PROGRAM REVIEW
Southern West Virginia Community and Technical College
Board of Governors

☑ Program with Special Accreditation ☐ Program without Specialized Accreditation

Program: A.A.S. Radiologic Technology (Degree and Title) 10/01/2014 (Date)

INSTITUTIONAL RECOMMENDATION

The institution is obligated to recommend continuance or discontinuance for each program reviewed and provide a brief rationale for its recommendation.

- ☑ 1. Continuation of the program at the current level of activity without corrective action;
- ☐ 2. Continuation of program with corrective action (specify required action - e.g., reducing the range of optional tracks or other corrective action);
- ☐ 3. Identification of the program for further development;
- ☐ 4. Development of a cooperative program with another institution or sharing of courses, facilities, and/or faculty, and the like;
- ☐ 5. Discontinuance of the program in accordance with provisions of the West Virginia Council for Community and Technical College Education, Title 135, Procedural Rule, Series 11, *Degree Designation, General Education Requirements, New Program Approval, and Discontinuance of Existing Programs.*

Rationale for Recommendation:

The Associate of Science degree in Radiologic Technology meets or exceeds the standards as a viable program as set forth by the West Virginia Council for Community and Technical College Education. There is significant numbers of graduates and the need is evident based on the number of students employed, advisory committee feedback and national trends.

Eva Hallis/SSH Signature of person preparing report if other than Division Head	11-15-14 Date
Steven Hall Signature of Division Head	12-15-14 Date
[signature] Signature of Vice President for Academic Affairs and Student Services	2/23/2015 Date
Joanne Jaeger Tomblin Signature of President	3/30/15 Date
Thomas A. Hood Signature of Chair, Board of Governors	4/21/15 Date

Southern West Virginia Community and Technical College
Division of Healthcare and Business
Radiologic Technology, Associate in Applied Science

Program Review Summary

Program Review Components

A. Adequacy

- The curriculum adequately meets industry demands.
- The program is adequately staffed with qualified faculty.
- The entrance requirements for students are consistent with community college standards.
- Graduate job placement has been successful for those actively pursuing employment.
- Graduates often seek additional educational or certification levels.
- An advisory committee is actively involved in the program.
- The assessment system ensures that the student has attained proper competency.

Conclusion: The program meets and exceeds the minimum adequacy requirements.

B. Viability

- The enrollment is adequate for industry demands.
- The program maintains clinical education agreements with facilities in Boone, Charleston, Logan and Williamson, West Virginia.
- Associate of applied science is the degree obtained for the program and also serves as a stepping stone to a bachelor's degree in Imaging Science at Bluefield State College.
- Technology includes activated diagnostic imaging and computed tomography labs.

Conclusion: The program meets minimum requirements for viability as a major.

C. Necessity

- The program meets educational standards set by college and program accreditation.
- The program meets employment needs for the service region.
- There is a need for the program in this region among eight comparable programs within WV; the closest is in Charleston, offering a baccalaureate degree.

Conclusion: The program meets minimum requirements for necessity.

D. Consistency with Mission

- The program supports the mission and vision of the institution.
- The program and core courses support the Compact.

Conclusion: The program is consistent with the Mission of the college.

Recommendation: Continuation of the program at the current level of activity without corrective action.

Program Review
Southern West Virginia Community and Technical College
2013-2014
Program With Specialized Accreditation

Program: Radiologic Technology, Associate in Applied Science

Hours Required for Graduation: 60

I Program Description

Radiologic Technology has been a part of Southern West Virginia Community and Technical College's program offerings since 1991. The program length is twenty months and upon successful completion, awards the graduate with an Associate in Applied Science degree, the minimum required for eligibility for national certification. Program goals are to prepare students to be safe and competent radiographers, possess critical thinking, demonstrate professional attitudes and behaviors, and use effective communication. The program is designated to offer students with little or no training or experience in healthcare, an opportunity to obtain specialized abilities and knowledge in order to be marketable and eligible to seek national certification by the American Registry of Radiologic Technologists, ARRT. Upon completion of the program, graduates may desire to pursue education in various areas of imaging such as radiation therapy, nuclear medicine, MRI, computed tomography, mammography, quality management, ultrasonography and others. Southern houses the only CT machine on a community college campus in West Virginia. Courses in computed tomography are offered online and as part of the agreement with Bluefield State College's bachelor's degree in Imaging Science.

The registered technologist, RT, plays a vital role in healthcare. They must accurately provide diagnostic images of high quality in order to assist the physician with information necessary for diagnosis and treatment. Duties and responsibilities include patient assessment and care, preparing equipment, supplies, and instrumentation during procedures, as well as critical thinking and analyzing as it pertains to pathology and technical adaptations. The RT works integrally with staff, medical specialists, physicians, radiologists and nursing personnel and works in environments such as radiology/imaging, emergency, surgical departments, and outpatient facilities.

The program enrollment each year has been between thirteen and twenty students. This is based on factors such as the availability of clinical site access to develop psychomotor skills and competency. The economic decline and cyclical nature of turnover among employed radiologic technologists have partially determined the enrollment number for each new class. Employment needs in the region are also considered. See an article by the American Society of Radiologic Technologists, ASRT, in the appendicies. The enrollment number has decreased somewhat since two clinical education settings in Kentucky are not utilized. Therefore, considering all these factors, a new class is admitted each or every other fall.

II. Special Accreditation Information

The Radiologic Technology Program is accredited by the Joint Review Committee on Radiologic Technology, JRCERT, and maintained the regular, full eight years after the most recent site visit February 22-23, 2010. (See letter, Appendix). An interim report was submitted in February 2014. Revisions were made to the assessment plan prior to resubmission. The final re-accreditation status will be decided in December 2014 or early 2015. The JRCERT requires that program effectiveness data be easily accessible and is included in Appendix V and also at http://www.southernwv.edu/files/ped_june_2014_web.pdf.

West Virginia requires a radiologic technologist to maintain a valid license to practice in the state. Successful completion of the program allows the graduate to apply for the state license. (See Certificate, Appendix V).

III. Program Statement on Adequacy, Viability, Necessity, and Consistency with College Mission

A. Adequacy

The quality of the program is monitored on an ongoing basis by different methods. These methods include student evaluations during clinical rotations, didactic lab and classroom settings. Graduates and employers complete surveys several months after graduation. A summary of the surveys can be found in Appendix III that validates adequacy. The program is accredited by the Joint Review Committee on Radiologic Technology and in good standing with the State of West Virginia. Input from the advisory committee is also valuable and supports the need for the program, too. Facilities are adequate for housing equipment, supplies and providing instructional delivery.

1. Curriculum:

The professional curriculum standards are set by the ASRT and ARRT. The ASRT believes "the challenge in any curriculum is to give students a solid foundation of traditional core knowledge while also providing opportunities to develop skills that will serve them beyond entry to the profession. In particular, students must develop skills in areas such as information literacy, scientific inquiry, self-reflection, collaboration, peer counseling and mentoring." Retrieved from http://www.asrt.org/docs/default-source/educators/ed_curr_rad2012approved_013012.pdf?sfvrsn=2

Furthermore the program has been fulfilling compliance prior to the forecasted date for programs. "The guidance provided by this curriculum document will span the time period prior to and after the projected Jan. 1, 2015 start date of the American Registry of Radiologic Technology's minimum associate degree requirement for candidates seeking professional certification." Retrieved from http://www.asrt.org/docs/default-source/educators/ed_curr_rad2012approved_013012.pdf?sfvrsn=2

The curriculum weaves didactic and clinical aspects throughout the program allowing application. See program curriculum in Appendix I. Since only one class has completed the program under the 60 total credit hour curriculum curricular adequacy cannot be determined.

2. Faculty:

Two full-time faculty provide program specific instruction in order to accomplish the institutional mission. The JRCERT requires the didactic instructor to be a certified radiologic technologist, with a minimum of a baccalaureate degree, and is knowledgeable in course development, instruction, evaluation and academic counseling. The current didactic instructors hold master's degrees thus exceeds the requirement. The coordinator (program director) must possess a master's degree (minimum), be proficient in curriculum design, program administration, evaluation, instruction and counseling, and document three years full-time experience in the profession, and two years' experience as an instructor in an accredited JRCERT program. The current program director exceeds these minimums. Both faculty comply with institutional qualifications. See Appendix II.

The coordinator of the program, Eva Hallis, is a full-time Radiologic Technology instructor, devoting 100% to the program and her qualifications are:

1. Master's Degree in Human Resource Management.
2. Thirty-two years' experience as a Radiologic Technologist.
3. Thirty years' experience as an instructor/coordinator.
4. Member of ARRT, ASRT, West Virginia Society of Radiologic Technologists, Association for Educators in Imaging and Radiologic Sciences.
5. Chaired annual WVSRT conference in Charleston, WV, October 2014.
6. American Heart Association CPR Instructor.
7. Maintains mandatory continuing education requirements for professional development. Attends conference for radiography educators every few years and accreditation seminars when programmatic accreditation is impending.
8. Additional eight hours of doctoral work.

The current didactic instructor and clinical coordinator is Russell Saunders who has a combined equivalent of fifteen years at Southern. JRCERT requirements for a clinical coordinator include baccalaureate degree minimum, proficiency in curriculum development, supervision, instruction, evaluations and counseling; two years full-time experience in the profession and one year experience as an instructor in a JRCERT accredited program (JRCERT Standards, 2010). Mr. Saunders' qualifications are:

1. Master of Arts degree
2. Twenty-five years' experience as a Radiologic Technologist.
3. Ten years' experience as adjunct faculty, lab manager, part-time and full-time equivalent.
4. Member of ARRT, ASRT, West Virginia Society of Radiologic Technologists.
5. CPR certified.

