RADIOLOGY PROGRAM TRAINING GUIDE

WorldPoint at the heart of your training

This comprehensive guide equips radiologic technology educators with actionable tools, scenario templates, and integration strategies to implement effective, simulation-based learning in alignment with American Registry of Radiologic Technologists (ARRT), Joint Review Committee on Education in Radiologic Technology (JRCERT), and industry-recognized standards.

Built for program directors, faculty, and simulation coordinators, this guide translates accreditation expectations into measurable, real-world training outcomes.

1 CURRICULUM MAPPING & SIMULATION INTEGRATION

Simulation Curriculum Alignment Chart

Use this chart to scaffold simulation objectives across your program, aligned to ARRT content specifications and JRCERT clinical competency requirements:

Semester	Simulation Objectives	Modalities	Skills & Competencies	Outcomes Tracked
1	Positioning Fundamentals, Basic Patient Care	Radiography	SID, tube alignment, patient interaction, vital signs	Basic skills validation checklist
2	Image Acquisition, Exposure Evaluation	Radiography, CT	Image quality control, technique adjustment, QA checks	Image review rubrics, dose tracking logs
3	Cross-Modality Workflow, Emergency Protocols	CT, MRI, Mobile Imaging	Trauma scan workflow, patient safety, contrast reactions	OSCEs, role-play assessments
4	Interventional & Advanced Imaging	IR, Mammography, Vascular	Procedural simulation, sterile technique, consent	High-fidelity case evaluations, simulated documentation

2 SCENARIO & CASE TEMPLATES

Standardized Simulation Case Template

Title: Mobile Chest X-Ray for COVID+ ICU Patient

Modality: Radiography (portable)

Learning Goals: Demonstrate infection control protocol, equipment setup, image acquisition in confined space

Case Details:

- 62-year-old male, ICU, on ventilator
- Orders: Portable chest radiograph
- Complications: Isolation precautions, chest tube present

Skills Assessed:

- PPE compliance
- Mobile unit setup & alignment
- Image acquisition & QA
- Clinical communication with nursing staff

Pro Tip: Build a library of 20–30 rotating cases covering trauma, pediatrics, geriatric imaging, contrast administration, and non-routine positions.

3 SIMULATION IMPLEMENTATION STRATEGIES

Faculty Preparation

- Host semesterly calibration workshops to align on rubrics and assessment expectations.
- Use scenario dry runs with peer faculty for consistency.

Scheduling Strategy

- Reserve dedicated simulation blocks for midterms/finals using rotating lab groups.
- Use "flex sim hours" to accommodate student remediation or enrichment.

Technology & Tools

- Use structured image review rubrics (criteria: centering, anatomy, exposure, artifacts)
- Embed clinical judgement questions after simulations (What would you do differently? What pathology might you suspect?)

4 PERFORMANCE RUBRICS & COMPETENCY CHECKLISTS

Radiographic Chest Projection Rubric (Example):

Skill	Excellent (3)	Satisfactory (2)	Needs Improvement (1)
Positioning & SID	Centered, accurate SID	Minor misalignment	Major error or omission
Exposure	Correct exposure, no repeat	Minor technique error	Poor contrast/visibility
Radiation Protection	Shielding used correctly	Partial use	No shielding applied
Patient Interaction	Clear communication	Some hesitation	Missed steps or rushed

Critical Thinking Evaluation (Post-Simulation)

- Did the student adjust technique for patient body habitus?
- Did they recognize potential complications (e.g., aspiration risk)?
- Were communication and documentation complete?

5 CASE LIBRARY EXAMPLES (BUILD YOUR PROGRAM CATALOG)

Case 1: Pediatric Trauma (Radiography)

- 9-year-old with suspected tibia fracture. Limited movement, accompanied by anxious parent
- **Learning Focus:** Pediatric communication, limb immobilization, exposure adjustment

Case 2: Bariatric Chest Series (Radiography)

- 45-year-old outpatient, BMI 42, dyspnea complaint
- **Learning Focus:** Technique adjustment for body habitus, beam alignment, repeat minimization

Case 3: Stroke Alert CT (CT)

- 78-year-old inpatient, slurred speech, sudden onset symptoms
- **Learning Focus:** Emergency workflow, contrast prep, radiologist communication

Case 4: Outpatient Mammography (Mammography):

- 52-year-old female with breast tenderness and family history
- **Learning Focus:** Patient positioning, soft skills for discomfort management, safety protocols

Case 5: Vascular Access under Fluoroscopy (Interventional):

- ER patient requiring PICC line under imaging guidance
- **Learning Focus:** Sterile prep, collaborative simulation with nursing, equipment setup

6 PROGRAM EVALUATION & OUTCOME TRACKING

Simulation ROI Dashboard Metrics

Metric	Benchmark	Your Target	Notes
Simulation Hours/ Student	≥ 20 hrs/semester		
ARRT Registry Pass Rate	≥ 90% first-time		
Clinical Site Satisfaction	≥ 4.5/5 avg rating		
Remediation Required	<10% post-clinical		

Tools

- Digital tracking spreadsheets for OSCEs and simulation outcomes
- Anonymous student feedback forms on simulation relevance & realis

7 TOOLS, RESOURCES & REFERENCES

Recommended Tools

- High-fidelity radiography simulation platforms (e.g., projection-based with feedback)
- PACS-compatible image review software for simulated QA
- Simulation scenario authoring templates (fillable PDFs)

Curriculum Mapping Resources

- ARRT Radiography Content Specifications (2024)
- JRCERT Standards for Accredited Educational Programs in Radiologic Sciences (2024)
- INACSL Standards of Best Practice: Simulation Design (2024)

Faculty Development Resources

- American Society of Radiologic Technologists (ASRT) Radiologic Technology Journal
- Journal of Medical Imaging and Radiation Sciences (JMIRS)
- HealthySimulation.com (Simulation news, case libraries, and teaching insights)

NEED SUPPORT?

WorldPoint offers curriculum-aligned radiology simulation tools and consultative product planning support.

Request a free consult or demo: **www.worldpoint.com/contact**