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INTRODUCTION
The Lone Star College Medical Radiologic Technology (MRT) Program Student Handbook contains policies, procedures, and behavioral expectations for student radiographers. Students are expected to familiarize themselves with information contained in this handbook, as well as the policies and procedures of the College as published in the Lone Star College System Catalog.

Policies and procedures contained in the Radiologic Technology Student Handbook are subject to change by the MRT faculty and do not constitute an irrevocable contract between the students and the programs. Changes will become effective whenever the proper authorities so determine and will apply to both prospective students and those already enrolled. However, they will not increase the overall program length unless directed by accrediting agencies of the Program. Additionally, the Program is not responsible for any misrepresentation of its requirements or provisions that might arise as a result of errors occurring in the preparation of this handbook.

All students are required to maintain copies of the MRT Student Handbook for reference during Program enrollment. Since program information will be reviewed prior to each clinical course, all students are also required to present a copy of the Student Handbook on the first class day of each clinical course. Students are also required to provide a current address and telephone number to the Program office each semester and submit changes as they occur.

EQUAL OPPORTUNITY STATEMENT
The Lone Star College System (LSCS) is committed to the principle of equal opportunity in education and employment. The district does not discriminate against individuals on the basis of race, color, gender, religion, disability, age, veteran status, national origin, or ethnicity in the administration of its educational policies, admissions policies, employment policies, scholarship and loan programs, and other district or college administered programs and activities.

ADA STATEMENT
LSCS is dedicated to providing the least restrictive learning environment for all students. The college system promotes equity in academic access through the implementation of reasonable accommodations as required by The Vocational Rehabilitation Act of 1973, Title V, Section 504 and the Americans with Disabilities Act of 1990 (ADA) which will enable students with disabilities to participate in and benefit from all post-secondary educational programs and activities.

Students with disabilities who believe that they need accommodations in this course are encouraged to contact the LSC-Montgomery Disability Services Office at 936-273-7239; located in Building C, Office C123, or LSC-CyFair Disability Services Office at 281-290-3260; located in Building LRNC 108, as soon as possible to ensure that such accommodations are implemented in a timely fashion.

PROGRAM ACCREDITATION
Lone Star College - Montgomery and Cy-Fair Medical Radiologic Technology Programs are accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). For additional information, contact the JRCERT at 312.704.5300 or www.jrcert.org. The Lone Star College - System is accredited by the Southern Association of Colleges and Schools, and the Medical Radiologic Technology Programs have been approved by the Texas Higher Education Coordinating Board.
MEDICAL RADIOLOGIC TECHNOLOGY PROGRAM MISSION STATEMENT, GOALS, AND STUDENTS’ OUTCOMES

Mission Statement
The mission of Lone Star College, Medical Radiologic Technology Programs, is to provide a comprehensive education of structured learning experiences and to assist in meeting the community’s need for medical imaging professionals. The program curriculum combines didactic and clinical education experiences to enable the student to acquire knowledge; develop medical imaging skills; professional values; and the desire for life-long learning. Graduates of the programs are effectively prepared for entry-level positions in the medical radiologic technology profession.

Program Goals
Goal 1: Graduate entry-level Medical Radiologic Technologists, who are effectively prepared to pass the ARRT national certification/credentialing examination at first attempt
   Student Learning Outcomes:
   a. MRT students will demonstrate readiness to successfully complete (pass) the American Registry of Radiologic Technologists (ARRT) national certification/credentialing examination at first attempt.
   b. MRT students will successfully complete the program and graduate with an AAS degree
   c. MRT graduates will pass the ARRT examination, at first attempt, within 6 months after graduation.
   d. MRT graduates will be employed in the Medical Radiologic Technology profession within 6 months after graduation.

Goal 2: Develop clinical competency in program students
   Student Learning Outcomes:
   a. Students will demonstrate proficiency in entry-level clinical skills by recalling and applying correct radiographic procedures and positioning skills; successfully completing exposure technique exercises and selecting appropriate exposure/ technique factors; and observing and practicing adequate radiation protection measures.
   b. Employers will be satisfied with MRT graduates’ clinical competencies and job performances.
   c. MRT graduates will be satisfied with the quality of education received at LSC.

Goal 3: Develop effective communication skills in program students
   Student Learning Outcomes:
   a. MRT students will demonstrate proficiency in written communication skills.
   b. MRT students will demonstrate proficiency in oral communication skills.

Goal 4: Develop critical thinking and problem solving skills in program students
   Student Learning Outcomes:
   a. MRT students will use critical thinking/problem solving skills to critique and evaluate the quality of diagnostic images.
   b. MRT students will apply critical thinking and problem solving skills while performing non-routine imaging procedures.

Goal 5: Establish the desire for professional development and life-long learning in program students
   Student Learning Outcomes:
   a. MRT students will attend and participate in on/off campus professional development activities.
   b. MRT students will write and present scientific papers in preparation for professional development seminar activities.
Program Overview
Lone Star College offers a two-year, Associate of Applied Science degree program in Medical Radiologic Technology. Students enrolled in the program receive classroom instructions (didactic education) at the college and clinical education experiences at affiliated hospitals and clinics. Radiography education is a competency-based education, which exposes the student to the underlying principles of radiologic sciences and varieties of hands-on learning experiences that enable the student to acquire knowledge; develop and enhance imaging skills; and successfully complete required clinical competencies and outcomes.

Student learning outcomes in didactic education are assessed using combinations of unit tests, quizzes, research projects, term papers, classroom discussions, presentations, and final comprehensive examinations. Clinical education learning outcomes and skill development are assessed by way of clinical competency demonstrations and testing in program laboratories and at affiliated clinical education sites. Students receive letter grades in both didactic and clinical courses at the end of each semester, and they are required to achieve and maintain a grade of “C” (75%) or better in each course, in order to continue in the program and graduate. Program graduates are effectively prepared to pass the American Registry of Radiologic Technologists’ (ARRT) national certification/credentialing exam at first attempt.

PROGRAM OBJECTIVES
1. The MRT programs will support the local Radiology Technology professional community by:
   • Providing a consistent source of well-educated Radiologic Technologists from a variety of ethnic, socioeconomic, and family backgrounds in that:
     a. The programs will recruit/admit approved number of qualified students annually.
     b. At least 80% of students admitted to the programs will graduate.
     c. At least 80% of program graduates will pass the American Registry of Radiologic Technologist licensing exam on the first attempt.
   • Working with the library to establish a good resource of professional reference materials.
   • Promoting and/or providing professional development in clinical education and other areas of local interest/need.
   • Promoting and directing students to qualified facilities in the district for clinical education.
2. The programs will actively and adequately promote and inform the public and future students of the requirements and expectations of students applying for admission into the Radiologic Technology Program and of those in the program.
3. The programs will provide support for its students:
   • Academic, as needed to ensure success of students who have demonstrated ability, by helping and/or directing students to resources for tutoring or instruction in effective study behaviors.
   • Psychological, by helping and/or directing students to resources for counseling, stress management, time management.
   • Financial, by promoting and facilitating the appropriate acquisition and use of available financial aid and helping to identify and/or solicit resources.
4. The programs shall recruit and retain sufficient qualified full and part time faculty who are excellent teachers and exemplary role models. Additionally, this faculty will promote the appropriate role of the Radiologic Technologist in the delivery of health care by their active involvement in professional and legislative bodies, to the extent allowed by law.
5. The program shall establish a comprehensive curriculum in Radiologic Technology education that includes advanced studies (through electives), that is recognized as excellent by Radiologic Technology professionals and that incorporates computers and other technology that supports the educational process and the practice of Radiologic Technology.

6. The program shall periodically review and revise this curriculum to meet the needs of:
   - The profession of Radiologic Technology
   - The Joint Review Committee on Education in Radiologic Technology
   - The students and faculty
   - The Texas Higher Education Coordinating Board
   - The Lone Star College System
   - Lone Star College – Montgomery and Lone Star College - CyFair

7. The programs shall solicit and maintain a sufficient number of clinical education sites to meet/exceed the needs of its student body. Through all these sites, it will be able to provide clinical education experiences in all areas in which radiologic technologists may practice.

8. The programs will establish means for the students, clinical educators and other Radiologic Technologic professionals and employers to provide feedback to the program faculty and administrators. This feedback shall address the quality and completeness of the professional education program. The Radiologic Technology programs shall respond to this feedback with positive change.

9. The programs shall obtain and maintain accreditation by appropriate agencies, including the Joint Review Committee on Education in Radiologic Technology.

**PROFESSIONAL CREDENTIALS**

The MRT program graduates are eligible to apply for the national radiologic technology certification examination administered by the American Registry of Radiologic Technologists (ARRT). Upon successful completion of the Certification Examination, the graduate will be recognized as a Registered Technologist - Radiographer R.T. Graduates are also eligible to apply for state certification through the Texas Department of State Health Services (TDSHS).

Anyone, however, convicted of a felony, gross misdemeanor or misdemeanor, with the sole exceptions of speeding and parking violations (all alcohol and/or drug related violations included), may be ineligible for certification by the ARRT and TDSHS. If an applicant is concerned whether his/her conviction record will affect eligibility, contact the ARRT at 612.687.0048 or www.arrt.org and the TDSHS at 512.834.6617 or http://www.dshs.state.tx.us/mrt/default.shtm.

All accepted students are required to complete a background check administered by programs’ approved background check organization. If any issue arises on the background check, the student will be required to complete an ARRT Pre-Application Review at their own expense. Students with background check issues will be expected to complete the ARRT Ethics Review immediately. After the review is complete, the ARRT will mail a letter to the student, and the student will be required to bring the letter to the MRT Program Director/Clinical Coordinator. Refusal to complete the review may result in dismissal from the program. Students with positive hit on their ARRT Pre-Application review may not be allowed to participate in clinical education.
rotation and will be required to get clearance from affiliated clinical education sites. Check with your MRT Program Director/Clinical Coordinator for details. More information on the ARRT Ethics Pre-Application Review is available at: http://www.arrt.org/index.html?content=ethics/preapp.htm.
## ADMINISTRATIVE AND INSTRUCTIONAL PERSONNEL

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<th>LSC – CYFAIR</th>
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<td>Rad Tech Assistant: 281-290-3275</td>
</tr>
</tbody>
</table>
### COLLEGE CONTACTS

<table>
<thead>
<tr>
<th>LSC - MONTGOMERY</th>
<th>LSC – CYFAIR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NASH Division</strong></td>
<td>Fax: 281-290-8255</td>
</tr>
<tr>
<td>Fax Machines</td>
<td>Fax: 281-290-3476</td>
</tr>
<tr>
<td>Suite B100 936.271.6102</td>
<td>Additional Contacts:</td>
</tr>
<tr>
<td>Suite B200 936.273.7362</td>
<td><strong>Library</strong>- voice: 281-290-3214; text: 832-463-0478</td>
</tr>
<tr>
<td>Rad Tech Program Direct 936.273.7054</td>
<td><strong>Assessment Center</strong>: 281.290.3220 or email <a href="mailto:cyfair.testingcenter@lonestar.edu">cyfair.testingcenter@lonestar.edu</a>.</td>
</tr>
<tr>
<td>College Metro Phone Number 936.321.5161</td>
<td><strong>Campus Police</strong>: 281-290-5911</td>
</tr>
<tr>
<td><strong>Additional Contacts</strong></td>
<td><strong>LSC-CyFair Bookstore</strong>-</td>
</tr>
<tr>
<td>ELC Information Desk 936.273.7373</td>
<td>Next to the Lakeside Café in the College Center</td>
</tr>
<tr>
<td>Library Information Desk 936.273.7387</td>
<td>Allison Scott, Manager</td>
</tr>
<tr>
<td>Testing Center 936.273.7377</td>
<td>Phone: 281.290.5950</td>
</tr>
<tr>
<td>Campus Police 936.273.7255</td>
<td>Fax: 281.290.5956</td>
</tr>
<tr>
<td>Bookstore 936.273.7334</td>
<td>IT Helpdesk: 281-290-3948</td>
</tr>
<tr>
<td>or 7338</td>
<td></td>
</tr>
<tr>
<td>IT Help Desk 936.273.7385</td>
<td></td>
</tr>
<tr>
<td>Wellness Center 936.273.7317</td>
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</tr>
</tbody>
</table>