6. Additional advanced certification in Computed Tomography from ARRT.
7. Ongoing continuing education for professional development.
8. Completed two years in the President's Future Leadership Academy
9. Presented at League for Innovations in Community Colleges, March 2013 and 2014.

Qualified college faculty teach support courses such as English, anatomy and physiology, math, computer systems, physics and sociology. Support faculty meet or exceed the qualifications of the college's accrediting body, Higher Learning Commission of the North Central Association of Schools and Colleges.

The program must utilize instructors in clinical settings. These radiologic technologists maintain current ARRT certification or hold a valid West Virginia license in radiography and meet JRCERT requirements as clinical instructors. Clinical staff, (radiologic technologists) evaluate the students' competency on radiographic procedures and relevant skills necessary.

3. Students:

A. Entrance Abilities:

The Radiologic Technology program has admitted students every fall except for 2012 and 2014, primarily due to decreased job outlook in the area. Students applying for admission must meet the requirements for Healthcare associate in applied science degree programs as well as college general admission requirements. Admission into the program has been reviewed and revised over the last several years. Currently, in addition to meeting the general college requirements, criteria is the combination score of ACT sub categories, and a minimum college GPA of 2.0. Applicants are ranked by the ACT sub category total. ACT or other testing has not reliably predicted student success. Applicants enter with varying degrees of ability, desire and financial stability. Admission is limited due to accreditation and approval requirements, clinical staff/student ratio, and availability of clinical learning facilities. Job shadowing was added in the summer of 2013 to improve the completion rate. The student must complete a background check and drug screen as well as a physical exam stating the student is physically able to function in the clinical setting.

B. Exit Competencies:

Upon completion of the Radiologic Technology program, the student will have an understanding of radiologic technology including knowledge of radiation protection, equipment operation and quality control, image acquisition and evaluation, imaging procedures, and patient care and education (ARRT, Content Specifications, 2013).

Students are required to have an overall cumulative grade point average of 2.0 in addition to successful completion of the program requirements. All radiologic technology courses, with RA designation, must be completed with a grade of C or better.

The program's assessment plan addresses program goals, student learning outcomes, benchmarks, methods, tools, results and analyses. The program reviews and shares the plan results with the advisory committee. The plan identifies abilities necessary for graduates to become gainfully employed. In RA 225, Seminar in Radiologic Technology (offered in the last semester), one goal is that the student must achieve a minimum of 80% on at least one all-subject mock registry exam. For each of the five clinical courses, one each semester, competency on imaging procedures must be achieved with a minimum of 85% or higher. Capstone competencies are completed during the last semester and are conducted by program faculty in the on-campus lab. A minimum of 85% or higher must be achieved on these capstone competencies. To be eligible to seek application to take the ARRT Registry Exam in Radiography, the program must assure and document competency in didactic and clinical practice. Although it is not required of the graduate to obtain ARRT certification, the State of West Virginia does grant reciprocity for those who do obtain it. Otherwise, the West Virginia Medical Imaging and Radiation Therapy Board requires passage of a license exam without proof of ARRT certification. Certification pass rates are given later in this document.

4. Resources:

A. Financial:

The Radiologic Technology program receives its full funding through the college's state appropriated funds and general revenue resources. It has been sufficient to purchase necessary instructional tools. Faculty have been able to attend professional conferences in the region and state. The program labs include dedicated digital imaging equipment equivalent to area medical facilities including a Computed Tomography (CT) machine. Two full body simulation manikins let the students learn and enhance their positioning and technical abilities, evaluate images and critically analyze their own images without radiation exposure to live patients. The program has requested and will continue to purchase library holdings. More recently, students have had to request assistance from scholarships or the Southern Foundation to attend the annual state conference, the Kettering review seminar and purchase required certification preparatory software.

B. Facilities:

The Radiologic Technology program utilizes a number of facilities to obtain clinical experience. The clinical facilities have been very supportive by providing a mentor/ clinical instructor at each facility who students report to for assignments. The JRCERT approved facilities in West Virginia include Logan Regional Medical Center, Thomas Memorial Hospital, Thomas Imaging Center, Boone Memorial Hospital Williamson Memorial Hospital, Charleston Area Medical Center - Memorial Hospital and General Hospital. Two inactive sites are Williamson Appalachian Regional Hospital, and Mingo-Pike Radiology, Inc., both in Kentucky.

The laboratory and classrooms on the Logan Campus are more than adequate for the program and are equipped with chairs, tables and adequate lighting conducive to learning.

Computer labs are available to students on all campuses. The program has a laptop farm that is used for research, testing and software applications. The Program has requested additions to library holdings to keep students current in imaging. An online database resource for journal literature is available to students and faculty.

5. Assessment Information:

The Radiologic Technology program has an annual report which includes an assessment plan as required by the JRCERT and includes goals and objectives, benchmarks, method and assessment tool, time, frame, person responsible and analysis/action plan. Each year the plan is evaluated and conclusions or action plans are devised. The use of the results brings revisions or changes in courses, curriculum and assessment tools. The 2013-2014 assessment plan is included in Appendix IV. The JRCERT requires programs to make program effectiveness data (PED) accessible to everyone. The current PED may be found at http://www.southernwv.edu/files/ped_june_2014_web.pdf.

A. Assessment Data:

All students are expected to participate in institutional, program and course assessment activities. Institutionally, students with 60+ hours participate in MAPP every spring. This measures academic proficiency in critical thinking, reading, writing and math. Context based sub categories include humanities, social science and natural science. MAPP has not been a reliable predictor of ARRT Registry Exam passage or successful program completion. MAPP scores for the program can be found on Southern's webpage, under the assessment data, for years 2010, 2011 and 2012.

Assessment tools for student learning include standard examination, oral and poster presentation, research paper, affective non-graded writing, and other learning activities. Student, graduate and employer surveys are also used to assess the program's effectiveness. The 2013-14 assessment plan for the program is included in Appendix IV.

Recent assessment data that has shown the need to improve the program. Examples are:

1. Poor image analysis in RA 101 and 103; addition of new image analysis to clinical courses in 2014.
2. Completion rate low; added job shadowing under the advisement of the advisory committee.
3. Weak assessment for goal 3, demonstrating professionalism; added reflections rubric, fall 2014.

B. Copies of Assessment Tools:

Program assessment plan tools are available upon request.

C. Graduate and Employer Satisfaction:

Students, graduates and employers are requested to complete surveys. Graduate and employer surveys are conducted six months after graduation. These surveys denote average rating of between 3, good and 4, excellent, for all items, on a scale of 0-4. See Appendix IV for survey summary results.

6. Previous Program Reviews:

The program was last reviewed for a five-year period in the spring of 2010. The review found the program adequate with no further recommendations for the program.

7. Advisory Committee:

The advisory committee for the Radiologic Technology program is active. The committee consists of employees of various healthcare facilities representing administration and staff positions, a medical advisor, current students and lay member. The committee reviews program effectiveness, makes recommendations and assists the program in carrying out its goals and objectives, in relevance with the mission. The committee meets at least once a year. Ongoing feedback is provided by the clinical facilities via the clinical coordinator making regular visits to the clinical education settings, which affords the opportunity for feedback. The coordinator often emails or makes phone calls to department directors as the need arises or to address concerns. Participation at the annual advisory committee meeting has become more difficult because some members cannot leave their worksite to attend. The program is open to alternative meeting times or conducting it via conference call.

8. Strengths/Weaknesses:

The Radiologic Technology program reviews the survey results and other assessment data to determine strengths and weaknesses. The JRCERT self-study also requires strengths and areas for improvement and is available upon request.

A. Strengths:

1. Dedicated coordinator and clinical coordinator.
2. Cooperation of clinical education settings and providing clinical instructors.
3. Imaging equipment and supplies housed on campus.
4. Students actively seeking are employed after graduation.
5. The program is accredited by the JRCERT.
6. Anticipating interim report to JRCERT to permit eight year re-accreditation.

B. Weaknesses:

1. Limitations of enrollment due to clinical education settings, losing two sites in Kentucky, staffing and JRCERT requirement to maintain 1:1 staff-to-student ratio for competency procedures and unstable employment in the immediate region.

Plans to improve:

1. Utilize the current clinical sites and accept a class of 15 for 2015.
2. Pursue employment assistance possibilities at the college.

B. Viability:

The Radiologic Technology program has been a highly sought program as indicated by the number of applicants ranging from 132 to 254 in the last five years. With limited facilities in the area, it is difficult to accept a large class. With the closest similar program over 50 miles from Logan, the program is needed in this service area. The economic stability in the area shows that some medical facilities have maintained viability while others have reduced their workforce. In some cases, this lowers the number of students who can rotate in their facility to maintain the 1:1 student to technologist ratio. Despite this, the program continues to help supply the area with qualified graduate Radiologic Technologists. (See comments from hospital administrators in the Appendix IV).

Certification for those performing computed tomography will be required in order for medical institutions reimbursements. Identifying this need, the ARRT curriculum will increase the demand for Radiologic Technologists to further their education by enrolling in CT courses and added competencies as part of the radiologic technology curriculum. Southern has met this by including CT competencies and offering online CT courses.

See applicant, enrollment and graduate and program effectiveness data in Appendix III.

1. Program Enrollment and Graduates- see Appendix III

2. Program Course Enrollment- specific program course enrollment is similar to Program enrollment and is available upon request.

