



Job Description

Job Title: Psychometrician
Department: Examination Requirements and Psychometrics
Reports To: Manager- Psychometrics
FLSA Status: Exempt
Location: Hybrid, Twin Cities Metro Area

Mission

The American Registry of Radiologic Technologists promotes high standards of patient care by recognizing qualified individuals in medical imaging, interventional procedures, and radiation therapy.

Vision

ARRT will be the premier organization for credentialing healthcare technology professionals in medical imaging, interventional procedures, and radiation therapy.

Values

ARRT is a principled and mission-driven organization that values and demonstrates quality, integrity, objectivity, and evidence-based decision making.

Position Summary:

The Psychometrician works with the Examination Requirements and Psychometrics team to maintain the psychometric integrity of ARRT's certification programs. The Psychometrician also drives the ARRT's strategic initiatives for:

- systematic evaluation of modern testing methodologies and innovative item types
- contribution to increased understanding through psychometric research
- dissemination of information through publication in professional journals and presentations at professional conferences

Psychometric projects may be conducted in collaboration with ARRT's Board of Trustees, ARRT Examination Committees, the University of Minnesota Educational Measurement or Psychometrics PhD programs, ARRT senior staff, or other organizations that ARRT wishes to support.

Duties and Responsibilities:

Psychometric Work Responsibilities

- Exam Content and Eligibility Materials
 - Oversee periodic practice analysis projects for assigned programs, including committee selection, survey development, data analysis, and report writing.
- Examination Committees
 - Determine psychometric quality assurance criteria for item statistics, exam statistics, and examinee comment review, and ensure these criteria are met.
 - Review exams and comment on items prior to, and during, examination committee meetings in accordance with psychometric quality assurance criteria.

- Practice Analysis Committees
 - Collaborate with other Exam Requirements and Psychometrics staff to conduct practice analyses according to best practices.
 - Train committee members on required activities.
 - Present survey findings to committee, assist with interpretation, and facilitate discussion.
- Standard Setting Committees
 - Oversee periodic standard setting for assigned programs, including committee selection, data analysis, and report writing.
 - Collaborate with other Exam Requirements and Psychometrics staff to conduct standard setting meetings according to best practices.
 - Train committee members on required activities.
 - Analyze data and prepare reports for publication.
- Examination Scoring, Analysis, and Reporting
 - Determine psychometric quality assurance criteria for exam scoring, analysis, and reporting, and ensure these criteria are met.
 - Periodically review item statistics, exam results, and examinee comments to ensure accuracy of keys, passing scores, and exam content.
 - Perform regular exam processing and form production quality control.
 - Maintain procedures manual and other documentation required for exam processing and scoring.
 - Analyze exam results and collaborate with department staff to produce and publish annual examination summary and technical reports.
 - Respond to letters and calls regarding score reporting.
 - Recommend enhancements to scoring procedures and reports.
- Item Calibration and Test Form Scaling
 - Determine psychometric quality assurance criteria for item calibration and test form scaling and ensure these criteria are met.
 - Prepare and/or follow schedules for item calibration (initial, pilot, and recalibrations) for all exam programs.
 - Calibrate items as needed for selected exam programs.
 - Calculate cut scores scaling equations for exam forms; monitor pass rates, cut scores and other exam statistics over time.
 - Periodically conduct studies to identify models and procedures for calibration and scaling.
 - Perform analyses as needed to troubleshoot calibration and scaling methods.
 - Periodically meet with other staff to review and evaluate calibration and scaling procedures.

Psychometric Exam Security

- Design psychometrically sound procedures to assess exam security risks.
- Set criteria for flagging suspected security breaches.
- Implement an exam security program according to best practices.
- Review exam security program outcomes with Examination Requirements and Psychometrics staff for potential security breaches and investigate as needed.
- Alert Director of Examination Requirements and Psychometrics to suspected security breaches.

Community Relations

- Participate in activities that promote ARRT's goodwill and commitment to the professional community.
- Present papers and conduct workshops at conferences related to psychometrics and/or medical imaging.
- Publish research-based articles.
- May attend national assessment-related conferences as need arises.

Continuous Quality Improvement

- At all times, watch for areas of improvement in processes.
- Communicate areas of improvement and seek validation of appropriateness concerns.

- Initiate discussions of needed improvement process.
- Participate in the evaluation of the improved process.

Miscellaneous

- Write, review, or edit other ARRT documents as requested, including website material.
- Assist with or prepare memos and reports for presentation to the Board of Trustees.
- Present psychometric topics to internal or external audiences of all knowledge levels.
- Work with external vendors, as needed, to meet department operational or strategic goals.
- Assist with on-site or remote committee meetings.
- Perform other duties as assigned.