### INSTRUCTIONAL FACILITIES

**LSC – MONTGOMERY, JRCERT RECOGNIZED, CLINICAL EDUCATION SITES:**

**Conroe Regional Medical Center**
504 Medical Center Blvd.
Conroe, Texas 77304
936.539.7554
http://www.conroeregional.com

**Memorial Hermann- The Woodlands**
9250 Pinecroft
The Woodlands, Texas 77380
281.364.2310
http://www.memorialhermann.org/locations/TW.html

**Sadler Clinic – Conroe**
508 Medical Center Blvd
Conroe, Texas 77304
936.760.8518
http://www.sadler.com

**St. Luke’s Community Medical Center - The Woodlands**
17200 St. Luke’s Way
The Woodlands, Texas 77384
936.266.3214
http://www.stlukeswoodlands.com
Aurum Diagnostic Imaging
1501 River Pointe Dr. #180
Conroe, TX  77304
936.756.9740
http://www.aurumimaging.com/index.htm

Sadler Clinic - The Woodlands
9305 Pinecroft
Shenandoah, TX  77380
281.297.6350
http://www.sadler.com

Nexus Specialty Hospital
123 Vision Park Drive
Shenandoah, TX  77384
713.482.3346
http://www.nexusspecialty.com/Default.htm

Texas Children’s Health Center -The Woodlands
17198 St. Luke’s Way
Ste. 300, Medical Arts Center 1
The Woodlands, TX  77384
936.321.0808, ext. 253
http://www.texaschildrens.org/HealthCenters/Woodlands.aspx

Memorial Hermann – Northeast
18951 Memorial North
Humble, Texas  77338
281.540.6365 (Inpatient)
281. 540.7700, # 1, #2, ext. 4558 or 4532 (Outpatient)
http://www.memorialhermann.org/locations/NE.html

Cleveland Regional Medical Center
300 East Crockett
Cleveland, TX  77327
281.593.2128
http://www.clevelandregionalmedicalcenter.com/

Huntsville Memorial Hospital
110 Memorial Hospital Drive
Huntsville, TX  77340-4362
936.291.4570
http://www.huntvillememorial.com/
Outpatient :

Kingwood Medical Center
22999 U.S. Highway 59
Kingwood, Texas  77339
281.348.8376
http://www.kingwoodmedical.com

Houston Northwest Medical Center
710 FM 1960 West
Houston, TX  77090
281.440.2504

Note:  All clinical education settings, if hospitals, are recognized by the Joint Commission on Accreditation of Health Organizations
LSC – CYFAIR, JRCERT RECOGNIZED, CLINICAL EDUCATION SITES:

Christus St. Catherine Hospital Katy TX 77450
Cypress Fairbanks Medical Center Houston TX 77065
Doctor's Hospital - Tidwell Houston TX 77091
Houston Northwest Medical Center Houston TX 77090-3496
Methodist Willowbrook Hospital Houston TX 77070
North Cypress Medical Center Cypress TX 77429
St. Luke's Hospital at the Vintage Houston TX 77070
St. Luke's Sugar Land Partnership L.L.P. Sugar Land TX 77478
Tomball Regional Hospital Tomball TX 77375
Tomball Regional Medical Center, Spring Creek Imaging Tomball TX 77375
University General Hospital Houston TX 77054

Note: All clinical education settings, if hospitals, are recognized by the Joint Commission on Accreditation of Health Organizations
ACADEMIC INFORMATION AND POLICIES

PROGRAM OVERVIEW AND ADMISSION

The Radiologic Technology education at Lone Star College is a two-year program that leads to an Associate of Applied Science Degree in Radiologic Technology. The six-semester program includes two summer semesters for a total of 72 credit hours.

The curriculum is a balance of general educational and MRT professional courses in the classroom and laboratory, as well as supervised clinical experiences at affiliated clinical education sites. This combination provides the student an opportunity for educational development and skill competency.

The program is designed to provide the student with the knowledge and skills to perform radiographic examinations, provide patient care and assist the Radiologist during diagnostic procedures. Radiologic Technologists are employed in medical centers, community hospitals, extended care facilities, physicians’ offices, specialist clinics and other health care institutions.

PROGRAM ADMINISTRATION

Administration of the program will be the responsibility of the Medical Radiologic Technology Director with the assistance of the Clinical Coordinator, Radiologic Technology faculty, and the academic counselors. The Program is also supported by the Student Services Division, library resources, and computer learning laboratories.

BACKGROUND CHECKS

All students accepted into Lone Star College Radiologic Technology Programs are required to submit an acceptable criminal background check in order to comply with the Joint Commission for Accreditation of Healthcare Organization’s standards. This is a requirement for all students providing care, treatment, or services in a JCAHO accredited clinical affiliate.

To ensure that the Program complies with these requirements, the following guidelines have been established:

1. Background checks are required of all accepted students as a condition of program admission. Continuation in the program will be contingent on the results of the background check.
2. The accepted student will complete the required authorization forms and submit the form and payment directly to an LSCS/MRT Programs’ approved provider. All forms must be completed in their entirety.
3. A designated deadline will be established to ensure reports are received in timely fashion prior to final admission in the Program.
4. Refusal to sign a release will prevent registration of the accepted student in the program.
5. An accepted student who provides misleading, erroneous or deceptive information on the release form could immediately have his/her registration withdrawn.

6. Histories that will disqualify an individual from continuation and/or clinical placement include (but are not limited to): conviction or deferred adjudication of capital murder; murder; voluntary or involuntary manslaughter; any felony theft offense; indecency with a child; injury to a child, elderly or disabled individual; kidnapping; aggravated kidnapping; aggravated sexual assault; aggravated assault causing serious bodily injury; sexual assault of a child; aggravated robbery; any felony where a deadly weapon was used or exhibited; any felony related to the manufacture, delivery or possession of marijuana, a controlled substance, or a dangerous drug. Conviction of a misdemeanor involving moral turpitude will also prevent an accepted student from clinical placement. Moral turpitude is an act of baseness, vileness or depravity in the private or social duties that a person owes another member of society in general and that is contrary to the accepted rule of right and duty between persons. Other offenses, which may preclude licensure/certification, are published in the credentialing agencies regulations. These may include any violation stronger than a traffic ticket.

7. The Lone Star College Medical Radiologic Technology Programs will maintain verification of compliance with this admission requirement for all accepted students. All documentation will also be maintained and archived in a secure manner.

8. If a student is denied continuation in the program because of negative information found in the report, he/she may request a review of the report from the selected provider. If a conviction was wrongly reported, the student will have approximately fourteen (14 days) to request that the report be amended to reflect the mistake. During this time, a student may register for RADR courses, but will not be granted final admission into the Program until the report is amended. A correct report will result in forfeiting admission into the program.

9. The Radiologic Technology Program must receive documentation of an acceptable background check from a LSC/MRT program approved provider in order to demonstrate compliance to the clinical education settings. If the clinical education setting requests a copy of the report, it must be provided directly from the selected LSCS provider. The Radiologic Technology Program cannot provide a copy of the report to the clinical education setting due to the requirements of the Fair Credit Reporting Act.

10. If any issue arises on the background check, the student will be required to complete an ARRT Pre-Application Review at their own expense. Students with background check issues will be expected to complete the ARRT Ethics Review immediately, at the request of the program. After the review is complete, the ARRT will mail a letter to the student, and the student will be required to bring the letter to his/her MRT Program Director and Clinical Coordinator. Refusal to complete the review may result in dismissal from the program. Students with positive hit on their ARRT Pre-Application review may not be allowed to participate in clinical education rotation and will be required to get clearance from affiliated clinical education sites. Check with your MRT Program Director/Clinical Coordinator for details.


11. Should any legal issue stronger than a speeding ticket arise while the student is in the program, the student must come forward and bring the issue to the attention of the Program Director and Clinical Coordinator. The student may be required to complete an ARRT Pre-Application Ethics Review at their own expense.
TUITION AND FEES

All tuition and fees must be paid in accordance with institutional policy as published in the Lone Star College System General Catalog.

COURSE WITHDRAWAL

Withdrawal from a class after the official day of record will result in a mark of “W” on the student’s transcript and credit will not be awarded for the course(s). Prior to the official withdrawal date, it is the student’s responsibility to initiate a request for withdrawal from any course. The withdrawal will only be processed if the student completes and submits for signature the required withdrawal form(s). The student must consult with the faculty member or a designated representative prior to submitting the request for withdrawal.

Prior to the withdrawal date, faculty members may initiate requests for withdrawal of students for circumstances that the faculty member believes is appropriate. Any circumstances under which the student may be withdrawn by the faculty member will be included in the class syllabus.

Satisfactory academic progress (successful completion of at least 80 percent of all classes attempted) is required for continuing eligibility for financial aid.

FINANCIAL ASSISTANCE

Lone Star College System participates in programs which provide financial aid through grants, scholarships, loans, and part-time employment. Students choosing to apply for these programs should contact the financial aid office well in advance of registration. Priority is given to those students who apply and complete the process prior to April 1. After the priority date, awards are made as long as funds are available. For additional information visit http://lonestar.edu/financial-aid.htm or contact the Student Services Division at LSC – Montgomery (936.273.7236) or LSC – CyFair (381-290-3200)

COUNSELING

College/division counselors/advisors (see page 8) are available to assist students with questions and concerns related to academic or personal difficulties that may interfere with learning and achievement of goals. Students are encouraged to meet with a counselor/advisor at least once during each semester. Students are also encouraged to meet with faculty members if they have concerns relating to the coursework. Faculty members or counselors/advisors may encourage students to take advantage of various services and programs offered by the Student Services Division or students may choose self-referral. Examples of such services and programs include
academic counseling, career exploration, referral services, transfer planning, testing, and services for students with disabilities.

CONFIDENTIALITY OF STUDENT RECORDS

In compliance with the "Family Educational Rights and Privacy Act of 1974", Lone Star College System gives notice that the following types of information will be released upon request and may require the approval of the appropriate administrator, unless the student desires to withhold all or any portion of it: student’s name; address; e-mail address; telephone listing; date and place of birth; major field of study; participation in officially recognized activities and sports; semesters enrolled; degrees, certificates and awards received; enrollment status; student classification; and the most recent previous educational agency or institution attended by the student.

Any student objecting to the release of all or any portion of such information must notify the admissions office in writing as soon as possible during each semester of enrollment.

Release of any additional information pertaining to student records must be authorized by the student (ie. grades, transcripts). The student’s parents may authorize release of information if the student is younger than 18 years of age and a dependent as defined by the Internal Revenue Service. A student or parents of a student under the age of 18 may request to view the student’s educational record with a written request to the office of student organizational development at the college(s) attended.

The Medical Radiologic Technology Program also securely maintains health and clinical records whether on campus or in the clinical education setting. Students submit all health records to the program’s Clinical Coordinator office where they are stored in a fire-proof cabinet for the duration of the student’s enrollment in the Program. Records related to clinical education are maintained in locked drawers or file cabinets provided by the clinical education setting for the clinical instructor and program faculty. Access to these records, is limited to the Clinical Instructors and Program Faculty. Students may be required to give their Social Security numbers to clinical facilities regarding patient safety. The numbers are solely for this purpose only. Following graduation, student records are permanently stored by the Program.

STUDENT CONDUCT

LSCS strictly forbids gambling, use of controlled substances and alcoholic beverages, and the appearance of anyone under the influence of any of these on the campus or when attending or participating in activities sponsored by the college. Students that use any drug, prescription or otherwise, that may prohibit use of heavy equipment and/or machinery, may have to discontinue use of the drug while in the clinical rotation. This can lead to a lapse in patient care and proper operation of ionizing radiation equipment.
STUDENT PROBATION

Probation is notification to a student of failure to meet minimum program or course requirements at some point during the program. A student may be placed on probation due to inappropriate behavior, substandard program performance, ethical considerations, attendance and academic probation according to LSCS policy as defined in the college catalog.