3. Service courses: Currently there are no courses in the program that are required in other majors.

4. Off-Campus/Distance Delivery Classes:

The program offers no off-campus or distance delivery classes. Hybrid and 100% online courses within the program include RA 201, RA 206, and RA 210. The JRCERT limits the percent of courses within the program that can be totally online and requires a substantive change application to justify the need.

5. Articulation Agreements:

The Radiologic Technology program is articulated with Bluefield State College's Imaging Sciences program. BSC has an approved 2+2 program for associate degree

students who desire a baccalaureate degree. Southern's CT courses are 300/400 level electives.

C. Necessity:

According to the U. S. Department of Labor's Bureau of Labor Statistics Occupational Outlook Handbook, the "Employment of radiologic… technologists is projected to grow 21 percent from 2012 to 2022, faster than the average for all occupations. As the population grows older, there will be an increase in medical conditions, such as breaks and fractures caused by osteoporosis, which can require imaging to diagnose them." Retrieved from http://www.bls.gov/ooh/healthcare/radiologic-technologists.htm

The graduate can easily find employment as a Radiologic Technologist if they are willing to commute or relocate. In recent years, economic instability has reduced the number of new positions in the region's hospitals and clinics. Graduates have sought employment outside the state noting lower salaries in WV. Hospitals will continue to be the primary employer of Radiologic Technologists, however, growth is expected in outpatient care centers. An article titled, "Tough R.T.s FIGHT tough Times," is included in Appendix V, with permission.

1. Graduates:

A. Placement Rates:

Through informal inquiries and feedback from supervisors and former graduates, students have been made aware of jobs. The student is on a job interview during each clinical course. By graduation, students often secure jobs within one of their clinical education settings. Job placement for the last five years shows 21 of 24 employed of those seeking employment, for an average of 87.5%.

B. Salary Range:

Radiologic Technology graduates have been gainfully employed at entry-level salary ranges within the national average. Increases in salary are possible if additional certification is obtained. The *Occupational Outlook Handbook* reports median annual earnings nationwide for Radiologic Technologists as $55,910 ($48,170 in May 2006). (Retrieved from http://www.bls.gov/oco/ocos105.htm.)

Appendix III demonstrates 2013 median annual and hourly wage, and the number employed for West Virginia.

D. Consistency with Mission:

The Radiologic Technology program mission is "… to meet community and employer needs for radiographers with high quality, student-friendly and accessible educational opportunities and services. The program strives to instill professional development and transferable behaviors into the work place."

Further compliance with the College's mission is shown by the Radiologic Technology program's connection to requirements in humanities and sciences. The support of other departments is essential to the program's future. The ASRT recognizes the importance of applicable knowledge gained from support courses. Oral and written communication is essential in the medical field. Knowledge of anatomy and physiology, physics and computers is also of utmost importance to the successful graduate. Professional development is incorporated into the program including the importance of awareness of professional issues.

Discontinuance of the Radiologic Technology program would eliminate an important educational opportunity for students in the immediate region and would limit the institution's ability to fulfill the mission.

Appendix I

Curriculum

Radiologic Technology
Associate in Applied Science
Recommended Sequence

Department/Course	Title	Credit Hours
First Year – Fall Semester		
BS 118	Essentials of Human Systems in Allied Health	4
MT 128	Algebra for Allied Health (or higher)	3
RA 100	Introduction to Radiologic Technology	3
RA 101	imaging Procedures I & Image Analysis	3
RA 104	Principles of Radiographic Exposure	2
RA 110	Clinical Practice I*	1
OR 110	Introduction to College	1
	Total Hours:	17
First Year – Spring Semester		
EN 101	English Composition I	3
PH 200	Introductory Physics	4
RA 103	Imaging Procedures II & Image Analysis	3
RA 125	Clinical Practice II*	2
RA 207	Digital Imaging Acquisition and Display	1
	Total Hours:	13
Summer Session		
RA 150	Clinical Practice III (40 hrs/wk)	Total Hours: 4
Second Year - Fall Semester		
SO 200	Introduction to Sociology	3
RA 200	Clinical Practice IV**	3
RA 201	Radiation Biology & Advanced Radiation Protection	2
RA 202	Pathology	2
RA 203	Imaging Procedures III & Modalities	3
	Total Hours:	13
Second Year – Spring Semester		
AH 200	Health Care Ethics and Law	1
CS 103	Introduction to Applications	1
RA 204	Imaging Equipment	2
RA 206	Pharmacology in Radiology	1
RA 210	Quality Management in Imaging Systems	2
RA 225	Seminar in Radiologic Technology	3
RA 250	Clinical Practice V**	3
	Total Hours:	13
	Total Program Hours:	60

*Note: Clinicals are on T & R and scheduled both day and evening hours, therefore, no additional courses may be taken on T or R unless online.
**Note: Clinicals are on M,W,F and scheduled both day and evening hours, therefore, no additional courses may be taken on M,W, F unless online.

Appendix II

Faculty

APPENDIX II – Faculty Data

Name Eva Hallis Rank Professor

Check one: Full-time X Part-time _____ Adjunct _____

Highest Degree Earned MS – Human Resource Management

Date Degree Received May 1994

Conferred by The University of Charleston

Area of Specialization Bachelor of Applied Science – Radiologic Technology

Professional registration/licensure American Registry of Radiologic Technologists, ARRT, Radiography. West Virginia Medical Imaging and Radiation Therapy Board (license)

Years of employment at present institution 9

Years of employment in higher education 28

Years of related experience outside higher education 4

Non-teaching experience 4

To determine compatibility of credentials with assignment:

(a) List courses you taught this year and those you taught last year: (If you participated in team-taught course, indicate each of them and what percent of courses you taught). For each course include year and semester taught, course number, course title and enrollment.

Year/Semester	Course Number & Title	Enrollment
2014/Fall	RA 201 Radiation Biology & Adv. Protection	7
	RA 202 Pathology	7
	*RA 203 Imaging Procedures III & Modalities	7
	AH 200 Health Care Ethics and Law	30
	AH 200 Health Care Ethics and Law	30
	AH 200 Health Care Ethics and Law	4
	AH 124 CPR two sections	11 & 7
2013 Summer	AH 200 Health Care Ethics and Law	15
2013/Spring	RA 204 Imaging	6
	RA 206 Pharmacology in Radiology	6
	RA 225 Seminar in Radiologic Technology	6
	AH 200 Healthcare Ethics and Law (4 sections)	121
	AH 124 CPR	15

2013/Fall	RA 104 Radiographic Exposure	10
	RA 100	10
	AH 200 Health Care Ethics and Law	31 & 30
	AH 124 CPR four sections	48
2014 Summer	*denotes team taught	
2014 Spring	AH 200 Health Care Ethics and Law	14
	RA207 Digital Imaging	7
	RA 125 Clinical Practice II	7
	AH 200 Health Care Ethics and Law (3 sections)	92
	AH 124 CPR (3 sections)	35

b). If degree is not in area of current assignment, explain. NA

(c). Identify your professional development activities during the past five years.

1) Attended the two day Annual Conferences hosted by the West Virginia Society of Radiologic Technologist the last 5 years. This professional conference presents topics on current and upcoming technological advances and often includes sessions for radiology educators.

2) Chaired the 2014 WVSRT conference held in Charleston, WV.

3) Participation in various faculty development sessions at Southern.

4) Attended accreditation workshop presented by the Joint Review Committee on Radiologic Technology, in Las Vegas, 2012.

5) Voluntarily maintain membership in the ASRT, which provides a peer reviewed journal with continuing education articles, to remain up to date regarding current issues and advances,

6) Completed 6 doctoral hours from Marshall University 2011.

APPENDIX II – Faculty Data

Name Russell Saunders Rank Assistant Professor

Check one: Full-time X Part-time _____ Adjunct _____

Highest Degree Earned MA
Date Degree Received May 2013
Conferred by Marshall University
Area of Specialization Master of Arts – Leadership Studies - Education

Professional registration/licensure American Registry of Radiologic Technologists, ARRT, Radiography and Computed Tomography.
West Virginia Medical Imaging and Radiation Therapy Board
Years of employment at present institution 23 total; 15 years full-time equiv.
Years of employment in higher education 23 total; 15 years full-time equiv.
Years of related experience outside higher education 25
Non-teaching experience 25

To determine compatibility of credentials with assignment:

(a) List courses you taught this year and those you taught last year: (If you participated in team-taught course, indicate each of them and what percent of courses you taught). For each course include year and semester taught, course number, course title and enrollment.

Year/Semester	Course Number & Title	Enrollment
2014/Spring	RA 103 Imaging Procedures II	7
	RA 125 Clinical Practice II	7
Summer 2014	RA 150 Clinical Practice III	7
2013/Fall	*RA 207 Digital Imaging Technology	10 - 50% - 8 weeks
	**RA 101 Imaging Procedures I	10
	RA 110 Clinical Practice I	10
2013/Spring	RA 210 Quality Management	6
	RA 250 Clinical Practice V	6
	CT 263 Sectional Anatomy I	3
Summer 2013	RA 150 Clinical Practice III	0
2012/Fall	*RA 207 Digital Imaging Technology	6 - 19% - 3 weeks CT only
	RA 200 Clinical Practice IV	6

* and ** denote courses team-taught with Eva Hallis, RT faculty

(b). If degree is not in area of current assignment, explain. NA

(c). Identify your professional development activities during the past five years.
1. Attended the 2013, 2012, 2011, 2010, 2009, 2008, 2007 WVSRT State Conference.

