the clinical environment during, but not limited to, simulation procedures, image production, or quality assurance testing.

Students must be provided their radiation exposure report within thirty (30) school days following receipt of the data. The program must have a published protocol that identifies a threshold dose for incidents in which student dose limits are exceeded. Programs are encouraged to identify a threshold dose below those identified in federal regulations.

The program's radiation safety policies must also include provisions for the declared pregnant student in an effort to assure radiation exposure to the student and fetus are kept as low as reasonably achievable (ALARA). The pregnancy policy must be made known to accepted and enrolled female students, and include:

- a written notice of voluntary declaration,
- an option for written withdrawal of declaration, and
- an option for student continuance in the program without modification.

The program may offer clinical component options such as clinical reassignments and/or leave of absence. Pregnancy policies should also be in compliance with Title IX regulations. The program should work with the Title IX coordinator and/or legal counsel to discuss and resolve any specific circumstances.

### ***Required Program Response:***

- Describe how the policies and procedures are made known to enrolled students.
- Describe how the radiation exposure report is made available to students.
- Provide copies of appropriate policies.
- Provide copies of radiation exposure reports.

### ***Possible Site Visitor Evaluation Methods:***

- Review of published program materials
- Review of student records
- Review of student radiation exposure reports
- Interviews with faculty
- Interviews with clinical preceptor(s)
- Interviews with students

**5.2 The program assures each energized laboratory is in compliance with applicable state and/or federal radiation safety laws.**

***Explanation:***

Compliance with applicable laws promotes a safe environment for students and others. Records of compliance must be maintained for the program's energized laboratories.

***Required Program Response:***

Provide certificates and/or letters for each energized laboratory documenting compliance with state and/or federal radiation safety laws.

***Possible Site Visitor Evaluation Methods:***

- Review of published program materials
- Review of compliance records
- Interviews with faculty



### **5.3 The program assures that students employ proper safety practices.**

#### ***Explanation:***

The program must assure that students are instructed in the utilization of imaging equipment, accessories, optimal exposure factors, and proper patient positioning to minimize radiation exposure to patients, selves, and others. These practices assure radiation exposures are kept as low as reasonably achievable (ALARA).

Students must understand basic safety practices prior to assignment to clinical settings. As students progress in the program, they must become increasingly proficient in the application of radiation safety practices.

- Students must not hold image receptors during any radiographic procedure.
- Students should not hold patients during any radiographic procedure when an immobilization method is the appropriate standard of care.
- Programs must develop policies regarding safe and appropriate use of energized laboratories by students. Students' utilization of energized laboratories must be under the supervision of a qualified radiographer or LXMO operator who is available should students need assistance. If a qualified radiographer or LXMO operator is not readily available to provide supervision, the radiation exposure mechanism must be disabled.

Programs must establish a magnetic resonance imaging (MRI) safety screening protocol and students must complete MRI orientation and screening which reflect current American College of Radiology (ACR) MR safety guidelines prior to the clinical experience. This assures that students are appropriately screened for magnetic field or radiofrequency hazards. Policies should reflect that students are mandated to notify the program should their status change.

#### ***Required Program Response:***

- Describe how the curriculum sequence and content prepares students for safe radiation practices.
- Describe how the program prepares students for magnetic resonance safe practices.
- Provide the curriculum sequence.
- Provide policies/procedures regarding radiation safety.
- Provide the MRI safety screening protocol and screening tool.

#### ***Possible Site Visitor Evaluation Methods:***

- Review of program curriculum
- Review of radiation safety policies/procedures
- Review of magnetic resonance safe practice and/or screening protocol
- Review of student handbook
- Review of student records
- Interviews with faculty
- Interviews with clinical preceptor(s)
- Interviews with clinical staff
- Interviews with students

**5.4 The program assures that medical imaging procedures are performed under the appropriate supervision of qualified clinical staff.**

***Explanation:***

Appropriate supervision assures patient safety and proper educational practices. The program must develop and publish supervision policies that clearly delineate its expectations of students, clinical preceptors, and clinical staff.