Students who are placed on probation will receive a written counseling document with specific corrective actions that must be accomplished within a specific time frame. Failure to achieve the corrective actions will result in dismissal from the program and may preclude readmission to the program. Students may also submit a written rebuttal that will be attached to the counseling document. It is the student’s responsibility to understand and identify the criteria in a probationary status and perform accordingly.

PROGRAM DISMISSAL

Failure to maintain the defined standards of progress of the Lone Star College, Radiologic Technology Programs, or upon well documented violations of the Program Handbook or system’s Catalog can lead to student suspension from the program. The student, however, has the right and privilege to pursue the Appeals Process as outlined in the 2011-2012 LSC Catalog, page 71.

Any student dismissed for just cause from the Program is not entitled to refunds.

LEAVING PROGRAM DUE TO PERSONAL REASONS

Students that withdraw, or leave the program due to personal reasons, MUST complete an exit interview with the Medical Radiologic Technology Program Director. Failure to complete this interview, within one week of requesting to withdraw from the program, will result in losing recommendation for transfer into another program or readmission into the LSC Medical Radiologic Technology Program.

READMISSION

Former students may be allowed readmission on a "space available" basis. "Space available" is dependent upon the authorized number of students established by the JRCERT. Readmission will be based upon the following:

1. Submission of a written request to the Program Director at least two months in advance of the semester that readmission is being sought.
2. Completion and submission of the program’s Petition for Readmission form.
3. Submission of a one page, typed personal statement that describes why the student have a desire to be readmitted into the LSC program and become a part of the radiology profession. The statement must also include information regarding any past or perceived future barriers to your success, plans on how to successfully complete this program, and goals for the future beyond this program.

4. Submission of current college transcripts directly to LSCS for evaluation purposes.

5. Satisfy current college admission requirements and provide evidence of maintaining an overall “C” (2.0) GPA at any previous college(s) attended.

6. All readmission correspondence, with the exception of official college transcripts, must be mailed directly to the appropriate Radiologic Technology Program Director (page 8).

The following readmission policies will also apply:

1. A readmitted student is required to fulfill the graduation requirements that are in effect at the time of readmission.

2. Any student who was required to exit the Program due to academic reasons will only be granted one (1) readmission.

3. Students gaining readmission to the Program must retake academically deficient course(s) and may be required to audit course(s) that are offered in the same semester.

4. Students who have been out of the Program for one (1) or more years will be required to reapply as a new student.

TRANSFER STUDENTS

All transfer students are admitted to the program on a "space available" basis. "Space available" is dependent upon the authorized number of students established by the JRCERT. Students who request a transfer into the Lone Star College – Montgomery/CyFair Radiologic Technology Program from another accredited Radiologic Technology program will only be considered upon the submission of the following:

1. A completed Petition for Transfer.

2. A signed Personal Statement from the student describing their reasons for leaving their original program.

3. Current unofficial transcripts from any colleges, universities, or proprietary schools the student has attended.

4. Satisfy current college admission requirements.

5. A minimum of three recommendations (one from the previous program director and two from previous faculty members) must be completed and mailed directly to the Program Director under separate cover.

6. A comprehensive description of all radiologic technology courses completed.

Any student requesting a transfer into the Lone Star College – Montgomery or CyFair Radiologic Technology Program must have earned at least a “C” in all transfer courses. Scholastic requirements for all other academic courses are outlined in the Lone Star College System (LSCS) catalog and will also govern the eligibility of the applicant for admission. Transfer student are required to meet for an advisement meeting with a division counselor.

Students who were required to exit their original program for academic reasons must repeat all academically deficient courses and may be required to audit other program courses offered in the
same semester. Students who were asked to leave their original program for violation(s) of the
college or program’s code of conduct, ethical standards, academic dishonesty, civil rights or
harassment policies may be ineligible for transfer.

The following transfer student policies will also apply:

1. A prospective transfer student who was not actively enrolled in a radiography program
   for one year may be required to retake some or all previous radiography courses. A
   transfer student may also be asked to apply as a new student to the Program.

2. A transfer student who fails to maintain satisfactory academic grades, as a Lone Star
   College Radiologic Technology student is not eligible for readmission. All other petition
   or application for readmission will be handled by the admissions committee on a case by
   case basis.

3. Transferability of previously completed coursework is at the discretion of the
   respective Lone Star College Radiologic Technology Program and division counselors.

4. Any student approved for transfer into the Lone Star College Radiologic Technology
   Program will be required to fulfill all graduation requirements that are in effect at the time
   of transfer.

APPEALS PROCESS

A student may request initiation of the appeal process for an unresolved problem involving a
program policy. A program policy is defined as one made by the entire LSC M RT faculty, which
affects more than one individual RADR course, e.g. clinical attendance or readmission policy.

INITIATION OF AN APPEALS HEARING

1. The student should first meet with the instructor involved and attempt to resolve the
   problem at that level.
2. If the problem is not resolved, the student initiates the appeal process by submitting a
   letter to the Program Director. The intent to appeal and the nature of the problem and
   the requested outcome should be clearly stated in the letter.
3. The letter must be received within one week from the time of the problem occurrence.
4. The student will be allowed to continue to attend class/clinical until the Appeals
   Committee meets and formulates a decision concerning the appeal.
5. The Chair of the Appeals Committee will form an ad hoc Appeals Committee and
   meeting within ten days of the appeals requested.

APPEALS COMMITTEE MEMBERSHIP

1. The chair of the committee will be selected from a member of the full time teaching
   faculty.
2. Each time the Appeals Committee convenes, the chair will appoint three faculty members (one allied health, one counselor, and one faculty from any other discipline) and a student representative from an allied health program. The student representative may come from the radiography program or another health related program.

3. The Director may serve as an ad hoc non-voting member of the Appeals Committee.

4. A faculty member directly involved in any given appeal may not be a member of the ad hoc Appeals Committee.

APPEALS COMMITTEE PROCEDURES

1. Chair duties:
   a. appoint a secretary
   b. convene the meeting
   c. state purpose of meeting
   d. introduce committee members
   e. direct the appeal hearing
   f. call for a vote
   g. inform Director/Clinical Coordinator/faculty and student of the committee findings
   h. maintain minutes of the appeal in a secure file in the department

2. The student should be prepared to discuss the problem situation and defend his/her position.

3. The instructor/s directly involved should be prepared to present data related to his/her position concerning the appeal problem.

4. The Appeals Committee decision will be a private vote. A majority vote will be required in order to make an exception to departmental policy.

5. The Chair will inform the student of the committee’s decision within 2 weeks of receiving the appeal. Any special conditions developed by the committee will be communicated to the student in writing.

6. Unresolved issues or further appeals may be taken to the college’s chief academic officer as outlined in the college catalog.

* NOTE: Academic appeals, the formal request by a student to change a grade or to challenge a penalty imposed for violation of standards of academic integrity, follow the LSCS policy as stated in the college catalog.

**A FLOW CHART OF THE APPEALS PROCESS IS IN THE APPENDIX (PAGE 105)

PROGRAM GRADING SYSTEM

The following grading system has been established by the LSCS Radiography Programs:

A = 93 - 100  B = 85 - 92  C = 75 - 84  D = 68 - 74  F = 67 and below

GRADE DETERMINATION
The specifics for grade determination in each course are contained within the appropriate course syllabus. Examinations (written, computer based, or skills based) are used to determine the degree to which the individual learner has achieved the objectives. Students will not be allowed to leave the classroom for any reason following the start of any examination and/or quiz. Students who need to leave the classroom during an examination will be required to submit their examination for grading and will not be allowed to reenter the classroom during the examination process. Students are also required to maintain test security by covering their exam responses with a blank sheet of paper provided by the course instructor. *All students are further required to submit a required number of scantron sheets to the instructor by the 3rd class day.* Due to the confidential nature of grades, instructors are not allowed to post examination scores.

In accordance with the LSCS Catalog regarding academic integrity, “When there is clear evidence of cheating, plagiarism, collusion or misrepresentation, a faculty member will take disciplinary action including but not limited to: requiring the student to retake or resubmit an exam or assignment, assigning a grade of zero or “F” for an exam or assignment, or assigning a grade of “F” for the course. Additional sanctions including being withdrawn from the course/program or being expelled from school may be imposed on a student who violates the standards of academic integrity.”

**ACADEMIC PROGRESSION**

Progression from one Radiography course to the next within each level of the program is dependent upon the student obtaining a course grade of "C" or better in each prerequisite course. Failure to do so will result in removal from the program until the course is offered again. Former students may be allowed readmission on a "space available" basis as referenced in the program’s Readmission policy contained in this handbook. A student who is required to exit the Program due to academic reasons will only be granted one (1) readmission. Students gaining readmission to the Program must retake academically deficient course(s) and may be required to audit course(s) that are offered in the same semester. Any student who deviates from the published curriculum plan may not be able to progress and may be unable to complete the program in the designed time period.

**ACADEMIC INTEGRITY**

The following information is taken directly from the 2011-2012 Lone Star College System Catalog, page 71, concerning academic integrity.

Lone Star College System upholds the core values of learning: honesty, respect, fairness, and accountability. The system promotes the importance of personal and academic honesty. The system embraces the belief that all learners, students, faculty, staff and administrators, will act with integrity and honesty and must produce their own work and give appropriate credit to the work of others. Fabrication of sources, cheating, or unauthorized collaboration is not permitted on any work submitted within the system.

The consequences for academic dishonesty to be determined by the professor, or the professor and academic dean, or the professor and chief student services officer can include but are not limited to:

1. Having additional class requirements imposed,
2. Receiving a grade of zero or “F” for an exam or assignment,
3. Receiving a grade of “F” for the course,
4. Being withdrawn from the course or program,
5. Being expelled from the college system.

Professors should clearly explain how the student’s actions violated the academic integrity policy, how a grade was calculated, and the actions taken.

PROGRAM ACCREDITATION STANDARDS

As programs accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), Lone Star College – Montgomery and CyFair Radiologic Technology Programs adhere to the Standards for an Accredited Program in Radiologic Sciences. The STANDARDS require a program to clearly demonstrate the appropriateness of its purposes, document its effectiveness, and provide assurance that it will continue to meet accreditation standards. Information regarding the STANDARDS is presented and discussed with all students during introductory imaging courses.

Student complaints regarding allegations of Program non-compliance with JRCERT STANDARDS will be addressed according to the published Program and LSCS appeal processes. The Program will maintain all such complaints with their resolution in accordance with the United States Department of Education (USDE) regulations. For additional information, contact the JRCERT at 312.704.5300 or www.jrcert.org.

GENERAL PROGRAM INFORMATION AND POLICIES

PROPER FORMS OF ADDRESS

When addressing faculty in the college and other facilities, students should use the last names of faculty preceded by Dr., Mr., Mrs. or Ms. as applicable or requested by that individual. This form of address will also apply to all physicians and patients within the clinical education settings. Additionally, the faculty recommends that all medical imaging managers, clinical instructors, and staff be addressed in a similar manner as deemed appropriate by their employing facility. Appropriate recognition serves to strengthen proper relationships and foster mutual respect between faculty, clinicians, patients, and students.

FACULTY AND ADMINISTRATIVE OFFICES

Students have access to faculty members for consultation or advisement via telephone, email, or office visits. Although Radiologic Technology faculty members post office hours outside their door, students are welcome at other times when faculty are available. While visiting the office of a faculty member or administrative assistant, the following rules will apply: (1) knock on office door and wait until asked to enter, and (2) if the door is open but the faculty member is occupied in conversation or a telephone call, wait outside until she or he is available (if business is urgent or
an emergency, a message should be left with the Division Coordinator (page 8) indicating where the student may be reached when the specific faculty member is available).