2. Attended Southern's Governance/professional development days in 2013, 2012, 2011, 2010, 2009, 2008, 2007 during the months of August and December.
3. 2014 and 2013 presenter of League for Innovations in the Community College.
4. Attended Kettering National Radiography Review Seminars in 2013-2008.

Appendix III

Program Enrollment and Graduates

Salary and Employment Numbers

Program Enrollment and Graduates
Radiologic Technology

Number of applicants over the last 5 years:

Year	Number of Applicants
2010	220
2011	132
2012	178
2013	254
2014	167

Program enrollment for the previous five years:

Class Year	Number Enrolled
2010	13
2011	22
2012	0
2013	13
2014	0

Number of graduates for previous five years:

Year	Number of Graduates
2010	13
2011	10
2012	6
2013	6
2014	0

A total of 35 students have graduated from the program over the last five years.

Southern West Virginia Community and Technical College
Radiologic Technology Program
Program #0415
Program Effectiveness Data

The Radiologic Technology Program is accredited by the Joint Review Committee on Education in Radiologic Technology. The following program effectiveness data is made available to the general public and perspective students, for compliance to the JRCERT Standards. This data is also accessible using the link https://portal.jrcertaccreditation.org/summary/programannualreportslist.aspx

[This data was submitted with the annual report to the JRCERT 2014]

ARRT Pass Rate

The five year average for the credentialing exam pass rate will be 75% on the first attempt.

Year	Number passing	Number of examinees	ARRT exam pass rate, on the first attempt
2009	14	15	93
2010	9	10	90
2011	10	10	100
2012	6	6	100
2013	3	6	50
5 year avg.	42 total passing	47 total examinees	**89.30%**
2014	no graduates	no examinees	0%

Pass Rate Annual benchmark for the program is 75%.

Job Placement Rate

The five year average for job placement rate will not be less than 75% within 12 months of graduation.

Year	Number of graduates employed	Number Actively seeking	Job Placement Rate	Justification
2009	6	9	67	1 employed & continuing education 1 continuing education 3 not willing to relocate 1 did not communicate with the program about employment status; 3 did not find employment
2010	6	8	75	1 continuing education 1 not willing to relocate 2 did not find employment
2011	6	6	100	1 working in lab; 2 did not communicate if seeking employmt; 1 continuing to pharmacy school
2012	5	5	100	1 not willing to move out of area
2013	4	5	80	1 not willing to move out of area
				*1 trying to get into pharmacy school but seeking employment.
5 yr avg.	29	35	**29/35 = 82.9% 2009-2013**	
2014	0	0	**A new class was not accepted in 2012, therefore no graduates for 2014**	

Salary and Employment Numbers

Area: West Virginia Period: May 2013	
Occupation (SOC code)	**Hourly median wage**
Radiologic Technologists(292034)	21.68
SOC code: Standard Occupational Classification code -- see http://www.bls.gov/soc/home.htm Data extracted on October 21 2014	

Area: West Virginia Period: May 2013	
Occupation (SOC code)	**Annual median wage(2)**
Radiologic Technologists(292034)	$45090
Footnotes: (2) Annual wages have been calculated by multiplying the hourly mean wage by 2080 hours; where an hourly mean wage is not published the annual wage has been directly calculated from the reported survey data.	
SOC code: Standard Occupational Classification code -- see http://www.bls.gov/soc/home.htm Data extracted on October 21 2014	

Area: West Virginia Period: May 2013	
Occupation (SOC code)	**Employment(1)**
Radiologic Technologists(292034)	1620
Footnotes: (1) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.	
SOC code: Standard Occupational Classification code -- see http://www.bls.gov/soc/home.htm Data extracted on October 21 2014	

Number employed in 2006 was 1,930.

Appendix IV

Program Assessment Plan for 2013-14

Employer Surveys Summary

Graduate Surveys Summary

Comments from Clinical Site Directors

Assessment Plan for JRCERT

Southern West Virginia Community and Technical College **#0415** August 1, 2013 – July 31, 2014
Assessment Plan – revised after 2/2014 interim report submission and discussions with staff and Tom Brown via phone and email.

The mission of the Radiologic Technology program is to meet community and employer needs for radiographers with high quality, student-friendly and accessible educational opportunities and services. The program strives to instill professional development and transferable behaviors into the work place.
Note: No second year students; only first year students.

Goal 1: Prepare students to become safe and competent radiographers.

Student Learning Outcome:	**Benchmark**	**Method/ Assessment Tool:**	**Time Frame/ person responsible:** (Person responsible is Instructor unless noted.)	**Results:**	**Analysis/Action Plan:**
1. The student will evaluate radiographic images for appropriate positioning and image quality.	First year students will average ≥ 75% on Image analysis in the first positioning course.	Image Analysis, IA, quizzes	First fall; Course instructor	10 students, completing three different image analyses. Overall average for all three was 76.5%. Breakdown: Shoulder girdle, 63.7% average; Upper extremity, 78.5%; lower extremity, 79.3% avg.	Met average. Instructor will post days/times when lab will be open for students to review images; instructor will be available to assist. Lower average for shoulder images may be due to less opportunity to perform or see these in clinic. Improvement up from 2011 when average was 55% for image analyses in same course.

2. The student will produce diagnostic quality images.	First year students will average 2 or higher for image quality, on a 0-3 scale.	Clinical Coordinator Semester End Evaluation, CCSEE, Quality of Work section.	First fall; Clinical Coordinator, CC	N= 10 Average = 2.05 9- 2's 1- 2.5	Met Expected for students in their first semester of clinical rotations. Smaller class allows more individualized attention in clinic.
3. The student will demonstrate patient care knowledge.	First year students will average 2 or higher for patient care, on a 0-3 scale.	CCSEE, Patient care section.	First spring CC	N=7 3.0 All 7 scored 3's.	Met The addition of intro. Class in the first fall, may have helped. It included communication and assessment content and application.

Goal 2: Provide educational opportunities for students to possess critical thinking skills.

Outcome:	Benchmark	Method/Assessment Tool:	Time Frame/ person responsible:	Results:	Analysis/Action Plan:
1. The Student will recognize and solve problems.	First year students will average 80% or higher on Exposure labs.	Lab assignments criteria.	First fall; Course instructor	N=10 Average of all 3 labs= 96.5%. Breakdown: Lab 1: 99.5% avg. Lab 2: 100% avg. Lab 3: 90%	Met. Some labs had math problems to solve; Usually worked in teams, so confidence and scores were higher.
2. The student will make appropriate decisions regarding clinical procedures and patients abilities.	First year students will average of 2 or higher for critical thinking, on a 0-3 scale.	CCSEE Ability to make decisions section	First spring, CC	N=7 2.0 avg. All 7 received score of 2	Met. Expectations met for students in their first semester.

Goal 3: Demonstrate responsible professional attitudes and behaviors.

Student Learning Outcome:	Benchmark:	Method/Assessment Tool:	Time Frame/ person responsible:	Results:	Analysis/Action Plan:
1. The Student will identify state and national professional organizations by name and purpose.	Students will average ≥ 90% on an online quiz, out of possible 100%.	Introductory module; Professional Organizations Quiz, online.	First fall Course instructor	N=10 93% average 4 scored 100% 5 scored 90% 1 scored 80%	Met. This is their initial introduction to professional organizations; timely, because it coincides with annual state conference. Will continue to relay how important professional organizations are and their roles, throughout the curriculum.
2. The Student will participate in the annual state conference.	Each Student will score between 8-10 for written feedback on a 0 – 12 scale.	Reflections Rubric; Wrote about favorite speaker; one thing learned; what they realized about their own knowledge level; Qualities and abilities of speakers they would like to possess; how WVSRT can assist their future.	First fall; Program director	N= 8 2 scored 9 4 scored 11 3 scored 12	Met. Self-awareness gained. Several now interested in radiation therapy school because of a speaker.
3. The student will develop personal and professional goals.	Each first year student will score a minimum of 14 for submitting measurable goals, on a 0-18 scale.	Goals Rubric Assesses SMART and grammar and spelling; required only 5 goals with one personal.	First fall Course instructor	N=8 1 scored 11 2 scored 16 5 scored 17	Since all except 1 student scored the minimum, the benchmark may be raised or changed to a range like 12-14. I will often ask progress of goals informally in the future. As second years, they revise them.

Goal 4: Use effective communication.

Student Learning Outcome:	Benchmark:	Method/Assessment Tool:	Time Frame/ person responsible:	Results:	Analysis/Action Plan:
1. The Student will understand and demonstrate effective oral communication.	First year students will average 2 or higher for interaction, on a 0-3 scale.	CCSEE, interaction section.	First fall, CC	N=7 average = 2.3 5 scored 2.0 4 scored 2.5 1 scored 3.0	Met. As expected. This usually improves as student's progress and give oral presentations in several future courses.
	First year students will average 4 or higher for the oral report of their team's poster, on a 0 – 5 scale.	Exhibit/Poster scoring tool, Team Class Report section.	First spring; course instructor	N = 7 Average = 4.78 or 95% 3 scored 4.5; 4 scored 5	Met. I will continue to grade the oral portion individually.
2. The student will demonstrate appropriate written communication	First year students will average ≥ 85% on history taking.	Lab Worksheet-History taking, wheelchair & stretcher maneuvering, assisting transfers, immobilization.	First fall; Course instructor	N=10 Average = 99%	Met. New course; will consider grading each part of the lab separately instead of the entire lab as one.
	First year students will average ≥ 80 on the team poster project, out of a possible 100%.	Exhibit/Poster scoring tool	First spring; course instructor	N = 7 Average = 90.6%	Met.
	First year students will score a minimum of 10 on written peer feedback, on a 0-12 scale.	Poster Project Peer Review Rubric - rated, answered questions, mechanics, gave +/-	First spring; course instructor	N = 7 Average = 11.2 out of 12 1 scored 10 3 scored 11 3 scored 12	Met. First time rubric used. Will continue to monitor.