The JRCERT defines direct supervision as student supervision by a qualified clinical staff who:

- reviews the procedure in relation to the student's achievement,
- evaluates the condition of the patient in relation to the student's knowledge,
- is physically present during the conduct of the procedure, and
- reviews and approves the procedure and/or image.

Students must be directly supervised until competency is achieved. Once students have achieved competency, they may work under indirect supervision. The JRCERT defines indirect supervision as student supervision provided by qualified clinical staff who is immediately available to assist students regardless of the level of student achievement.

Repeat images must be completed under direct supervision. The presence of qualified clinical staff during the repeat of an unsatisfactory image assures patient safety and proper educational practices.

Students must be directly supervised during surgical and all mobile, including mobile fluoroscopy, procedures regardless of the level of competency.

***Required Program Response:***

- Describe how the supervision policies are made known to students, clinical preceptors, and clinical staff.
- Describe how supervision policies are enforced and monitored in the clinical setting.
- Provide policies/procedures related to supervision.
- Provide documentation that the program's supervision policies are made known to students, clinical preceptors, and clinical staff.

***Possible Site Visitor Evaluation Methods:***

- Review of published program materials
- Review of student records
- Review of meeting minutes
- Interviews with faculty
- Interviews with clinical preceptor(s)
- Interviews with clinical staff
- Interviews with students

**5.5 The sponsoring institution and/or program have policies and procedures that safeguard the health and safety of students.**

***Explanation:***

Appropriate health and safety policies and procedures assure that students are part of a safe, protected environment. These policies must, at a minimum, address campus safety, emergency preparedness, harassment, communicable diseases, and substance abuse. Enrolled students must be informed of policies and procedures.

***Required Program Response:***

- Describe how institutional and/or program policies and procedures are made known to enrolled students.
- Provide institutional and/or program policies and procedures that safeguard the health and safety of students.

***Possible Site Visitor Evaluation Methods:***

- Review of published program materials
- Review of student records
- Interviews with faculty
- Interviews with 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 state licensing examination pass rate of not less than 75 percent at first attempt within six months of 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.

**6.1 The program maintains the following program effectiveness data:**

- **five-year average state licensing examination pass rate of not less than 75 percent at first attempt within six months of graduation,**
- **five-year average job placement rate of not less than 75 percent within twelve months of graduation, and**
- **annual program completion rate.**

***Explanation:***

Program effectiveness outcomes focus on issues pertaining to the overall curriculum such as admissions, retention, completion, credentialing examination performance, and job placement.

The JRCERT has developed the following definitions and criteria related to program effectiveness outcomes:

**State licensing examination pass rate:** The number of graduates who pass, on first attempt, the limited X-ray machine operator certification examination compared with the number of graduates who take the examination within six months of graduation.

**Job placement rate:** The number of graduates employed in the radiologic sciences compared to the number of graduates actively seeking employment in the radiologic sciences. The JRCERT has defined not actively seeking employment as: 1) graduate fails to communicate with program officials regarding employment status after multiple attempts, 2) graduate is unwilling to seek employment that requires relocation, 3) graduate is unwilling to accept employment, for example, due to salary or hours, 4) graduate is on active military duty, and/or 5) graduate is continuing education.

**Program completion rate:** The number of students who complete the program within the stated program length. The program specifies the entry point (e.g., required orientation date, final drop/add date, final date to drop with 100% tuition refund, official class roster date, etc.) used in calculating the program's completion rate. When calculating the total number of students enrolled in the program (denominator), programs need not consider students who attrite due to nonacademic reasons such as: 1) financial, medical/mental health, or family reasons, 2) military deployment, 3) a change in major/course of study, and/or 4) other reasons an institution may classify as a nonacademic withdrawal.

Credentialing examination, job placement, and program completion data must be reported annually via the JRCERT Annual Report.