**REVIEW OF EXAMINATIONS AND ASSIGNMENTS**

Examinations in radiologic technology courses, whether written or computer based, will be reviewed by the instructor and students. Other course assignments will be reviewed by the instructor according to dates scheduled in the course syllabus.

**MAINTENANCE OF FACILITIES**

Due to the daily schedule of classes in academic buildings, a low noise level should be maintained in hallways, laboratories, classes, and offices to prevent disruption of learners. Children and guests are not permitted in the classroom or clinical education settings.

**RADIOGRAPHY LABORATORY PROCEDURES**

Students are expected to maintain the radiography laboratory facilities on campus with as much care and order as expected in the actual clinical education settings. Since the maintenance and organization of radiographic rooms and equipment is the radiographer’s responsibility in a clinical setting, students are expected to assume the maintenance and organization of the radiography lab in the educational setting.

Laboratory guidelines for operation and safety, as posted in the Radiography Lab, include the following: (a) Students shall not be in the Radiologic Technology Lab without permission of program instructors, (b) Unauthorized or inappropriate use of the Lab may lead to suspension or withdrawal from the Program, (c) Students who display disruptive behavior in the classroom or laboratory will be dismissed from class. Time missed will be considered as a partial absence for the class or laboratory period. Repeated incidents of disruptive behavior may result in dismissal of the student from the course and possibly the program, (d) Students are not allowed to bring children into the radiographic area of the Lab in order to eliminate the risk of any potential radiographic exposure to a child during the Lab period, (e) **Students are not allowed to make radiographic exposures without direct program faculty supervision**, (f) **Under NO circumstances will exposures be made on human beings or animals in the Radiologic Technology Lab.** Violations of this policy will result in immediate expulsion and withdrawal from the program, (g) **Students shall wear radiation badge monitors at all times ionizing radiation is being utilized in the laboratory setting**, (h) Students shall leave the lab in a clean and orderly fashion prior to departure from the lab, (i) No food or beverages will be allowed in the Radiographic Room of the Lab.

In case of radiographic equipment damage or operating failure, use of the equipment should be discontinued immediately and reported to the supervising faculty member for further investigation and repair.
IMMUNIZATIONS POLICY

Upon admission to the Medical Radiologic Technology Program, students will be required to obtain current immunizations as required by the Texas Department of Health for Healthcare Providers. All required immunizations follow both the Texas Department of Health and the Center for Disease Control guidelines. Documentation of all required immunizations must be submitted to the Clinical Coordinator by the date provided by the Clinical Coordinator. All students must be in compliance with program immunization prior to placement in the clinical education setting. Students whose immunizations and CPR expire while enrolled in the program will provide the Clinical Coordinator of proof of renewed compliance by a date specified by the Clinical Coordinator. Students who have expired immunizations will not be allowed to attend clinical rotations and will be counted absent for the missed clinical time.

Any titer reports which are required for verification of immunity for Hepatitis B, Varicella or MMR must be attached to the LSCS Documentation of Required Immunizations form submitted by the students to the program. Serum antibody titers must be included on the laboratory reports. Students must also attach a copy of the radiology report for chest radiographs which are performed for verification of absence of tuberculosis in the event of a positive PPD test.

Student health files will also be reviewed periodically for compliance. Required immunizations will include:

**TUBERCULOSIS SCREENING**
- Must be Mantoux PPD administered intradermally.
- Must be read within 72 hours at site where it was administered.
- For a positive PPD, size of induration must be documented in mm. and must have doctor’s statement of treatment plan attached.
- Students with a history of a positive PPD must submit chest X-ray results less than one year old and show proof of treatment.
- All foreign-born students who have received the BCG vaccine ARE NOT EXEMPT from the PPD screening test.
- Documentation of a PPD taken within the past year will be accepted; however, it must be repeated after the one (1) year deadline. Example: PPD done in 1/09, another is due in 1/10. For those unable to receive a PPD, a chest X-ray result less than a year old must be submitted.
- Some clinical facilities require proof of TB test within the last three months. Students assigned to these facilities will be required to obtain the TB test at the request of the Clinical Coordinator.
- Students with a history of a positive TB test should obtain a chest radiograph and submit a copy of the radiologist’s report. Students will be required to update the chest x-ray once every twelve months.
- Students that do not complete their TB Skin test as directed by the Clinical Coordinator will not be permitted to attend clinical rotations and will be counted absent for the missed clinical time.

**MEASLES, MUMPS AND RUBELLA**
- Can be handled in one of two ways:
  1. Proof of vaccination (MMR)
2. Titer blood level showing immunity
   - All students must show proof of two (2) measles vaccinations (or proof of titer level). These are scheduled one month apart. Measles is also known as Rubella.

Tdap
   - Must be within last 10 years
   - TD is no longer accepted.

HEPATITIS B
   - All students shall receive a complete series of Hepatitis B immunizations prior to the beginning of direct patient contact or show serologic confirmation (titer) of immunity to the Hepatitis B virus.
   - The immunizations are administered in a series starting with two doses 4 weeks apart and then a third dose five months following the second dose. The series may take a total of six months to complete properly.
   - Students also may opt to have the “fast track immunizations”. These Hepatitis B immunizations are given in a series of three with each immunization being given 4 weeks apart. This allows a student to complete the series in three months as opposed to six months. Note: Not all physician offices may agree to give the third shot in this “fast track time period”.

VARICELLA (CHICKENPOX)
   Students must show proof of Varicella immunity by one of the following methods:
   - 2 documented doses of Varicella vaccine.
   - Titer blood level showing immunity.
   - History of illness is no longer an accepted form of documentation.

BACTERIAL MENINGITIS VACCINATION
   Effective January 1, 2012, Senate Bill 1107 amends current Texas law requiring proof of Bacterial Meningitis vaccination 10 days before attending Spring 2012 classes for all entering students.
   Lone Star College has partnered with Magnus Health SMR (Student Medical Records), an electronic system for tracking and storing the bacterial meningitis immunizations and exemptions. Visit [http://lonestar.edu/meningitis.htm](http://lonestar.edu/meningitis.htm) for details.

CPR REQUIREMENTS
   All students must submit proof of a valid two year (2) American Heart Healthcare Provider CPR or Basic Life Support (BLS) for Healthcare Providers certification prior to the date given by the Clinical Coordinator. No other CPR will be accepted. Current certification must be maintained throughout the Program. Any student whose CPR expires during their clinical training are to submit documentation of renewed CPR status to the Clinical Coordinator. Students who have expired CPR certifications will not be allowed to attend clinical rotations and will be counted absent for the missed clinical time.

INFECTION CONTROL GUIDELINES
The following Guidelines and Recommendations are put forth by the Center for Disease Control for the prevention of transmission of infectious diseases in health care settings as established in Fall of 1994. These revised guidelines are essentially a combination of Universal Precautions and Body Substance Isolation and contain two tiers of precautions.

FIRST TIER: STANDARD PRECAUTIONS (eight elements):
Designed for care of patients in health care settings regardless of their diagnosis or presumed infectious status.
Primary strategy for successful nosocomial infection control:

1. Hand Washing: Wash hands immediately after touching blood, body fluids, secretions and excretions and contaminated items, whether or not gloves are worn.

2. Gloves: Wear gloves when touching blood, body fluids, secretions, excretions and contaminated items; put on clean gloves just before touching mucous membranes and non-intact skin. Remove gloves promptly after use, before touching non-contaminated items and environmental surfaced and before going to another patient, and wash hands immediately to avoid transfer of micro-organisms to other patients or environments.

3. Mask, Eye Protection, and Face Shield: Wear a mask and eye protection or a face shield to protect mucous membranes of the eyes, nose and mouth during procedures and patient care activities that are likely to generate splashes or sprays of blood, body fluids, secretions and excretions.

4. Gowns: Wear a gown or plastic apron (a clean non-sterile gown is adequate) to protect skin and prevent soiling of clothing during procedures and patient care activities that are likely to generate splashes or sprays of blood, body fluids, secretions and excretions. Soiled gowns should be removed immediately and hands washed to prevent spread of infection between patients.

5. Patient Care Equipment: Handle used patient care equipment soiled with blood, body fluids, secretions and excretions in a manner that prevents skin and mucous membrane exposures, contamination of clothing, and transfer of micro-organisms to other patients and environments.
   - Reusable equipment will not be used for the care of another patient until it has been appropriately cleaned and reprocessed.
   - Single use items will be properly discarded after use. Follow CDC Guidelines and specific agency policies as indicated.

6. Linen: Handle, transport and process used linen soiled with blood, body fluids, secretions and excretions in a manner that prevents skin and mucous membrane exposures, contamination of clothing and avoids transfer of micro-organisms to other patients and environments.

7. Occupational Health and Blood borne Pathogens: Take care to prevent injuries when using needles, scalpels and other sharp instruments or devices; when cleaning used instruments; and when disposing of used needles.
   - NEVER recap used needles or otherwise manipulate them using both hands, or any other technique that involves directing the pint of a needle toward any part of the body;
rather, use either a one handed scoop technique or a mechanical device designed for holding the needle sheath.

- DO NOT removed used needles from disposable syringes by hand, and DO NOT bend, break or otherwise manipulate used needles by hand.
- Place used disposable syringes and needles, scalpel blades and other sharp items in appropriate puncture resistant containers located as close as practical to the area in which the items were used. Place reusable syringes and needles in puncture resistant containers.

USE MOUTHPIECES, RESUSCITATION BAGS OR OTHER VENTILATION DEVICES as an alternative to mouth-to-mouth resuscitation methods in areas where the need for resuscitation is predictable.

1. Client/Patient Placement: Patients who contaminate the environment or who do not assist in maintaining appropriate hygiene or environmental controls should be placed in a private room. If this is not possible, other arrangements need to be made in consultation with the health care area’s infection control department.

In addition to following standard precautions, the following guidelines should be considered when providing client care:

- Health care workers with open lesions, upper respiratory infections, or weeping dermatitis should refrain from all direct client contact and from handling client care equipment.
- Pregnant health care workers are not known to be at greater risk of contracting HIV or HBV infection than health care workers who are not pregnant; however, if a health care worker develops HIV or HBV infection during pregnancy, the infant is at risk of infection resulting from perinatal transmission.
- Place all contaminated articles and trash in leak-proof bags. Check specific policies of health care setting for double bagging.
- All spills should be cleaned quickly. If spills occur in an HIV/AIDS client/patient area clean with a 1:10 solution of bleach.

SECOND TIER: TRANSMISSION-BASED PRECAUTIONS:
Designed for patients known or suspected to be infected or colonized with pathogens that can transmit diseases.

1. Airborne: Tiny particles that travel a distance.
   - Occurs by dissemination of either airborne droplet nuclei (small particle residue [5 microns or smaller in size] of evaporated droplets containing microorganisms that remain suspended in the air for long periods of time) or dust particles containing the infectious agent.
   - Transmission occurs when the microorganisms carried in the manner can be widely dispersed by air current and may become inhaled by a susceptible host within the same room or a distance from the source patient.

2. Droplet: Large particles that travel a short distance (3 feet), close contact.
   - Occurs via large-particle droplets (larger than 5 microns) containing microorganisms generated from the person whom has a clinical disease or is a carrier of the microorganism. Droplets are generated primarily during coughing, sneezing, or talking and during the performance of certain procedures such as suctioning and bronchoscopy.
Transmission involves contact of the conjunctivae, or mucous membranes of the mouth or nose of a susceptible person with the droplet particles. It requires close contact between source and recipient persons since droplets do not remain suspended in the air and generally travel only short distances through the air, usually 3 feet or less.

3. Contact: Occurs through direct or indirect contact.
   - Direct Contact involves skin-to-skin contact and physical transfer of microorganisms from a susceptible host form an infected or colonized patient.
   - Indirect Contact involves contact of a susceptible host with a contaminated intermediate object, usually inanimate in the patient’s environment.

Blood Borne Pathogen Policy
Exposure to Blood or Body Fluids

In the event that a student is exposed to blood or body fluids, the student must follow the procedures outlined by the Clinical Education Setting in which they are placed for the clinical course.