Goal 4 continued					
3. The Student will work well in a team atmosphere.	First year students will average of 2 or higher as a team player, on a 0 – 3 scale.	CCSEE, Interaction section- cooperates; team player	First spring; CC	N = 7 2.5 avg. 5 scored 2.0 4 scored 2.5 1 scored 3.0	Met
	Complete team project with peer feedback	Project peer feedback. Assignment asked for references; biggest challenge; why teamwork is important; Peer reviews asked to rate & give suggestions.	First Spring; Course instructor	N=7 Posters in RA 207 Peer reviews gave strengths and where to improve.	Met

2013-2014 assessment plan only reflects documentation and data for first year students; no new class was accepted in the fall 2012.

Completion Rate for 2014: 0 No students were eligible for graduation.

Reasons for not completing program: First fall- 7 of 10 remain at the end of the semester.
Poor academic progress- one failed RA 101; one failed MT 128; one decided not to continue- personal reasons.

Five year rates with full program report of effectiveness data can be found at http://www.southernwv.edu/files/ped_june_2014_web.pdf.

As of 9-17-14 End

Radiologic Technology
2010-2013 Employer Questionnaire Summary

Total Number of Surveys sent: 18 Total Number of surveys returned: 14 Return Rate: 77 %

Employers were asked to rate the employee for the degree to which the Radiology program prepared the graduate technologist in the areas below.

The scale extremely prepared = 4 well prepared = 3 satisfactory = 2 and less satisfactory = 1.

Area to rate:	Average for 2010-2013:
Patient Care	3.37
Patient Interaction	3.37
Radiation Protection Methods	3.20
Proper use of exposure factors	3.15
Proper positioning skills	3.27
Cooperation with co-workers	3.55
Initiative	3.42
Quality of work	3.46
Quantity of work	3.41
Dependability	3.55
Self-confidence	3.32
Ability to make decisions	3.03
Ability to organize work	3.38
Overall performance level	3.28

Would you consider hiring from this program in the future? 14 "Yes" 0 "No"

Radiologic Technology Department
2010-2013 Graduate Survey Summary

Number of surveys sent: 28 Number returned: 18 for 64% Return Rate

Graduates were asked to give their opinion as to what degree the RT program prepared them for employment in the following areas. They were asked to provide comments for any areas receiving less than a "C". The following scale was used (4) = excellent, (3) =good, (2) =satisfactory, (1) =Poor, (0) = unsatisfactory

Area to rate:	2010-2013 Average:
Patient care and education	3.66
Interaction and Communication	3.68
Radiation Protection and Methods	3.68
Setting Exposure Factors	3.27
Positioning & Image Evaluation	3.77
Cooperation with co-workers	3.77
Professional conduct	3.72
Initiative and Self Confidence	3.61
Ability to make decisions and organize	3.53

Graduates unedited responses to the following:

1. Were you adequately prepared for the "work world" environment? 18 Yes 0 No
Provide any suggestions for future program improvements. None noted here.

2. How satisfied are you with the program's effectiveness in preparing you overall?
_9_ Very satisfied _8_ Satisfied _0_ Dissatisfied
_0_ Very Dissatisfied _1_ No response

Comments from Clinical Sites Directors/Supervisors

The Program Coordinator sent this email September 3, 2014 to directors or supervisors of clinical sites the program utilizes:

Greetings everyone,

I know you are all involved in ongoing monitoring and improvements associated with Joint Commission or state requirements and many of you have dealt with corporate changes also. Although the agency and criteria may be different, Higher Ed. has similar processes in place.

A program review is required by the Board of Governors. The last review for the A.A.S. in Radiologic Technology program at Southern was 2009. The next review will be early 2015. In compiling documentation for the review, I am asking you as imaging director or supervisor, to provide input. The Board of Governors can continue the program as is, continue it with further development, or discontinue it. Many of you have hired our graduates and know that they are competent and qualified as radiologic technologists. In recent years, the job market has been less than desirable. For whatever the reason, some graduates cannot or will not relocate to areas where jobs are more available. According to the ASRT, there has been a decreased job market overall. In an effort to not flood the market, the program took smaller classes recently. With this said, Southern plans for the program to continue to fulfill its mission. I would appreciate any comments regarding adequacy of the program, viability, need, etc. that I could include in the program review. You name will be listed with your comments. If your administration has any input, please send this email and encourage them to respond. I would like to have these by September 15. Eva Hallis, MS, RT, R

Unedited Responses:

The Southern Rad Tech program plays a vital role in the Radiology department at LRMC. In a review of our staffing, currently 35 of 53 Radiology employees are Southern graduates. Without the continuation of the program I fear that we would have great difficulty fulfilling our staffing model.

Southern has always provided technologist of high quality that require minimal orientation to our workforce. In addition our current staff enjoys and takes great pride in educating the students as they rotate thru clinicals.

***

I consider your program to be of high quality and prepares graduates to exceed entry level technologists jobs. Over the past 10 years we have hired more Sothern graduates than we have any other program. They have advanced into specialty and supervisory positions at a rate equal to other new technologists within my staff. I do see something unique within the Southern program in that graduates don't want to let go their roots in southern West Virginia – sometimes

not even wanting to commute to Charleston. The last 3 technologists that I have hired this summer have been from programs outside the Southern or UC programs. We are dependent on your program and would not want to see anything happen with its existence. I do think that reducing the number of students in the program should adjust to the current job market. (Unedited responses, continued)

***

Mingo-Pike Radiology appreciates the rad tech program at Southern. Your students have been an integral part of our imaging facility. The students are a breath of fresh air, sort of speak when here during their clinical rotations. It serves as a refresher for the technologists here on staff from teaching positioning, technique and anatomy to just talking about the curriculum and what they should expect to get out of the rad tech program.

The program is also a vital part of the community. Graduating local people to meet the demand for health care workers in the medical imaging field. MPR has had the opportunity to hire and employee many technologists that graduated from the Southern program.

Thank you for your dedication and hard work at keeping the rad tech program going at Southern.

***

I would like to let you know that in the past several years we have hired at least 8 of your students, which are still currently employed by CAMC working in the Cardiac Cath Lab and have combined performance review of over 3.5 out of 4. I would not hesitate in the future to hire any graduates from your program. I recently had 3 positions posted externally and have had difficulty filling.

***

I understand that the Radiology Technology program at Southern will be up for review in 2015. I wanted to send you an email to let you know how important your program is and has been to us at Thomas Health Systems. I have been here for 21 years and in management for approximately 15 of them. I have worked with and hired a lot of students and technologists. Most of them have came from the Southern program. In my opinion, the students from Southern have been well versed both academically and in the clinical setting. They appear to be eager to learn from our technologists. I think the continuation of the program is needed for our facility.

As you know, we at Boone Memorial Hospital are huge proponents of the Radiologic Technology program at Southern. Since the program's inception 21 years ago, we have hired exclusively from the graduates of the program. Serving as a clinical site has provided the opportunity to conduct a very thorough on-the-job interview of prospective hires, and it has worked out beautifully. We have a staff of very competent, qualified professionals with a very low turnover rate.

I realize that the market for technologists in the area has been stagnate, but I am confident that it would be mistake to disband the RT program. I believe that decreasing the class sizes and beginning new classes every other year will have a positive impact on the availability of jobs in this region, but it may take a little more time to see the positive effects.
(Unedited responses, continued)

As I mentioned earlier, we have very little turnover here at Boone, but several of our technologists are nearing retirement age and I do anticipate the need to hire several technologists in the next couple of years. I am hoping to be able to select those new employees from our former students.

I believe the RT program at Southern has been a huge asset to the local medical community and I firmly believe that the program should continue.

Please continue to keep our program afloat Eva.

***

I would like to share that we CAMC find value in your program, graduating quality Radiographers. CAMC Imaging has hired a number of RT graduates from the SWVCTC program.
We currently have 3 of our Lead Technologists and 1 of our Operations Managers that are graduates from the program. This is a testimony to their leadership skills, in addition to their technical abilities. I also wanted to share that I know of many of our employees that were in Technical Assistant roles and other positions in the hospital, that would not be RT's today, had it not been for your program. Many students cannot afford a 4 -5 year investment due to time and money. The location of your program, affordability, and 2 year Associate Degree makes it attractive.

***

End

Accreditation Letter

Certificate, State of West Virginia

NOTICE OF REGISTRATION

SOUTHERN WV COMMUNITY AND TECHNICAL COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

2900 DEMPSEY BRANCH ROAD, BUILDING C, ROOM 113
MOUNT GAY, WV 25637

Registration Number
231404

* * *

Radiation machines are registered at the address above in compliance with the Radiological Health Rules.