***No Required Program Response.***

***Possible Site Visitor Evaluation Methods:***

- Review of program effectiveness data
- Interviews with faculty

## **6.2 The program analyzes and shares its program effectiveness data to facilitate ongoing program improvement.**

### ***Explanation:***

Analysis of program effectiveness data allows the program to determine if it is meeting its mission. This analysis also provides a means of accountability to faculty, students, and other communities of interest. Faculty should assure all data have been analyzed and discussed prior to sharing results with an assessment committee or other communities of interest. Sharing the program effectiveness data results should take place in a timely manner.

Programs must use assessment results to promote student success and maintain and improve program effectiveness outcomes. Analysis of program effectiveness data must occur at least annually, and results of the evidence-based decisions must be documented.

In sum, the data analysis process must, at a minimum, include:

- program effectiveness data that is compared to expected achievement; and
- documentation of discussion(s) of data analysis including trending/comparing of results over time to maintain and improve student learning.
  - If the program does not meet its benchmark for a specific program effectiveness outcome, the program must implement an action plan that identifies the issue/problem, allows for data trending, and identifies areas for improvement. The action plan must be reassessed annually until the performance concern(s) is/are appropriately addressed.

### ***Required Program Response:***

- Describe examples of evidence-based changes that have resulted from the analysis of program effectiveness data and discuss how these changes have maintained or improved program effectiveness outcomes.
- Provide actual program effectiveness data since the last accreditation award.
- Provide documentation of an action plan for any unmet benchmarks.
- Provide documentation that program effectiveness data is shared in a timely manner.

### ***Possible Site Visitor Evaluation Methods:***

- Review of aggregated data
- Review of data analysis and actions taken
- Review of documentation that demonstrates the sharing of results with communities of interest
- Review of representative samples of measurement tools used for data collection
- Interviews with faculty
- Interview with institutional assessment coordinator, if applicable

### **6.3 The program has a systematic assessment plan that facilitates ongoing program improvement.**

#### ***Explanation:***

A formalized written assessment plan allows programs to gather useful data to measure the goals and student learning outcomes to facilitate program improvement. Student learning outcomes must align with the goals and be explicit, measurable, and state the learning expectations. The development of goals and student learning outcomes allows the program to measure the attainment of its mission. It is important for the program to engage faculty and other communities of interest in the development or revision of its goals and student learning outcomes.

The program must have a written systematic assessment plan that, at a minimum, contains:

- goals in relation to clinical competency, communication, and critical thinking;
- two student learning outcomes per goal;
- two assessment tools per student learning outcome;
- benchmarks for each assessment method to determine level of achievement; and
- timeframes for data collection.

Programs may consider including additional goals in relation to ethical principles, interpersonal skills, professionalism, etc.

The program must also assess graduate and employer satisfaction. Graduate and employer satisfaction may be measured through a variety of methods. The methods and timeframes for collection of the graduate and employer satisfaction data are the prerogatives of the program.

#### ***Required Program Response:***

- Describe how the program determined the goals and student learning outcomes to be included in the systematic assessment plan.
- Describe the program's cycle of assessment.
- Describe how the program uses feedback from communities of interest in the development of its assessment plan.
- Provide a copy of the program's current assessment plan.

#### ***Possible Site Visitor Evaluation Methods:***

- Review of assessment plan
- Review of assessment methods
- Interviews with faculty
- Interview with institutional assessment coordinator, if applicable

#### **6.4 The program analyzes and shares student learning outcome data to facilitate ongoing program improvement.**

##### ***Explanation:***

Analysis of student learning outcome data allows the program to determine if it is meeting its mission, goals, and student learning outcomes. This analysis also provides a means of accountability to faculty, students, and other communities of interest. Faculty should assure all data have been analyzed and discussed prior to sharing results with an assessment committee or other communities of interest. Sharing the student learning data results must take place in a timely manner.

Programs must use assessment results to promote student success and maintain and improve student learning outcomes. Analysis of student learning outcome data must occur at least annually, and results of the evidence-based decisions must be documented.