Guidelines:
- Report exposure to clinical instructor (CI), and Lone Star College – Montgomery program faculty immediately.
- Complete an LSC RT Program’s Incident Form. Complete clinical facility’s Incident Form.
- The clinical instructor, in consultation with the facility authorities, will initiate specific follow-up procedures based on facility policies. If exposure is deemed infectious and requires follow-up, the procedures listed below will be initiated.
- Determine medical status of source client to whom the student was exposed.
- Test the exposed individual patient for evidence of HIV or Hepatitis B as soon as possible after exposure.
- The student should be tested by his/her private physician within 48 hours of the exposure and medical guidance as to follow-up treatment and referral should be requested.
- If negative retest in 6 weeks, then at 3, 6, and 12-month intervals with private physician.
- Seek counseling throughout the experience.
- Adhere to the recommendation for the prevention of transmission of any infectious disease during the testing period of 3 months.
- Confidentiality of medical records is protected and information is shared only on a strictest “need to know” basis. Any breaches of confidentiality will be grounds for disciplinary action.
- Confidential screening for various communicable diseases can be obtained through the local health department.
- All expenses incurred are the sole responsibility of the student.

Prevention of Exposure to Blood or Body Fluids

Students must follow universal precautions whenever performing activities with the potential for coming in contact with blood or body fluids. Prior to practice in the clinical area, students will be given instructions by the faculty in the following areas:
- The most current information on modes of acquiring and transmitting infectious diseases.
- Thorough instruction in universal precautions.
- Supervised practice in a skills lab.
CONTAGIOUS/COMMUNICABLE DISEASES

LSCS conforms to all requirements of the Communicable Disease Prevention and Control Act and the Open Records Act. With a physician’s written approval, students with a contagious or communicable disease normally will be allowed to attend class. The identity of such students is confined to those persons within the college with a direct need to know (i.e., president, vice president, faculty member or counselor) and will not be revealed without the student’s consent. Questions concerning the district’s policy and enrollment procedures of a student with a contagious or communicable disease should be referred to the office of student and organizational development.

Bacterial meningitis is a serious, potentially deadly disease that can progress extremely fast. It is an inflammation of the membranes that surround the brain and spinal cord. More information concerning this disease and its treatment can be found in the Student Services office at each campus and online at http://lonestar.edu/meningitis.htm.

Students are to notify the instructor of record of their clinical course if they are potentially in a contagious state. The Program reserves the right to deny a student’s participation in clinical courses while he/she is considered contagious. Students will also be required to submit documentation from their physician stating that he/she is no longer in a contagious state. Students are to use the programmatic medical release form signed by their physician and returned to the Program Clinical Coordinator prior to resuming clinical education rotations.

ALCOHOL AND DRUG POLICY

All students in the Medical Radiologic Technology Program are required to successfully complete clinical rotations at JRCERT and program approved clinical education settings. Most approved clinical education settings require all employees to submit to either pre-employment or random drug testing. In order to ensure that students practice professionally and safely in the workplace, Lone Star College MRT programs will require all students to meet the drug and alcohol abuse standards of their assigned clinical education setting. Various clinical education settings require Lone Star College Radiologic Technology students to submit to preliminary and/or random drug testing. Any student suspected of being under the influence of drugs or alcohol while at a clinical assignment will be treated as if he or she was an employee of the facility. All students are expected to comply with any request for drug testing by the clinical education setting.

A student who fails to comply with such clinical education setting requests will be dismissed from their assigned clinical area. Continued refusal to submit to drug testing or a positive drug test will result in administrative withdrawal from the program. Students who are dismissed from the Medical Radiologic Technology Program for reasons related to drugs or alcohol will not be eligible for readmission to the Program unless a medically appropriate explanation is provided in writing to the Program Director.

PREGNANCY POLICY
The National Council of Radiation Protection (NCRP) advises that control measures should be taken to avoid or reduce the risk of ionizing radiation exposure to the human embryo or fetus. It should be noted, however, that the risks or probability of detectable effects induced by medical diagnostic exposure are very small.

It is the policy of the Lone Star College Medical Radiologic Technology Programs to provide reasonable radiation protection to student radiographers occupationally exposed to radiation. Pregnant students are expected to follow the additional protective measures detailed below which have been developed to restrict the fetal radiation dose below the dose limits as recommended to the NCRP and the United States Nuclear Regulatory Commission (USNRC). *(Voluntary disclosure of pregnancy: It is the decision of the pregnant student as to whether or not she wishes to disclose her pregnancy to program faculty.)*

The following procedure shall be followed:

1. It is voluntary that the student discloses her pregnancy to the program faculty. If the student volunteers to disclose her pregnancy to program faculty, the faculty must request that the pregnancy disclosure should be in written form.

2. The Programs strongly encourages the student to notify respective Lone Star College Medical Radiologic Technology Program Director immediately upon verification of pregnancy to ensure that protective measures for the fetus and mother are initiated.

3. The Director will arrange for the student to review her previous radiation exposure records. The Director will provide the student with a copy of NCR 8.13-3 and will review protective actions and the risks associated with radiation exposure to the fetus.

4. Upon verification that a pregnancy exists, the Director will offer three options to the student.

**Option # 1 - Remain In the Program throughout the pregnancy**

If the student so decides, she may continue in the Program under the following requirements.

A. The student shall review and implement radiation safety practices as outlined in her copy of NRC appendix 8.13.3

B. The student shall wear exposure - monitoring devices as determined by the NCR’s recommendation.

C. The student shall wear a wrap-around lead apron during exposures to radiation. Lead aprons of 0.5 mm lead equivalent are considered sufficient to attenuate 88% of the beam at 75 kVp. Above 75 kVp, aprons with 1.0mm lead are recommended.

D. The student shall participate in all scheduled clinical rotations areas as assigned.

E. The Radiation Safety Officer (RSO) of the clinical education setting will be made aware of the student’s pregnancy to further protect the student. Based on radiation exposure to the fetus, the RSO of the facility may determine continuation or modification of the student’s rotation. The student will be subject to all radiation safety requirements for that facility.

**Option # 2 - Leave of absence during pregnancy**
If the student so decides, she may elect to leave the Program during the pregnancy period.

A. If the student decides to accept this option and leave the Program, she must immediately notify the Director in writing.

B. An incomplete will be awarded for the course(s) in progress if the course(s) cannot be completed. The remaining course work may be completed upon the student’s return, subject to space availability. It may not be feasible for the student to re-enter the program immediately since all courses are offered chronologically and only once a year.

C. All didactic and clinical course work must be completed prior to completion and graduation from the Program.

D. The Director shall document the student’s decision in regard to the two options described above.

E. The student shall complete and sign documentation acknowledging receipt of all information and associated documentation in regard to the pregnancy. All documentation shall be kept in the student’s permanent personal file.

**Option #3 – Nondisclosure of pregnancy and therefore continuation without modification**

1. If the student chooses not to disclose her pregnancy to the program faculty, no modifications of clinical training will be provided.

2. Due to nondisclosure of the pregnancy, the student will not be provided with radiation safety practices as outlined in NRC appendix 8.13.3 documents.

3. The student will continue to be provided a radiation monitoring badge to be worn at the collar in accordance with the other students in the program. The student will not be provided with an additional badge to be worn at the abdomen to monitor fetal radiation exposure.

4. The RSO of the clinical facility will be the final authority in regards to continuation of clinical training by the student at the facility. The student will be subject to all radiation safety requirements for the clinical facility.

**STUDENT EMPLOYMENT**

Since the Medical Radiologic Technology Program is considered a full time program, students will need to responsibly manage work and study schedules in order to maintain the grade average required to meet Program standards. Although the faculty discourages outside employment during the first and last semester of the Program, working more than two to three days per week is not suggested. Part-time employment arrangements are strictly between the student and the employing institution. Students employed in a healthcare institution are not allowed to wear the Program’s uniform, name badge, or dosimeter during employment hours.

**GRADUATION REQUIREMENTS**
Graduation eligibility requires the student to have satisfactorily completed the prescribed curriculum and competency requirements with an overall "C" (2.0 GPA) in all Radiography and general academic courses. Additionally, students must meet all district graduation requirements as stated in the LSCS Catalog. Although, Radiologic Technology graduates are awarded their Associate of Applied Science degree in December, students are encouraged to participate in the LSCS commencement ceremony held each May.

PINNING CEREMONY

All Radiologic Technology graduates are required to purchase the LSC Radiography pin from a designated source and participate in the Program’s Pinning Ceremony. First year students in the Program are required to attend, assist in planning, and host the annual pinning ceremony for graduates as a service to the profession.

INCLEMENT WEATHER

In the event of inclement weather or emergency closing, the Location Executive Officer may cancel all or some of the college classes. Generally, such decisions will be made between 5:30 a.m. and 6 a.m. for day classes. When off-campus facilities are closed for any reason, the college classes at those sites will also be cancelled. Please follow the instructions below for to obtain closing announcements.

1. Listen to any of the major local radio and television stations (i.e., KPRC, KTRH, Fox, CBS, NBC, ABC, etc.). If a decision is made to close the college, these stations will all be alerted via a secure web site/e-mail system. They will immediately broadcast the information to listeners/viewers. NOTE: It should specifically say "LONE STAR COLLEGE - MONTGOMERY ". If LSC - CYFAIR closes, it will say "LONE STAR COLLEGE - CYFAIR ". If the entire system closes, it will say "LONE STAR COLLEGE SYSTEM".

2. Log on to the Lone Star College – Montgomery, CyFair, or LSCS website. Click on the "Emergency Notices" link. This is the first place where notification is made. Again, it will specifically mention "Lone Star College – Montgomery or CyFair" unless the entire system closes. Bookmark this site.

3. Between the hours of 7 p.m. and 7 a.m. (when the college is "closed" for normal business), call the college's phone number (LSC-M: 936.273.7000; LSC-CYF: 281-290-3200). If a decision is made to close the college for the following day, there will be a message explaining the situation. If you call and reach a receptionist, he/she will tell you the status of the closing.

If there is no mention of closing when checking the above steps, assume that the college is open. Periodically recheck the above steps, however, since conditions may change over time. Most important, use your best judgment when traveling to the college or clinical sites.
PERFORMANCE REQUIREMENTS

Students entering the Radiologic Technology program should evaluate if they have any physical, mental or cultural reservations, limitation(s) or disabilities that would prevent them from fully performing in these areas. If such exist, the student should discuss with the program director whether reasonable accommodations can be made, or whether these limitations would prevent them from satisfactorily completing the program and passing the licensing exam to practice as a Radiologic Technologist.

Physical performance:
Lifting (approximately 40 pounds), supporting and turning patients on and off x-ray tables routinely
Standing, walking, climbing, stooping, kneeling, or squatting eighty percent of the time
Reaching, handling, holding, pushing, and pulling x-ray equipment
Hearing and seeing clearly

Communication performance:
Effective oral and written communication skills necessary to speak with patients and staff
Appropriate interpersonal skills
Work effectively in a team setting

Mental and emotional performance:
Critical thinking skills and sound judgment
Emotional stability and maturity; Work compassionately with patients
Organize and perform sequentially the individual steps necessary for an x-ray examination

Registered radiologic technologists are occasionally exposed to ionizing radiation and often times perform radiographic procedures on patients with suspected communicable diseases. In addition, radiographic images are often produced using chemicals which may cause skin reactions in certain individuals.

CLINICAL ASSIGNMENTS

Clinical education assignments allow integration of classroom and lab knowledge with actual patient care experience. Each semester, students will be assigned to one of the clinical education settings by the Program faculty. All assignments, however, are subject to revision at the discretion of the Program Director and Clinical Coordinator, due to unforeseen program changes.

All clinical education settings reserve the right to refuse admission to any student who is involved in any activity not considered professional or conducive to proper patient care. If a clinical education setting expels a student for unprofessional and/or unethical conduct, the student will be counseled by the Clinical Coordinator and Program Director and may be dismissed from the program. Subsequently, if the student is dismissed from the program, the student will receive a grade of "F" for the clinical component of the course. Depending upon circumstances surrounding
the expulsion from the clinical site, the student may be transferred to another clinical education setting.