West Virginia Department of Health and Human Resources
Bureau for Public Health
Office of Environmental Health Services
Radiological Health Program
[64-CSR-23]

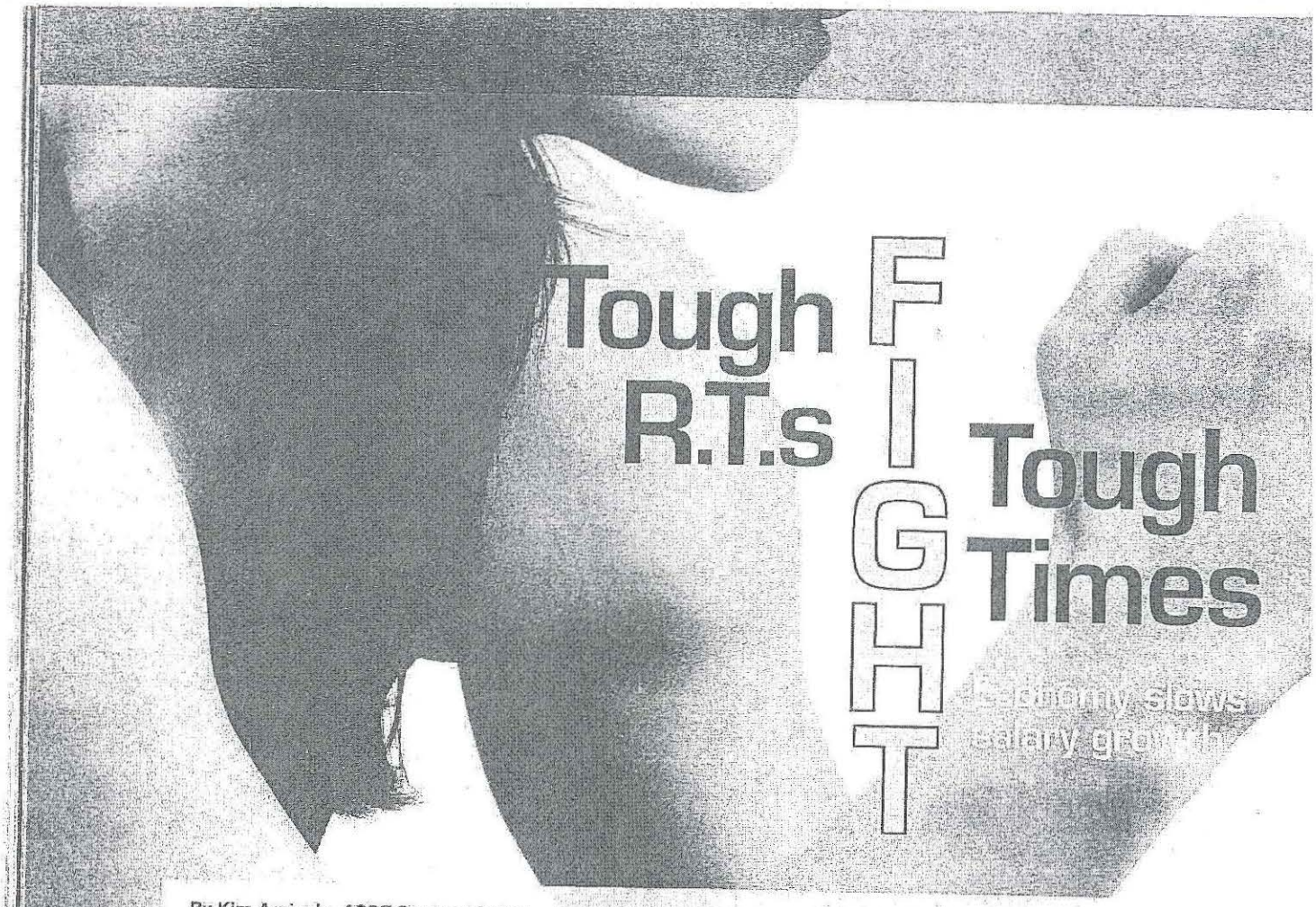
1/14/2016
Registration Expiration

The registrant shall notify the agency in writing within 10 days after any change which renders the information provided on the application for this registration no longer accurate.

Anthony Turner, Assistant Director
Radiation, Toxics & Indoor Air Division
Office of Environmental Health Services

Obj. 10.2

Supporting Article



Tough R.T.s FIGHT Tough Times

By Kim Agricola, *ASRT Scanner* Editor

Although we wish some things would stay the same, pay is not usually one of them. Wages and salaries of R.T.s have remained mostly stagnant over the past three years, according to results of the 2013 ASRT Wage and Salary Survey. In February, the ASRT Research Department made the survey available to a random sample of 316,000 R.T.s from each of the 50 states and the District of Columbia. More than 10,500 completed the survey.

Every three years, the ASRT surveys R.T.s to see how salaries compare across the country. The 2013 data show that pay rates haven't changed much since 2010, when R.T.s were last surveyed. "The slowing wage growth between 2010 and 2013 seems to be a reflection of the larger economy as the country continues to recover from the recession," said Myke Kudlas, M.Ed., R.T.(R)(QM), ASRT chief academic officer.

U.S. Salaries Lag Behind Inflation

The U.S. Bureau of Labor Statistics' Employee Compensation Index has increased 5.4 percent since 2010; inflation, on the other hand, has risen 6.8 percent and is outpacing wages across many industries, not just in the medical imaging and radiation therapy profession. For example, *Quality Progress* observed that the average salary for quality professionals "has become frustratingly stuck in place."

Personal income fell 3.6 percent in January, the largest monthly drop in 20 years, according to the U.S. Department of Commerce. A recent article in the *New York Times* reported that the wage share of the country's gross domestic product has been declining since 2001, and was at a record low — 43.5 percent of the GDP — last year.

"Salaries, even for physicians, haven't kept up with inflation," said Ani Turner, deputy director of the Altarum Center for Sustainable Health

Spending. "Wages haven't been growing in health care, in particular, where there's pressure to slow the rate of spending." Pay raises, bonuses and overtime are a distant memory for many.

"Fiscal pressure to contain costs has forced many hospitals to set wage and hiring freezes, reduce hours, cut benefits and trim staff," said ASRT CEO Sal Martino, Ed.D., R.T.(R), FASRT, CAE. "Radiology departments also have faced reimbursement cuts for a variety of medical imaging exams and radiation therapy procedures. In fact, Medicare reimbursement for medical imaging has been cut 12 times since 2006, with payments for some services being reduced by more than 50 percent."

Sal said the state of the national economy is reflected in the results of the ASRT Wage and Salary Survey. After growing by 5.2 percent between 2007 and 2010, average R.T. salaries grew 1.7 percent between 2010 and 2013. The average salary for R.T.s across all disciplines is now $62,763. The average nationwide salary for radiographers is $53,680, lower by 0.5 percent from three years ago. The average annual salary for radiation therapists dipped 0.7 percent to $72,075.

Some specialty practice areas saw modest gains in income. The average annual salary rose 8 percent to $65,101 for mammographers, 5 percent to $68,384 for magnetic resonance technologists and 4.9 percent to $63,545 for computed tomography technologists. Marginal increases also occurred for professionals who work in nuclear medicine, sonography, cardiovascular interventional technology, medical dosimetry and quality management.

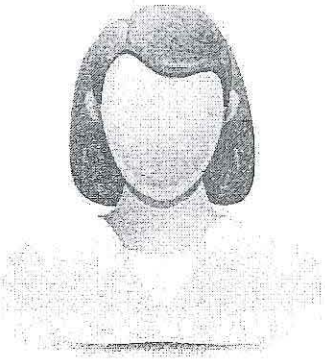
Other allied health professionals have experienced marginal salary increases too, according to a semiannual mail survey distributed by the Bureau of Labor Statistics' Occupational Employment Statistics program. The national estimate for respiratory therapists' mean annual wage was $57,200 in 2012, compared to $55,200 in 2010 (3.6 percent). Registered nurses earned an estimated $67,930 in 2012, compared to $67,720 in 2010 (0.3 percent). The OES data reported that average annual salaries for radiographers grew from $55,730 to $56,450 over those same two years (1.3 percent).

The Ups and Downs of Supply and Demand

Although the recession might be the main culprit behind the flat wages, growth in the numbers of R.T.s has compounded its effects. "It's highly probable that it's a substantial and significant factor in stagnant wages," noted John Culbertson, ASRT director of research. "Whenever you have an oversupply of workers, it's eventually going to affect wages — it's just the law of supply

2013 Compensation for Radiographers

	Radiography
OVERALL	
N	2862
MEAN	$53,680
MEAN by POSITION	
Staff technologist/therapist	$49,019
Senior/lead technologist/therapist	$55,506
Supervisor/manager	$71,325
Chief technologist/therapist	$56,097
Instructor/faculty	$63,698
Program director	$75,609
Administrator	$98,299
Corporate representative	$96,673
Locum tenens (temporary staff)	$58,078
Other Position	$61,657
MEAN by WORKPLACE	
Hospital (not for profit)	$57,187
Hospital (for profit)	$52,202
Clinic or physician's office	$45,966
Imaging center/outpatient imaging facility	$55,571
Education	$67,249
Government/V.A. hospital	$56,739
Mobile unit	$46,668
Corporate	$79,167
Locum tenens (temporary staff)	$66,317
Industrial	$44,928
Other Workplace	$58,042
MEAN by EDUCATION	
Certificate(s)	$55,461
Associate degree	$50,134
Bachelor's degree	$54,756
Master's degree	$73,105
Doctoral degree (including medical)	$67,444
Other education	$55,676
MEAN by YEARS IN PROFESSION	
2 years or less	$43,155
3 to 5 years	$45,444
6 to 10 years	$50,871
11 to 15 years	$58,096
16 to 20 years	$61,330
21 to 30 years	$66,425
31 years or more	$68,421



Demographically Speaking

What the Typical R.T. Looks Like in 2013

Gender	Female (71.7%)
Age	About 43 years old
Position	Staff technologist (68.4%)
Highest Level of Education	Associate degree (49.7%)
Workplace	Not-for-profit hospital (42.7%)
Years in Profession	15.26 years

Average demographics aside, each R.T. is unique. See how your salary compares to others in the profession using the ASRT Salary Estimator at www.asrt.org/salaryestimator.

and demand. Given the other usual suspects — sweeping changes in health care and the recession — these factors add up to a pretty predictable outcome."