In sum, the data analysis process must, at a minimum, include:

- student learning outcome data that is compared to expected achievement; and
- documentation of discussion(s) of data analysis including trending/comparing of results over time to maintain and improve student learning.
  - If the program does meet its benchmark for a specific student learning outcome, the program should identify how student learning was maintained or improved and describe how students achieved program-level student learning outcomes.
  - If the program does not meet its benchmark for a specific student learning outcome, the program must implement an action plan that identifies the issue/problem, allows for data trending, and identifies areas for improvement. The action plan must be reassessed annually until the performance concern(s) is/are appropriately addressed.

##### ***Required Program Response:***

- Describe examples of changes that have resulted from the analysis of student learning outcome data and discuss how these changes have maintained or improved student learning outcomes.
- Describe the process and timeframe for sharing student learning outcome data results with its communities of interest.
- Provide actual student learning outcome data and analysis since the last accreditation award.
- Provide documentation of an action plan for any unmet benchmarks.
- Provide documentation that student learning outcome data and analysis is shared in a timely manner.

##### ***Possible Site Visitor Evaluation Methods:***

- Review of aggregated/disaggregated data
- Review of data analysis and actions taken
- Review of documentation that demonstrates the sharing of results with communities of interest
- Review of representative samples of measurement tools used for data collection
- Interviews with faculty
- Interview with institutional assessment coordinator, if applicable



**6.5 The program periodically reevaluates its assessment process to assure continuous program improvement.**

***Explanation:***

Identifying and implementing needed improvements in the assessment process leads to program improvement and renewal. As part of the assessment process, the program must review its mission statement, goals, student learning outcomes, and assessment plan to assure that assessment methods are providing credible information to make evidence-based decisions.

The program must assure the assessment process is effective in measuring student learning outcomes. At a minimum, this evaluation must occur at least every three years and be documented. In order to assure that student learning outcomes have been achieved and that curricular content is well-integrated across the curriculum, programs may consider the development and evaluation of a curriculum map. Programs may wish to utilize assessment rubrics to assist in validating the assessment process.

***Required Program Response:***

- Describe how assessment process reevaluation has occurred.
- Discuss changes to the assessment process that have occurred since the last accreditation award.
- Provide documentation that the assessment process is evaluated at least once every three years.

***Possible Site Visitor Evaluation Methods:***

- Review of documentation related to the assessment process reevaluation
- Review of curriculum mapping documentation, if applicable
- Interviews with faculty
- Interview with institutional assessment coordinator, if applicable

## Glossary of Terms

**Academic calendar:** the official institutional/program document that, at a minimum, identifies specific start and end dates for each term, holidays recognized by the sponsoring institution, and breaks.

**Accreditation status:** a statement of the program's current standing with the JRCERT. Per JRCERT Policies [10.000](#) and [10.700](#), accreditation status is categorized as one of the following: Accredited, Probationary Accreditation, and Administrative Probationary Accreditation. The program must also identify its current length of accreditation award (i.e., 8-year, 5-year, 3-year, probation). The JRCERT publishes each program's current accreditation status at [www.jrcert.org](http://www.jrcert.org).

**Administrator:** individual(s) that oversee student activities, academic personnel, and programs.

**Articulation agreement:** a formal partnership between two (2) or more institutions of higher education. Typically, this type of agreement is formed between a hospital-based program and a community college or a community college and a four (4) year academic institution with the goal of creating a seamless transfer process for students.

**Campus:** the buildings and grounds of a school, college, university, or hospital. A campus does not include geographically dispersed locations.

**Clinical capacity:** the maximum number of students that can partake in clinical experiences at a clinical setting at any given time. Clinical capacity is determined by the availability of human and/or physical resources. Students assigned to imaging modalities such as computed tomography, magnetic resonance, interventional procedures, and sonography, are not included in the calculation of the approved clinical capacity unless the clinical setting is recognized exclusively for advanced imaging modality rotations.

**Clinical obligations:** relevant requirements for completion of a clinical course including, but not limited to, background checks, drug screening, travel to geographically dispersed clinical settings, evening and/or weekend clinical assignments, and documentation of professional liability.