**STUDENT RESPONSIBILITY FOR CLINICAL EDUCATION**

Students must have their own reliable form of transportation that will enable them to travel to and from all clinical education settings utilized by the Program. Additionally, students are expected to report on time to the assigned clinical setting. Students should also become familiar with travel directions and designated parking prior to each new clinical assignment. Students should be prepared to travel to any of the current program clinical facilities and/or new facilities that become affiliated with the program. Preferential assignment is not given to students based on child care issues, distance, transportation or other personal dilemmas. Catastrophic events will be handled on a case-by-case basis.

**MALPRACTICE INSURANCE**

All students are required to purchase professional liability insurance prior to participation in clinical education setting. The insurance protects the student, college, and clinical education setting in case of any medical situations that result in litigation. Generally, the insurance is purchased on an annual basis by both first and second year students as a part of clinical course registration fees.

**HEALTH INSURANCE**

Please note that some of the affiliated clinical sites may require students rotating in their facility to carry health insurance. It is the student’s responsibility to obtain health insurance coverage from his/her preferred provider.

**PROGRAM DRESS CODE**

**CAMPUS**

While on campus, students should dress in a reasonable and appropriate fashion. Clothing that includes low-cut blouses, low-cut trousers, see-through clothing, vulgar and distasteful clothing, or any other distracting accessories or clothing, will not be permitted. During guest speaker or clinical education setting visits/labs, however, professional business attire is expected.

**OFF CAMPUS EVENTS**

While representing Lone Star College – Montgomery or CyFair Radiologic Technology Program at various community events, students will be expected to dress in an appropriate professional manner. A business attire is expected.

**TEXAS SOCIETY OF RADIOLOGIC TECHNOLOGISTS ANNUAL MEETING**

Each spring, the Texas Society of Radiologic Technologists hosts their Annual Meeting. This convention is a Continuing Education event for registered technologists and radiologic technology students from around the state. The event is held each year in a different city in Texas. The convention brings students together to compete, network, and review for the ARRT Registry. LSC MRT students in their 2nd year are required to attend and participate in the student competitions. Participating and attending this event bodes well on resumes and is a good way to network within the radiologic technology community. Students are also required to participate in fund-raising
events throughout the year to assist in raising funds to attend this annual convention. The Program will provide some assistance with registration and hotel fees. For more information, go to: http://www.tsrt.info/.

CLINICAL UNIFORMS

Students are required to purchase uniforms following acceptance into the Program. All LSC Radiologic Technology students are expected to obtain uniforms and LSC RT patches from a designated source. Students will be governed by the current dress policy that is periodically reviewed and revised by the Radiography Faculty. Uniforms and lab coats should be purchased as often as necessary to meet the Dress Code Standards.

Some laboratory sessions may occasionally be conducted in a clinical education setting of the Program. In this case, students are required to wear a white lab coat (with an LSC Radiologic Technology patch affixed to the upper left sleeve and student name tag on left upper chest) with professional attire and shoes that are quiet with low heels. Students who do not comply with Dress Code Standards may be dismissed from the clinical education setting for the rest of the day. If dismissed, an absence will be recorded and documented on a Student Counseling Form and reflected on the student clinical evaluation.

DRESS CODE STANDARDS

A. FEMALE STUDENTS

1) Uniform scrub slacks or skirt, in a color determined by the faculty, to be purchased from a program approved vendor. Skirts must be knee length or slightly below the knee. Students may not wear low cut scrub pants which reveal their undergarments. Students may not wear scrub pants with slits on the inner or outer seams.

2) Uniform scrub top, in a color determined by the faculty, to be purchased from a program approved vendor. The LSC Radiologic Technology patch must also be sewn to the upper left sleeve (2” below the shoulder seam).

3) An undershirt (short or long-sleeved) determined by the faculty, to be purchased from a program approved vendor. The lower hem is tucked in the slacks. This is often necessary to prevent revealing of undergarments.

4) White lab coat (hip length), purchased from a program approved vendor, with the LSC Radiologic Technology patch affixed to the lab coat. Program patches are purchased from the college bookstore. WAIT FOR INSTRUCTIONS FROM FACULTY ON PLACEMENT OF PATCH. A Program approved warm-up jacket, the same color as the uniform, may be purchased if desired. All coats and jackets must have the program approved patch affixed to the left sleeve.

5) Crew length white socks with white leather shoes (no colored stripes on either socks or shoes; no low ankle socks).
6) Shoes must be white, leather, and cover the entire foot and heel (no clogs or open heeled, or open-toed shoes).

7) Minimal hair accessories **must** coordinate with the uniform as approved by faculty.

8) No gauges, barbells, studs, or other visible piercings are permitted.

**B. MALE STUDENTS**

1) Uniform scrub slacks, in a color determined by the faculty, to be purchased from a program approved vendor.

2) Uniform scrub top, in a color determined by the faculty, to be purchased from a program approved vendor. The LSC RT patch must also be affixed to the upper left sleeve (2" below the shoulder seam).

3) An undershirt (short or long-sleeved) determined by the faculty, to be purchased from a program approved vendor. The lower hem is tucked in the slacks. **This is often necessary to prevent revealing of undergarments.**

4) White lab coat (hip length), purchased from a program approved vendor, with the LSC Radiologic Technology patch affixed to the lab coat. Program patches are purchased from the LSCM college bookstore. **WAIT FOR INSTRUCTIONS FROM FACULTY ON PLACEMENT OF PATCH.** A Program approved warm-up jacket, the same color as the uniform, may be purchased if desired. All coats and jackets must have the program approved patch affixed to the left sleeve.

5) Crew length white socks with white leather shoes (no colored stripes on either socks or shoes; no low ankle socks).

6) Shoes must be white, leather, and cover the entire foot and heel (no clogs or open heeled, or open-toed shoes).

7) Hair, mustache, and beards must be neatly trimmed. Facial hair must be shaven or closely trimmed to the face.

8) No gauges, barbells, studs, or other visible piercings are permitted.

**C. GENERAL, ALL STUDENTS**

1) Nails must be clean, neat, and short (fingertip length). Nails must be free of polish or clear, unchipped polish may be worn. Artificial nails are prohibited by the clinical education settings due to the risk of transmission of infection.

2) No more than one ring on each hand and one neck chain (tucked inside the shirt collar).

3) Small earrings only, no larger that a quarter; no drop or seasonal earrings. Only one earring per ear is allowed and it must be in the **EAR LOBE only. No other visible body piercing jewelry is allowed.**

4) Hair should be neat, clean, off the shoulders, of a conservative color, and in a moderate style that will not compromise safety (hair must not obstruct vision or fall forward over the patient or work area). Hair which is long enough to be pulled back into a ponytail will be worn off of the shoulders during clinical rotations.
4) Make-up should be worn conservatively.
5) Colognes/perfumes or other scents should be minimal.
6) All body art (tattoos) must be concealed while in the clinical education settings.
7) Good personal hygiene is expected at all times.
8) College identification badge is to be worn on upper left side of chest with the student's name, photo, and institutional information always visible. Markers or stickers are not to cover or conceal the identification badge. This is a serious security issue.
11) During clinical education setting visits, a white lab coat (with a LSC Radiologic Technology patch affixed to upper left sleeve and student name tag on left upper chest) is to be worn with professional attire and shoes that are quiet with low and closed heels.
12) The Program's Dress Code Standards will further honor the guidelines of each clinical education setting.

Students that do not follow dress codes will be given the sequential following disciplinary actions:

1. A verbal and written counseling warning
2. A written counseling and dismissal for the day from the clinical facility
3. A formal counseling with faculty and possible removal from clinical facility
4. Dismissal from program

IDENTIFICATION BADGES

Each student will be provided with one Lone Star College Radiologic Technology name and photo identification badge upon acceptance in the Program. The identification badge is considered a part of the required clinical uniform and may be used at other college events. Replacement badges must be obtained from Student Services.

Official name badges must be worn with the approved uniform during clinical assignments. The badge is worn on the upper left side of the chest with the student name, photo, and institutional information always visible. The badge should not be covered or concealed by stickers or markers at any time. This is a serious security issue.

RADIATION MONITORING

All students are required to wear a radiation monitor (dosimeter) during clinical or laboratory assignments. Monitors are to be worn at chest level and outside of a lead apron when assigned to a radiation area of the clinical education setting. The Program will also provide any declared pregnant student with an additional monitoring device (to be worn at waist level) for fetal dose evaluation. Upon departure from the clinical education setting or campus lab, monitors must be placed in the designated storage area at the clinical facility. Students are not to leave monitors in a storage place which is not visible and/or readily accessible to faculty members and clinical
instructors. Monitors may only be transported between the hospital and college campus on scheduled laboratory days. If a student forgets to bring or wear his or her monitor in the clinical setting, the student will be dismissed from clinical and counted as absent until the badge can be located. If a monitoring device is lost or damaged, the student is required to immediately contact the Program’s Radiation Safety Officer (RSO) to request a replacement. **Any and all unusual incidences concerning a radiation monitor must be immediately reported in writing to the Program’s RSO.** The radiation monitor should never be worn when a student has personal radiographic procedures performed for diagnostic or therapeutic purposes.

Radiation monitoring reports are posted on the classroom bulletin board following receipt and each student is required to review and initial the report as soon as practical after posting. The student’s quarterly radiation report should not exceed the ALARA dosage to occupationally exposed workers. Students sustaining absorbed doses in excess of 25 mrem in any quarter or 100 mrem in one year will be notified by the RSO, interviewed, and counseled about radiation safety and questioned to determine the probable cause of the excess reading. The incidence will be further investigated by consulting the clinical instructor supervising the student to determine and document the probable cause or reason for the excess exposure.

Students who misplace or lose their dosimeters must pay for the replacement dosimeter, plus shipping. As of the date of this publication, the prices for replacements are as follows:

- replacement dosimeter – $2.89
- standard shipping and handling – $3.75
- overnight shipping and handling - $25.00

Please report the lost dosimeter to the Clinical Coordinator immediately. The student will be sent to the Business Office to make payment for the necessary costs of the replacement dosimeter. When the student presents their receipt to the Clinical Coordinator, the replacement dosimeter will then be ordered. The student will not be permitted to return to clinic until the fees are paid to the program and the replacement dosimeter has arrived. The student will not be permitted to attend clinic and will be counted absent for missed clinical time.

**LEAD MARKERS**

All students are required to purchase lead (Pb) markers in order to anatomically mark radiographs. A **minimum of two** sets of left (L) and right (R) markers (5/8”), vertical lettering, not horizontal lettering, with the student’s **three (3) initials** must be purchased prior to clinical participation. Markers must only be rectangular in shape with the left one being blue and the right one being red. Sources for marker orders include [http://www.pixray.com/cgi/home.php?cid=19](http://www.pixray.com/cgi/home.php?cid=19), [http://www.techno-aide.com/?page=showcase&category=Identifier+Personalized](http://www.techno-aide.com/?page=showcase&category=Identifier+Personalized). Lost markers require **immediate replacement** and a minimum of two sets must be maintained at all times.

Students are required to use their **own** markers when performing radiographs in clinical and laboratory settings. Use of another student’s or technologist’s markers is **strictly prohibited**. All students must use their own markers in order to perform competency examinations in the clinical setting and practicum exams in the laboratory setting.
CLINICAL POLICIES

During clinical assignments, students must comply with the following rules:

1) Report to the assigned clinical education setting in a Program approved uniform that is clean and unwrinkled. Ironing uniforms is expected.

2) Maintain all hospital and patient information as confidential in adherence with HIPAA regulations.

3) Since radiographs are a part of the patient’s medical record and property of the clinical setting, students must follow departmental and HIPAA policies regarding the right of a patient or his/her family members to view radiographs.

4) Smoking is only allowed in designated areas during the lunch break. The smell of cigarette smoke on the student, in the clinical setting, is not tolerated. Patients, as well as coworkers, often cannot tolerate the smell, and is considered unprofessional.