The expansion of the R.T. population had been accelerating since 2000 and peaked around 2007, but has lasted longer than the oversupply in 1994, said John. "The profession goes through these cycles of extreme shortages and then oversupply," he said. "With this type of reactive change, it's difficult to maintain a relative equilibrium between supply and demand."

When employers stop or reduce hiring, it translates to more individuals looking for work and affects pay rates because many job seekers desperate for work are willing to accept lower salaries. "It influences wages because you've got all these people competing for a limited number of jobs," said John.

The peaks and valleys in the number of ARRT examinations administered over the past 20 years help illustrate those cycles. ARRT statistics show that the number of first-time candidates for the three largest primary exams — radiography, nuclear medicine and radiation therapy — has been leveling off or decreasing since 2008. In 2010, the ARRT administered 15,132 first-time examinations in those disciplines. The number fell to 14,009 in 2011 and to 13,694 last year.

Patient demographics affect the cycle as well. "Most researchers believe the aging baby boom population will boost demand for health care services, including radiology," said Sal. While the expected bulge in that population is 10 to 20 years down the road, boomers started hitting retirement age two years ago.

The Affordable Care Act, which takes effect in 2014, also is expected to increase health care demand. "The expansion in health care insurance will bump up demand for health care services about 2 to 3 percent, but it depends on where you are in the country," said Ani. Depending on state Medicaid expansion, between 25 and 30 million people — roughly 10 percent of the population — are expected to gain access to additional health care services after the ACA is implemented, she noted. "The uptake in demand because of the ACA could bring [the oversupply] into balance."

For now, the ACA's potential effects on supply and demand in the radiologic sciences remains a wild card. "There are too many factors with this health care reform to make any solid predictions," observed John, who noted that many surveyed R.T.s wondered about the ACA's influence too.

Still Happy to Have a Job

Despite their mostly immobile salaries, more than half of R.T.s reported satisfaction with their pay, just as they did three years ago. In the 2010 survey, 54.5 percent of respondents said they were satisfied or very satisfied with their compensation; 52.7 percent expressed the same in the recent survey. Asked whether they are better off now than they were three years ago, 42 percent said they are in relatively the same position, 37.6 percent said they are better off and 20.3 percent said they are worse off.

"With the history of the fluctuating job market and downsizing of the workforce, R.T.s have proven to be resilient, persistent and fairly happy with their pay rates," said ASRT President Julie Gill, Ph.D., R.T.(R)(QM). "This is the first time in my career that I personally know radiologic technologists who are unemployed due to the economic climate, so most R.T.s are happy to be employed and are working hard to improve their work environment. With the economy making a slow recovery, hopefully more R.T.s will be even more satisfied with their salary."

Although some respondents expressed frustration that there's been little change in their pay,

many said they were happy to have a job during the recession.

"Considering the market in our area is flooded and has been for several years, I'm perfectly content with the compensation I receive," reflected one survey respondent. "Of course, we'd all like to be paid more, but I'm fully aware of the economy and the lack of radiologic technologist jobs. There are many facilities that just laid technologists off when things got tight. The facility I work for chose to minimally reduce our hours, keeping all of us within full-time range and employed."

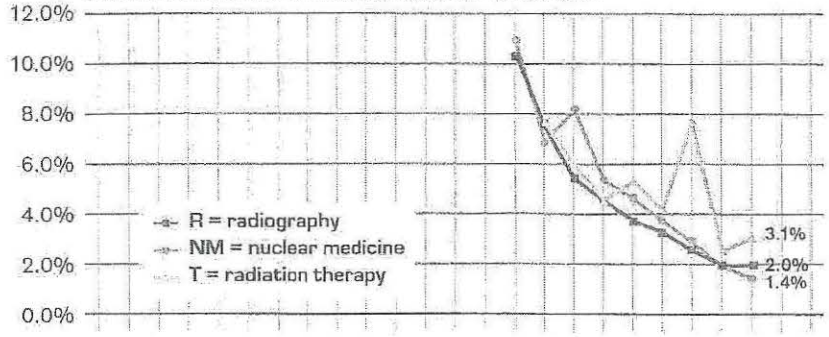
"Although I may be dissatisfied with my compensation and benefits, I feel fortunate to have a job," another R.T. wrote.

A recent graduate wrote: "I'm in my 90-day probationary time with my first position as a radiographer. After my 90 days, I will get an increase of $2 an hour and access to benefits.... As a new grad, and the market here being fairly overloaded, I'm very happy with having my first position and any compensation."

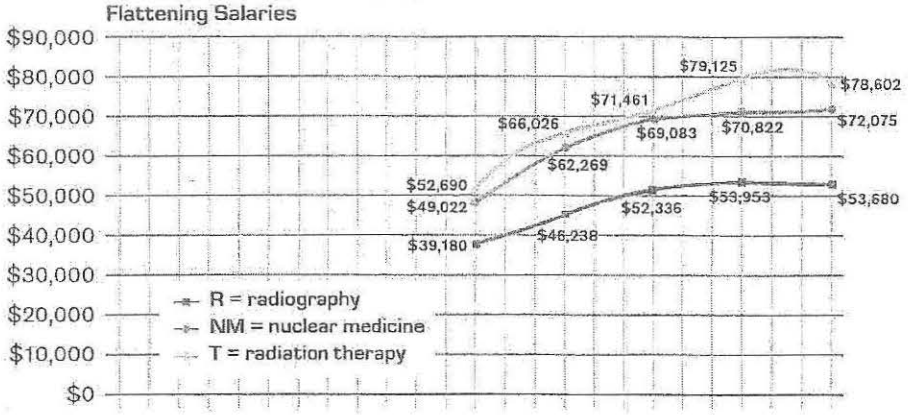
There was other good news. Pay raises haven't disappeared. Almost two-thirds, or 61.6 percent of respondents, said they received a raise within the past 12 months. The R.T.s reported an average pay increase of 2.6 percent. However, many said their raises haven't helped them keep up financially, given the rising cost of living, payroll tax hikes and insurance deductions.

"Even though I've received raises over the past three years, it hasn't been enough to keep pace with the increase in commodities and other expenses," commented one R.T. "Basically, inflation is winning. Even though I have

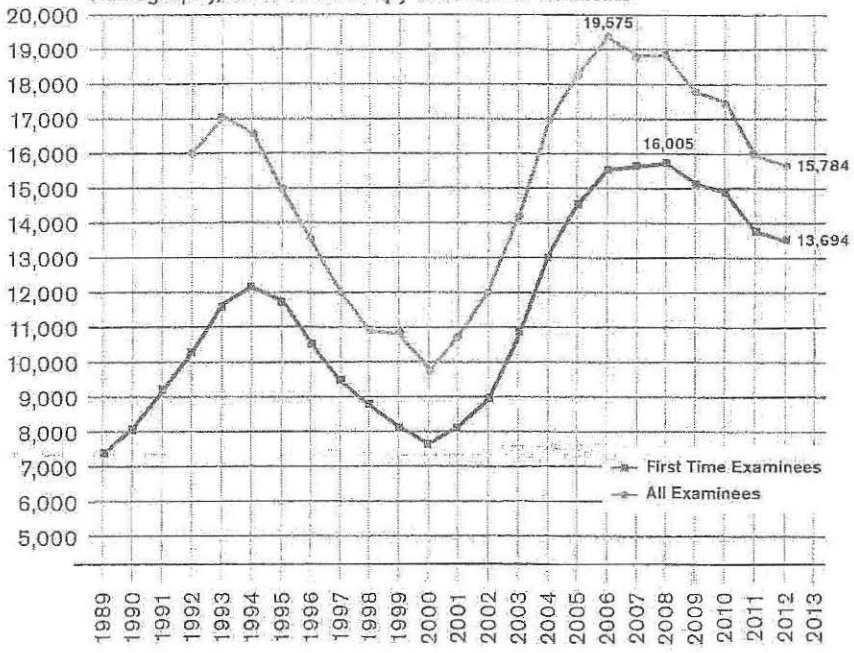
Staffing Survey (2003-2011)



Staffing Survey (2001-2013)



Number of ARRT Examinees (1989-2013)



slightly more money, my spending power has decreased. I'm not complaining though, because I'm happy to have a job and be receiving raises."

"Although I'm glad to have received any raise, we've had to take on a larger percent of our [health care] coverage," noted another respondent.

"I got a $2.25 raise for moving from general diagnostic x-ray to the cardiovascular lab to do cardiac interventional radiography," said another. "This past year, all the health, dental and vision insurances had rate increases, so pay is almost even."

"Our benefits were cut, our benefit costs were increased and our vacation accrual was decreased," noted an R.T. who received a companywide cost-of-living income raise. "Overall, any income increase was offset by out-of-pocket expenses."

Despite benefit cuts, 75.2 percent of respondents indicated that their employers provide a fixed percentage or full funding for a retirement plan, 76.7 percent receive either full or partial health insurance funding and slightly less than half of respondents (49.2 percent) receive full or partial life insurance coverage. Employers were least likely to provide liability insurance — 41 percent receive full or partial funding.

Respondents reported that employers were even less likely to finance professional development, although nearly half (48.6 percent) receive full or partial tuition assistance and 35.2 percent receive full or partial travel expense funding.