Skills and Abilities:

- Collaborative team player with excellent interpersonal, verbal, and written communication skills with demonstrated ability to communicate in a clear, concise, and professional manner.
- Ability to evaluate and establish priorities.
- Ability to research, interpret, explain, present, and apply complex procedures, rules, and regulations.
- Ability to provide/obtain detailed information to/from others as appropriate, including confidential and/or otherwise sensitive information.
- Proficiency in psychometric concepts, tools, techniques, and best practices.
- Proven ability to apply critical thinking and problem-solving skills to analyze, simplify, and translate complex business problems and apply the appropriate level of planning, organization, and structure to drive results to multiple levels in the organization.
- Demonstrated ability to utilize and understand the Microsoft Suite of office products.
- Experience with R, SQL, IRT calibrations, item analysis software applications (e.g., WINSTEPS), assessment engineering.

Minimum Qualifications:

Doctorate in Psychometrics, Quantitative Methods in Psychology, Educational Measurement, Industrial and Organizational Psychology or related field.

Preferred Qualifications:

Two or more years of Applied and Research Psychometrics

Physical Demands

Close Visual Acuity: Required to have close visual acuity to perform an activity such as: preparing and analyzing data and figures; transcribing; viewing a computer terminal; extensive reading; visual inspection involving small defects, small parts, and/or operation of machines (including inspection); using measurement devices; and/or assembly or fabrication of parts at distances close to the eyes.

Fingering: Picking, pinching, typing, or otherwise working, primarily with fingers rather than with the whole hand or arm as in handling.

Hearing: Perceiving the nature of sounds at normal speaking levels with or without correction. Ability to receive detailed information through oral communication, and to make fine discriminations in sound.

Repetitive Motions: Substantial movements (motions) of the wrists, hands, and/or fingers.

Sedentary Work: Exerting up to 10 pounds of force occasionally and/or a negligible amount of force frequently or constantly to lift, carry, push, pull, or otherwise move objects, including the human body. Sedentary work involves sitting most of the time. Jobs are sedentary if walking and standing are required only occasionally, and all other sedentary criteria are met.

Talking: Expressing or exchanging ideas by means of the spoken word. Those activities in which they must convey detailed or important spoken instructions to other workers accurately, loudly, or quickly.



ARRT Core Values

Accountable

We can count on each other.

We are responsible, reliable, and dependable. We follow through on our commitments in a thoughtful and efficient manner.

Adaptable

We are open to new ideas, challenges, & ways of working.

We are willing and able to change our behavior, thoughts, and actions to accommodate different situations or environments. We are flexible and can quickly shift direction when needed. We are open to change.

Business Acumen

We manage risks & opportunities to achieve positive results.

We seek to understand business issues and operations, customer needs and preferences, and industry trends so we can provide useful insights and recommendations for achieving our goals. We learn from our mistakes, but don't fear failure. By showing up with composure, confidence, and authenticity, we inspire confidence in others and lead effectively.

Collaborative

We are better when we work together.

We believe diverse skills, backgrounds, and perspectives help contribute to better outcomes. We can agree to disagree and still commit to act. We offer help and accept it.

Committed

We are all part of the solution.

We strive for excellence through continual improvement. We help develop potential solutions to problems and contribute ideas, enthusiasm, and energy for our work.

Critical Thinking

We test our assumptions to make better decisions.

We analyze information objectively, using data from various sources, questioning assumptions, and forming well-reasoned judgments. We determine when enough information is available to act. We use wisdom gained from experience to differentiate between subtleties and make sound decisions while considering positive and negative impacts of a decision.

Emotional Intelligence

We strive for self-awareness.

We recognize, understand, and manage our own emotions in positive ways to relieve stress, communicate effectively, empathize with others, overcome challenges, and defuse conflict. We set aside ego so we can learn and receive feedback.

Growth-Oriented

We are always learning & teaching.

We are committed to professional growth, seeking ways to enhance our technical and people skills and business knowledge. We embrace a coaching mentality to empower others to excel and make valuable contributions to the organization. We seek and provide constructive feedback.

Integrity

We do the right thing.

We are honest, fair, and ethical. We admit mistakes and work to reconcile disagreements or conflict respectfully. We give credit where credit is due.

Listening

We seek first to understand.

We use empathetic listening, including nonverbal body language or written words. We respectfully recognize others' diverse perspectives and needs without interrupting or jumping to conclusions before they finish speaking. We ask questions that promote discovery and insight to confirm understanding.

Resilient

We bounce back.

We strive to recover from adversity, challenges, or setbacks by positively adapting to difficult situations. We maintain emotional equilibrium by using appropriate coping strategies. We are persistent and keep moving forward.

Strategic Thinking

We plan and shape the future to achieve our goals.

We evaluate complex situations and anticipate future trends and challenges to develop long-term plans that achieve our goals. We connect the dots between different pieces of information, weigh options and form plans by blending analytical thinking, creativity, and foresight.