5) Food or drinks are only allowed in designated areas of the clinical education setting.

6) Do not refuse assignments from Program faculty, Clinical Instructors, or staff that are commensurate with technical abilities.

7) Leaving an assigned area or clinical departure without the direct knowledge of the Clinical Instructor is prohibited.

8) Patients should not be left unattended at any time.

9) Patients are to be addressed with title and last names (i.e., Mr. Jones, Miss Smith).

10) Physicians are to be addressed as “Dr.”

11) Holding or restraining a patient during a radiographic exposure is not permitted.

12) Students or clinical staff members are not allowed to alter attendance records.

13) Only Clinical Instructors, supervisors, and Program faculty are allowed to annotate the student’s attendance records or clinical file.

14) Sleeping during any clinical assignment is strictly prohibited.

15) Personal phone calls may not be received or made on clinical phones without the approval of the Clinical Instructor.

16) Tips or gratuities from a patient or the patient’s family are not allowed.

17) Alteration of the scheduled clinical hours without the knowledge and agreement of the assigned Program instructor is prohibited.

18) Do not argue or challenge the authority of Clinical Instructors or staff. If disagreements with clinical staff occur, contact the assigned Instructor of Record and Clinical Coordinator following task completion.

19) Chewing gum is not permitted in the clinical setting education.

20) The use of profanity is strictly prohibited.

21) The college and Radiologic Technology Program strictly prohibit a student from being in a clinical education setting or on campus under the influence of alcohol, drugs, or controlled substances. Refer to the LSC-M or LSC-CYFAIR Student Handbook and the LSCS catalog for review of the alcohol and drug policies.
22) **Possession of any electronic device (cell phones, pagers, laptop computers, smartphones, etc.) are PROHIBITED** to be on the student’s person, in any clinical education setting due to their interference with essential patient medical devices.

23) **Personal pagers are prohibited** in all clinical settings except emergency situations. If an emergency situation exists, the student must seek approval from the assigned Clinical Instructor and the approved pager must be operated in non-auditory (silent) mode.

24) Students who do not complete the required number of competency exams for the semester will receive a grade of “F”. Since each clinical course is a prerequisite for the subsequent clinical course, students receiving an “F” for a clinical course will be removed from the program.

Refusal to comply with the above program standards may result in dismissal from the program.

**CLINICAL COMPETENCY TESTING AND EVALUATION**

A clinical competency evaluation on a radiographic exam is considered a test. Therefore, students are NOT permitted to use books, notes, or ask questions pertaining to the performance of the radiographic exam during the exam itself or after requesting to competency test on a particular exam. Looking or referring to notes or books, other than a technique chart, or asking questions on how to do a particular procedure after requesting to competency test, will result in an automatic failure of the clinical competency evaluation. The competency will be written up and recorded as a failure in the student’s records.

**OPENING AND CLOSING CLINICAL CONFERENCE**

All students are required to attend Opening and Closing Clinical Conferences each semester. Opening Clinical Conference is on the first day of clinic each semester, and Closing Clinical Conference is on the last day each semester. Taking an absence on either of these days is not excused and will result in a 5-point per infraction deduction from the final grade. Tardiness or early departure to either of these conferences will result in a 2-point deduction per infraction from the final grade.

**MANDATORY ATTENDANCE FOR CLINICAL FACILITY ORIENTATIONS**

Some clinical facilities may require student orientation during LSC school breaks and between semesters. If you are assigned to such a facility, you are REQUIRED to attend the facility’s orientation. Please check with the Clinical Coordinator before planning trips out of town that could prevent you from attending any mandatory orientation at a clinical facility that you could be assigned to. The program will not rearrange clinical assignments to accommodate students.

**RADIATION PROTECTION**

All students are required to exercise appropriate radiation protection at all times. Students shall take the responsibility for protecting the patient, self, and others from unnecessary radiation.

LSC Radiologic Technology students:
• are not allowed to hold or restrain a patient during a radiographic exposure.
• are required to wear lead aprons when performing or assisting with portable radiographs.
• will demonstrate evidence of beam size no larger than the size of the image receptor.
• will always stand behind the lead barriers while making a radiographic exposure.
• will provide use of gonadal shielding on all patients of reproductive age (both female and male) unless it will obstruct the area of interest.
• will routinely shield infants and children for all radiographic procedures unless the shield will obstruct the area of interest.
• will always ask an LMP and will follow departmental protocol for pregnancy as it applies to female patients.
• will not make an exposure of a patient if there are staff or family members present in the radiographic room that do have on proper protective apparel.
• will not make a radiographic exposure when a clinical employee or family member remains in the room unless they are wearing proper radiation safety attire and radiation monitoring device.

Refusal to comply with the above program standards may result in dismissal from the program.

INCIDENT REPORTS
If an unusual incident or accident occurs while a patient is in the care of a LSC Radiologic Technology student, or when an incident involving a patient is witnessed by a student, and not by a clinical education setting employee, the student is required to immediately report the incident to the Clinical Instructor, assigned faculty member, and department manager of the institution. An unusual incident or accident may also be defined as any occurrence out of the ordinary which can or does impact the physical or mental health of the patient, a patient’s family member, a clinical staff member, or the student. In addition to this type of unusual incident, any damage to equipment of the facility must be similarly reported. Incident report forms for both the clinical education setting and college must be completed prior to departure from the facility on the day of the occurrence. The instructor will, in a timely fashion, report the incident and appropriate follow-up action to the student and the Program Director. Financial costs for a student’s personal injury are the responsibility of the student.

DIRECT SUPERVISION
Prior to successful demonstration of a radiographic procedure competency evaluation, all students are required to be directly supervised by a qualified radiographer. Direct supervision is defined as student supervision by a qualified radiographer who reviews the procedure in relation to the student’s achievement, evaluates the condition of the patient in relation to the student’s knowledge, is present during the procedure, and reviews and approves the procedure.

PORTABLE, TRAUMA, PEDIATRIC, AND SURGERY PROCEDURES REQUIRE DIRECT SUPERVISION AT ALL TIMES REGARDLESS OF COMPETENCY STATUS. FAILURE TO COMPLY MAY RESULT IN DISMISSAL FROM THE PROGRAM.
INDIRECT SUPERVISION

Following successful demonstration of a radiographic procedure competency evaluation, a qualified radiographer may indirectly supervise students. Indirect supervision is defined as student supervision by a qualified radiographer who is immediately available to assist students regardless of the level of achievement. Immediately available is interpreted as the physical presence of a qualified radiographer adjacent to the room or location where a radiographic procedure is being performed. This availability applies to all areas where ionizing radiation is in use (to include portable and surgical procedures). Failure to comply may result in dismissal from the program.

REPEAT EXAMINATION POLICY

A qualified radiographer MUST BE PHYSICALLY PRESENT when a student performs a repeat of any unsatisfactory radiograph. Each documented occurrence of a student repeating an unsatisfactory radiograph without the presence of a qualified radiographer present will be reflected on the Faculty Evaluation of Student Performance Form. Failure to comply may result in dismissal from the program.

STUDENT CONSULTATION

Each student will have periodic consultation periods with his/her Clinical Instructor, and assigned Program instructor although students may request more frequent consultation periods as needed. The Clinical Instructor or assigned Program instructor may, at any time, relieve a student of his/her work assignment for the purpose of consultation.

CLINICAL CONFERENCES

Individual discussions with students related to performance, strengths, and concerns or difficulties will be scheduled monthly by the Clinical Instructor and twice a semester by a program faculty member. Other conferences may occur as situations arise by either the Clinical Instructor or faculty.

RADIOGRAPHIC CRITIQUE

Students will evaluate radiographs for quality and review of anatomy during critique sessions with his/her assigned Clinical Instructor and/or Program faculty. These sessions may be individualized or within a group setting.

TEMPORARY DISABLEMENT
A temporarily disabled student shall be allowed to continue to perform the published clinical objectives unless or until the student’s performance cannot meet the published course or clinical objectives. Some conditions may preclude the student’s ability to perform in the clinical education setting (i.e. mobility assistive devices such as casts/crutches/canes).

Any student who has difficulty physically performing the published course or clinical objectives will be required to consult with a physician to determine the extent of physical limitations. Following physician consultation, the student will be required to present a statement indicating the extent of limitation and if it is safe for the student to continue clinical performance. If the physician cannot provide an unrestricted release statement, the student will not be allowed to return to the clinical education setting. Catastrophic events will be handled on a case-by-case basis. Additionally, the student may be advised to withdraw from the clinical course.

**CLINICAL MEAL SCHEDULE**

Students are allowed 30 minutes for a lunch break during the clinical day. These periods will be scheduled daily by, and at the discretion of, the assigned Clinical Instructor or LSC faculty. Lunch periods are not cumulative and may not be used to shorten the clinical day. There are NO other scheduled breaks during the clinic day.

**PROGRAM EXPENSES**

Students are solely responsible for any expenses that occur prior to or during the clinical education component of the curriculum. The following list of expenses is in addition to college tuition and fees that a student may encounter:

- Immunizations and current CPR certification
- Background check, ARRT Pre-Ethics Review (if applicable) and drug screening
- White lab coat (s) (hip length)
- Markers (2 or more sets)
- Name tag (provided by the college)
- Malpractice insurance
- Clinical clothing as required by the facilities
- Reliable transportation
- Meals (lunches)
- Parking fees

Other expenses as necessitated by program requirements.

**VENIPUNCTURE**

Radiologic Technology students are required to demonstrate proficiency in venipuncture prior to graduation. Following presentation of venipuncture theory, students are required to perform the
skill in a simulated laboratory setting. Students are not allowed, however, to inject or administer contrast media, medication or other injectable solutions to patients while in the Program. Students are also **NEVER** permitted to practice venipuncture on patients at anytime. Failure to comply may result in dismissal from the program.

**COLLEGE AND PROGRAM REPRESENTATION/CHEMICAL DEPENDENCY**

LSC Medical Radiologic Technology Program students represent our programs at all times. Professional conduct is expected of our students. Students that may find themselves in a position of drug possession, encounters with law enforcement for ANY drug or alcohol possession, or being under the influence of drugs or alcohol, **will face dismissal from the program.** This behavior is not that of a professional Radiologic Technologist that cares for patients. Students that find themselves in this position **are EXPECTED to report the incident to the Program Director IMMEDIATELY.**

**FAILED DRUG SCREENINGS**

Students may be required to submit to a drug screening clearance from some clinical facilities. Students that fail these required drug screenings may be dismissed from the program.

**ATTENDANCE INFORMATION AND POLICIES**

**DIDACTIC CLASS ATTENDANCE**

Class attendance is necessary for mastery of the information and skills discussed in class. In the event of a necessary class absence, contact the course instructor as soon as possible. The student is also responsible for all material covered during the missed class period.

The established and published class times will be observed. Roll will be taken at the beginning of the scheduled class time with absences and tardies being recorded. Students arriving late disrupt others who arrive on time and will be admitted to the classroom at the discretion of the instructor. Following four cumulative absences, the instructor may administratively withdraw a student from the class.

Absence from a scheduled lab must be approved by the instructor and rescheduled during the same week. Violation of this policy may result in a **5 point grade deduction** from the following laboratory practical examination.

All students are required to follow the published college schedule for final examinations.