Education Matters

If it feels like you're losing the battle to the economy, leveraging education and professional development might help you achieve some control over your earning potential.

"With the ebb and flow of changing workforce numbers, R.T.s can improve their earning potential in a number of ways," said Julie, who suggested volunteering, taking initiative at work or pursuing education opportunities. "I always tell my students that advanced education will open more doors for them. Learning new things, whether in a clinical modality or for an advanced degree, is an excellent way to set yourself apart from another R.T."

The ASRT survey shows that R.T.s with more education tend to be better paid. In 2013, an R.T. with an associate degree earns $64,314 on average, while an R.T. with a certificate earns about $58,841. An R.T. with a bachelor's degree earns about $65,726; with a master's degree, $76,663. Nearly half of respondents (49.7 percent) have an associate degree, 27.5 percent have a bachelor's degree, 17 percent have a certificate and 5 percent have a master's degree.

"Advanced degrees indicate to the employer that the R.T. is motivated for self-improvement," the ASRT president noted. "Whether you decide to go through each opened door is up to you, but a higher degree does translate to more opportunity, which usually translates to a higher salary."

A positive attitude never hurts, either, especially during tough times. Julie said it's probably one of the most effective strategies to increase your earning potential. "Employers want to hire and promote positive employees. By avoiding negative work attitudes, being appreciative of your work environment and staying energized on the job, you'll affect your colleagues — and your supervisor will notice it!"

Finally, if you've taken on more responsibilities at work without additional compensation, as many R.T.s noted in the survey, don't despair. Assuming more responsibility demonstrates your commitment to the department, said Julie, "whether it's chairing a

Compensation by Discipline or Specialty	2013	2010
Radiography	$53,680	$53,953
Radiation Therapy	$78,602	$79,125
Nuclear Medicine	$72,075	$70,822
Magnetic Resonance	$68,384	$65,098
Sonography	$70,701	$68,821
Computed Tomography	$63,545	$60,586
Mammography	$65,101	$60,263
Cardiovascular–interventional technology	$67,379	$64,614
Medical Dosimetry	$98,261	$95,279
Bone Densitometry	$56,312	$56,521
Quality Management	$71,305	$71,251
Radiologist Assistant	$97,185	$100,004
Vascular Sonography	$62,024	Not reported
Breast Sonography	$65,893	Not reported

Joint Review Committee on Education in Radiologic Technology
20 N. Wacker Drive, Suite 2850
Chicago, IL 60606-3182
312.704.5300 • (Fax) 312.704.5304
www.jrcert.org

June 18, 2010

Joanne J. Tomblin
President
Southern West Virginia Community and Technical College
P.O. Box 2900 Dempsey Branch Road
Mount Gay, WV 25637

RE: Program #0415
Previous Accreditation Status: 8 Years
Most Recent Site Visit: 02/10
Agenda: R-A6

Dear President Tomblin:

The Joint Review Committee on Education in Radiologic Technology (JRCERT) appreciated the opportunity to evaluate the associate degree radiography program sponsored by Southern West Virginia Community and Technical College. The JRCERT is the only agency recognized by the U.S. Department of Education for the accreditation of traditional and distance delivery educational programs in radiography, radiation therapy, magnetic resonance, and medical dosimetry. Specialized accreditation awarded by the JRCERT offers institutions significant value by providing peer evaluation and by assuring the public of quality professional education in the radiologic sciences.

The continuing accreditation status of the program was considered by the Joint Review Committee on Education in Radiologic Technology. The program was evaluated according to the **Standards for an Accredited Educational Program in Radiologic Sciences (2002)**. The JRCERT awards:

ACCREDITATION FOR A PERIOD OF EIGHT YEARS.

The maximum duration that may be awarded by the Joint Review Committee on Education in Radiologic Technology in this category is eight years.

An interim report will be required. The projected date for submission of the interim report is the First Quarter of 2014. The JRCERT will provide program officials adequate notice of the due date for submission of the interim report. Based on the interim report, the JRCERT will determine if the accreditation award of 8 years will be maintained or reduced and the continuing accreditation process expedited.

If the accreditation award is maintained, the next site visit is tentatively scheduled for the First Quarter of 2018.

The program is advised that consistent with JRCERT Policy 11.600, the JRCERT reserves the right to conduct unannounced site visits of accredited programs. The sponsoring institution would be responsible for the expenses of any on-site evaluation.

The attachment to the program director's copy of this letter identifies the clinical total capacity, as provided by the program, for the institutions recognized as clinical education settings. It is the responsibility of the program to provide a copy of this letter to appropriate personnel at the clinical education settings.

The Joint Review Committee on Education in Radiologic Technology Directors and staff congratulate you and the program faculty for achieving the maximum award of accreditation from the JRCERT and wish you continuing success in your efforts to provide a quality educational program. If we can be of further assistance, do not hesitate to contact us.

Sincerely,

Barbara L. Dehner

Barbara L. Dehner, M.S.R.S., R.T.(R)(M)(CT), FAEIRS
Chair

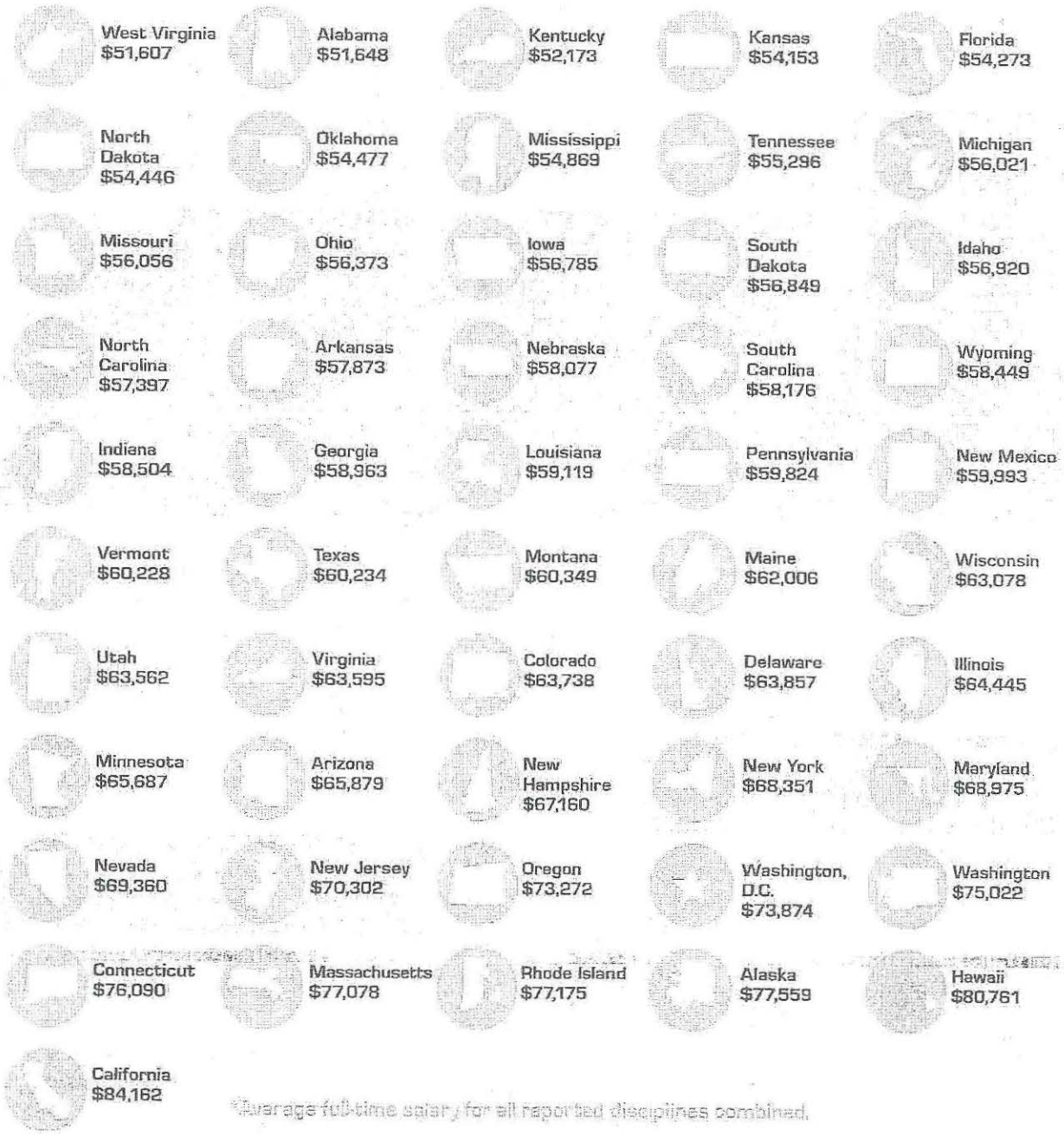
BLD/JSB/jm

copy: Program Director: Eva M. Hallis, M.S., R.T.(R)
Dean: Pamela L. Alderman, M.S.N.
Site Visitors: Alex S. Backus, M.S., R.T.(R)(QM)
Sherry M. Floerchinger, M.A., R.T.(R)(N)(QM)
West Virginia: Randy Fink
Accreditation Services Coordinator

departmental committee to create a new dress code or working with your supervisor to conduct a patient workflow study."

It might feel like everything's "up in the air" right now, but one thing's for sure. When the going gets tough, R.T.s. do too. Get the full picture of ASRT's 2013 Wage and Salary Survey results at www.asrt.org/wageandsalary. S

R.T. Average Salary by State* (Low to high)



*Average full-time salary for all reported disciplines combined.