**Communities of interest:** the internal and external stakeholders, as defined by the program, who have a keen interest in the mission, goals, and outcomes of the program and the subsequent program effectiveness. The communities of interest may include current students, faculty, graduates, institutional administration, employers, clinical staff, or other institutions, organizations, regulatory groups, and/or individuals interested in educational activities in medical imaging and radiation oncology.

**Comparable health sciences programs:** health science programs established in the same sponsoring institution that are similar to the limited scope x-ray machine operator program in curricular structure as well as in the number of faculty, students, and clinical settings.

**Curriculum map (-ping):** process/matrix used to indicate where student learning outcomes are covered in each course. Level of instructional emphasis or assessment of where the student learning outcome takes place may also be indicated.

**Distance education:** refer to the Higher Education Opportunity Act of 2008, [Pub. L. No. 110-315, §103\(a\)\(19\)](#) and JRCERT [Policy 10.800](#) - Alternative Learning Options.

**Asynchronous distance learning:** learning and instruction that do not occur in the same place or at the same time.

**Distance education:** an educational process characterized by the separation, in time and/or place, between instructor and student. Distance education supports regular and substantive interaction synchronously or asynchronously between the instructor and student through one or more interactive distance delivery technologies.

**Distance (Delivery) technology:** instructional/delivery methods that may include the use of TV, audio, or computer transmissions (broadcast, closed-circuit, cable, microwave, satellite transmissions); audio, computer, or Internet-based conferencing; and/or methodologies.

**Hybrid limited x-ray machine operator course:** a professional level limited x-ray machine operator course that uses a mix of face-to-face traditional classroom instruction along with synchronous or asynchronous distance education instruction. Regardless of institutional definition, the JRCERT defines a hybrid limited x-ray machine operator course as one that utilizes distance education for more than 50% of instruction and learning.

**Online limited x-ray machine operator course:** a professional level limited x-ray machine operator course that primarily uses asynchronous distance education instruction. Typically, the course instruction and learning is 100% delivered via the Internet. Often used interchangeably with Internet-based learning, web-based learning, or distance learning.

**Synchronous distance learning:** learning and instruction that occur at the same time and in the same place.

[Definitions based on Accrediting Commission of Education in Nursing (ACEN) Accreditation Manual glossary]

**Equivalent:** with regards to certification and registration, an unrestricted state license for the state in which the program and/or clinical setting is located.

**Faculty:** the teaching staff for didactic and clinical instruction. These individuals may also be known as academic personnel.

**Faculty workload:** contact/credit hours or percentages of time that reflect the manner in which the sponsoring institution characterizes, structures, and documents the nature of faculty members' teaching and non-teaching responsibilities. Workload duties include, but are not limited to, teaching, advisement, administration, committee activity, service, clinical practice, research, and other scholarly activities.

**Gatekeeper:** the agency responsible for oversight of the distribution, record keeping, and repayment of Title IV financial aid.

**Grievance policy and/or procedure:** a grievance is defined as a claim by a student that there has been a violation, misinterpretation, or inequitable application of any existing policy, procedure, or regulation. The program must have a policy/procedure to provide individuals an avenue to pursue grievances. If the institutional policy/procedure is to be followed, this must be clearly identified and provided to students. The policy/procedure must outline the steps for formal resolution of any grievance. The final step in the process must not include any individual(s) directly associated with the program (e.g., program director, clinical coordinator, faculty, administrator). The procedure must assure timely resolution. The program must maintain a record of all formal grievances and their resolution. Records must be retained in accordance with the institution's/program's retention policies/procedures. Additionally, the program must have a procedure to address any complaints apart from those that require invoking the grievance procedure (e.g., cleanliness of classroom). The program must determine if a pattern of any grievance or complaint exists that could negatively affect the quality of the educational program.

**Master plan of education:** an overview of the program and documentation of all aspects of the program. In the event of new faculty and/or leadership to the program, a master plan of education provides the information needed to understand the program and its operations. At a minimum, a master plan of education must include course syllabi (didactic and clinical courses), program policies and procedures, and the curricular sequence calendar. If the program utilizes an electronic format, the components must be accessible by all program faculty.

**Meeting minutes:** a tangible record of a meeting of individuals, groups, and/or boards that serve as a source of attestation of a meeting's outcome(s) and a reference for members who were unable to attend. The minutes should include decisions made, next steps planned, and identification and tracking of action plans.

**Program effectiveness outcomes/data:** the specific program outcomes established by the JRCERT. The JRCERT has developed the following definitions and criteria related to program effectiveness outcomes:

**State licensing examination pass rate:** The number of graduates who pass, on first attempt, the limited X-ray machine operator certification examination compared with the number of graduates who take the examination within six months of graduation.

**Job placement rate:** the number of graduates employed in the radiologic sciences compared to the number of graduates actively seeking employment in the radiologic sciences. The JRCERT has defined not actively seeking employment as: 1) graduate fails to communicate with program officials regarding employment status after multiple attempts, 2) graduate is unwilling to seek employment that requires relocation, 3) graduate is unwilling to accept employment due to salary or hours, 4) graduate is on active military duty, and/or 5) graduate is continuing education.

**Program completion rate:** the number of students who complete the program within the stated program length. The program specifies the entry point (e.g., required orientation date, final drop/add date, final date to drop with 100% tuition refund, official class roster date, etc.) used in calculating the program's completion rate. When calculating the total number of students enrolled in the program (denominator), programs need not consider graduates who attrite due to nonacademic reasons such as: 1) financial, medical/mental health, or family reasons, 2) military deployment, 3) a change in major/course of study, and/or 4) other reasons an institution may classify as a nonacademic withdrawal.

**Program total capacity:** the maximum number of students that can be enrolled in the educational program at any given time. Program total capacity is dependent on the availability of human and physical resources of the sponsoring institution. It is also dependent on the program's clinical rotation schedule and the clinical capacities of recognized clinical settings.

**Release time (reassigned workload):** a reduction in the teaching workload to allow for the administrative functions associated with the responsibilities of the program director or clinical coordinator or other responsibilities as assigned.

**Sponsoring institution:** the facility or organization that has primary responsibility for the educational program and grants the terminal award. A recognized institutional accreditor must accredit a sponsoring institution. 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. Consortia must be structured to recognize and perform the responsibilities and functions of a sponsoring institution.

## **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) is initiated by a program through the written request for accreditation sent to the JRCERT, on program/institutional letterhead. The request must include the name of the program, the type of program, and the address of the program. The request is to be submitted, with the applicable fee, to:

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

Submission of such information will allow the program access to the JRCERT's Accreditation Management System (AMS). The initial application and self-study report will then be available for completion and submission through the AMS.

#### **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, clinical coordinator, full-time didactic faculty, and clinical preceptor(s).
- d. Paying JRCERT fees within a reasonable period of time. Returning, by the established deadline, a completed Annual Report.
- e. Returning, by the established deadline, any other information requested by the JRCERT.

Programs are required to comply with these and other administrative requirements for maintaining accreditation. Additional information on policies and procedures is available at [www.jrcert.org](http://www.jrcert.org).

Program failure to meet administrative requirements for maintaining accreditation will lead to Administrative Probationary Accreditation and potentially result in Withdrawal of Accreditation.



Copyright © 2020 by the JRCERT

Subject to the condition that proper attribution is given and this copyright notice is included on such copies, the JRCERT authorizes individuals to make up to one hundred (100) copies of this work for non-commercial, educational purposes. For permission to reproduce additional copies of this work, please write to:

JRCERT  
20 North Wacker Drive  
Suite 2850  
Chicago, IL 60606-3182  
(312) 704-5300  
(312) 704-5304 (fax)  
[mail@jrcert.org](mailto:mail@jrcert.org) (e-mail)  
[www.jrcert.org](http://www.jrcert.org)



*Excellence in Education*