**CLINICAL ATTENDANCE**

Students are required to attend all clinical assignments as scheduled by the Program faculty. Daily attendance records will be used to document clinical attendance and tardiness. Students will utilize the Clinical Time Sheet to sign in upon arrival and sign out upon departure. Students will
not, however, be allowed to sign each other in or out. Attendance records will be verified daily by
the Clinical Instructor. If a student fails to sign in or out, attendance may be verified by a written,
signed note from the Clinical Instructor or supervising radiographer by the beginning of the next
clinical day. Failure to sign in or out and/or submit the appropriate documentation will result in the
student being charged with an absence. Falsification of any attendance records will result in
automatic referral to the Program Director for disciplinary action. If unavoidable circumstances
arise that will prevent clinical attendance or result in being tardy, both the assigned Program
instructor and Clinical Instructor must be notified prior to the scheduled arrival time. If the
Clinical Instructor or department manager is unavailable, the name of the individual who received
the message should be recorded. Telephone numbers of the Radiography faculty and clinical
education settings have previously been included in the handbook and on the program contact
sheet. Failure to notify the assigned Program instructor and Clinical Instructor will adversely affect
the student’s clinical evaluation grade. Students are to use the protocol of notifying their instructor
of record and clinical instructor as outlined below and on CRT Form #37. Transportation to the
clinical facility and arriving on-time is solely the responsibility of the student. Distance to facility,
working long hours, etc, does not excuse the student from the expectations of the program or
clinical facility. Students can NEVER stay overnight at a clinical facility and should NEVER ask to
do so. Students will be formally counseled for violations in this area. Repeated offenses may
result in dismissal from the program.

Protocol for Notification Policy for Clinical Absences/Tardies

Students who are anticipating being absent or tardy must follow the policy described below:
1. Notify the instructor of record for their clinical course thirty minutes prior to the start of the
   clinical day.
   a. It is the responsibility of the student to have accurate telephone numbers with
      them at all times to contact the instructor of record and the clinical education facility (CES). It is
      recommended these contact numbers be stored in the student’s cellular telephone or in their
      wallet or billfold. Faculty is not responsible for providing students with clinical contact numbers
      following their orientation at the CES.
   b. Contact telephone numbers for the Instructor of Record are listed under the contact
      information in the syllabus for each clinical course. Instructors are available via cell phone
during clinical hours.
   c. Students are to contact the instructor of record in the following manner:
      • Call the cell number for the instructor of record. If the instructor does not answer,
        please leave a message, but try to contact the instructor again to actually speak
        to the instructor.
      • Do not leave voicemail messages on the instructor’s office voicemail.
      • If you do not receive a return phone call within thirty minutes from the Instructor
        verifying they have received the message, the student must call the instructor
        again.
      • Students who are unable to reach their assigned Instructor of Record (Faculty)
        after the 2nd call, should contact the Clinical Coordinator’s cell number. If unable
        to reach the Clinical Coordinator, then contact the office of the Program Director
      • DO NOT call your Instructor of Record, or other faculty outside of daytime hours
        (7:30 am – 5:00 pm) for notification of absence.
2. Notify the Clinical Instructor assigned to the CES thirty minutes prior to the start of the
   clinical day.
a. Leave a message for the clinical instructor or the approved supervisor as guided by the clinical instructor for the CES.
b. Students who leave a message or speak to anyone other than their clinical instructor should write down the time and name of the person they spoke with at the CES.

3. **Students may not** notify clinical faculty or clinical instructors of absences by email or by leaving voicemail messages at the office of the assigned faculty.

4. Students that fail to contact either the faculty Instructor of Record or Clinical Instructor will have 2 points per infraction deducted from their final grade.

Habitual tardiness and/or absenteeism represent a lack of responsibility and will not be tolerated. The following absence and tardy guidelines will be enforced in all clinical courses.

### CLINICAL TARDY

Tardy is defined as "not being in the assigned area" as scheduled. **Three clinical tardies will equate to one clinical absence.** Tardiness will also be reflected on the student’s clinical evaluation grades. If a student’s arrival at or departure from the clinical education setting exceeds one (1) hour, the student will be considered absent for the entire day.

### CLINICAL ABSENCE

Students are permitted a specified number of absences per clinical semester as stated in clinical syllabi. Once absences have exceeded the maximum specified number each semester, one (1) letter grade will be deducted from the final course grade. With each subsequent absence another letter grade will be deducted from the final course grade. Examples: A student with an “A” clinical average, but having exceeded the maximum specified number of absences by one day will have his/her grade reduced to a “B.” A student with an “A” average clinical average, but having exceeded the maximum specified number of absences by two days will have his/her grade reduced to a “C.” A student with a “B” clinical average, but having exceeded the maximum specified number of absences by two days will have his/her grade reduced to a “D.” Since attendance represents dependability, absences will also affect the clinical evaluation grades.

### MEDICAL/SURGICAL ABSENCE

Students that require any medical attention that may include: an emergency room visit, hospitalization or surgery, or are under a physician’s care for a lengthy illness, are required to have the LSC Radiologic Technology Program Medical Release Form signed by the student’s physician. Students will not be permitted back into clinical facilities without this form signed by the physician. Students with emergencies while in the program will be handled on a case-by-case basis.

### BEREAVEMENT POLICY

Students are permitted up to three (3) consecutive days per year if death of an immediate family member occurs. Immediate family includes: spouse, child, mother, father, brother, sister, mother
or father-in-law, brother or sister-in-law, stepparents, stepchild, or grandparent. Any absence in excess of the allowed days or for other family members will be considered as a routine clinical absence. Proof of bereavement absence may be required by the Program faculty.

**CELL PHONE POLICY – CLINICAL AND DIDACTIC AREAS**

Cell phones during clinical hours and during class are PROHIBITED. Students that have their cell phones out during clinic or class will be given the following disciplinary action:

1. A verbal and written counseling warning
2. A written counseling and dismissal for the day
3. A formal counseling with faculty; student will be placed on academic probation
4. Dismissal from program
EDUCATIONAL PLAN

EVALUATING DIDACTIC (COGNITIVE AND AFFECTIVE) COMPETENCY

Competency or mastery of the Program’s didactic portion is accomplished by a variety of measurement devices. Primarily, the objective type (recognition) written test or examination is utilized. Examinations administered in the Medical Radiologic Technology Program include multiple choice, true/false, short answer, and matching questions. The questions, derived from text reading and/or classroom activities, are based on specific learning objectives presented in the course syllabus. Other strategies may include the use worksheets, radiographic critiques, and osteologic identification.

SEQUENCE:
On the first day of a didactic course, the student is given a course syllabus containing all pertinent course information and a class calendar. The instructor of record for the class will review the syllabus and acquaint the student with the expected outcomes and the level of acceptable performance for the course. Classes are conducted on a regular basis and kept in accordance with the publicized times and days.

Examinations are administered on a timely basis as indicated in the class calendar. After the examination has been scored, the instructor will review and discuss the results with the students. If students have questions about the material, a discussion is developed to enhance the learning process. At the end of the semester, a comprehensive final examination over the course of study is administered.

Grade determination for attainment of didactic competency is accomplished in accordance with that published in the syllabus. Grades below the level of "C" are considered unacceptable, and may require the student to repeat the course prior to their continuation in the Program. In any event, the learner must repeat the course and earn a grade of "C" or better prior to Program completion.
EVALUATING CLINICAL COMPETENCY

DOMAIN INTEGRATION:
It is commonly acknowledged that the cognitive, psychomotor and affective aspects of a curriculum are very much integrated and occur simultaneously within the program. In order to maximize clinical participation, however, the student should have mastered necessary cognitive competencies prior to or in conjunction with the clinical aspect of the program. These cognitive competencies normally include: Patient Care, Radiographic Imaging Equipment, General Human Anatomy and Physiology (Introduction or I and II), Principles of Radiographic Imaging I & II, Basic Radiographic Procedures, Intermediate Radiographic Procedures, Advanced Radiographic Procedures, Radiographic Pathology, Radiation Protection and Biology, and Radiologic Technology Seminar.

CLINICAL PARTICIPATION:
As demonstrated on the accompanying flow chart (Figure 1), the cognitive, psychomotor, and affective domains predominate during the clinical participation phase. The student first begins clinical participation by observation of a qualified radiographer during the performance of duties. The participation moves from a passive mode of observation to a more active mode as the student begins to assist the radiographer during radiographic, administrative, and processing procedures. The rate of student progress will be dependent upon the student's ability to comprehend and perform the various tasks (cognitive and psychomotor objective accomplishments). As the student becomes experienced in a given procedure(s), there is gradual movement toward an independent clinical performance stage. At this point, the student is actually performing procedures under the direct supervision of a radiographer or Clinical Instructor, thereby integrating the cognitive, psychomotor and affective domains.

CLINICAL COMPETENCY EVALUATION:
When the student has experienced sufficient practice and is able to perform a procedure at an acceptable level of performance, he or she may request evaluation by the Program Faculty or Clinical Instructor to determine clinical competency of a particular procedure. Upon successful completion of the clinical competency evaluation, the student will be allowed to perform the examination with indirect supervision. If the student fails the competency evaluation, he or she would return for additional clinical experiences before being allowed to request further evaluation of that particular procedure on another day. The student would continue to practice examinations while pursuing experience and/or the required number of examinations until the end of the course.

COMPLETE REQUIREMENTS FOR CLINICAL PERFORMANCE:
The path of clinical progression provides the student with opportunities to progress at a rate that is consistent with his or her ability and knowledge. The establishment of, progression through, and successful evaluation of clinical competency evaluations consider student performance as a constant, and time now becomes the variable for completion. There are, however, constraints imposed by the State that are also satisfied.
Glossary of Terms

Clinical Competency Evaluation - The procedure by which a student's performance of a particular procedure is evaluated.

Clinical Participation - Didactic, labs, and clinical practice.

Competency - The ability to attain an accepted level of proficiency within the realm of limited supervision to assume the duties and responsibilities as specified in course objectives.

Direct Supervision - The parameters of direct supervision include:
1. A qualified radiographer reviews the procedure in relation to the student's achievement.
2. A qualified radiographer evaluates the condition of the patient in relation to the student's knowledge.
3. A qualified radiographer is present during the conduct of the examination; and
4. A qualified radiographer reviews and approves the radiographs.

Indirect Supervision - Supervision provided by a qualified radiographer immediately available to assist students regardless of the level of student achievement. Immediately available is interpreted as the physical presence of a qualified radiographer adjacent to the room or location where a radiographic procedure is being performed. This availability applies to all areas where ionizing radiation is in use.

Laboratory - A work area for student practice that should include a phantom, radiographic table, overhead tube and accessories.

Laboratory Practice -
A. Instruct INSTRUCTOR
B. Demonstrate
C. Practice STUDENT
D. Examination

Radiographic Examination (Exams) - A series of radiographic exposures of an anatomical part that is sufficient to permit diagnostic evaluation of that part.

Qualified Radiographer - A radiographer possessing American Registry of Radiologic Technologists certification (RT) with active registration and practicing in the profession.
INTEGRATION OF CLINICAL COMPETENCY EVALUATION INTO THE PROGRAM

FORWARD:
A Clinical Competency Evaluation System is a standardized method of evaluating the performance of students.

IMPLEMENTATION:
The Program Director, in consultation with the Clinical Coordinator, Program Faculty, and Clinical Instructors will:

5. Arrange and structure the clinical phase of training into meaningful units. Each unit will hereafter be referred to as a clinical education course.
6. Integrate the clinical education courses with the didactic courses, thus integrating the cognitive, psychomotor, and affective domains.
7. Specify the subject material (psychomotor) aspects of each clinical education course.
8. Determine the level of supervision for each student based on attainment of competency.
9. Determine each evaluation procedure.
10. Identify the standard of performance to demonstrate competency.
11. Identify the remedial procedure for failure.
12. Identify the required examinations preceding competency evaluation.
13. Establish the administrative procedure for recording evaluation results.
14. Conduct appropriate training for measuring competencies.

The clinical competency evaluation system has been developed utilizing the elements of current educational theory. A structured evaluation tool has been designed for evaluation of students during clinical performance. The instrument is essentially objective and assists in reduction of evaluation bias by providing a degree of consistency in grade determination.

STRUCTURE OF CLINICAL EDUCATION:
Clinical education courses are prevalent throughout the entire Radiologic Technology program. Each course contains specific objectives and competency requirements. The structure of clinical education reflects a progression of required competencies:

Area & Activity:

LAB - Demonstration and practice.

CLINICAL PARTICIPATION - Observe, assist and perform.
CLINICAL COMPETENCIES - Upon successful completion of Clinical Competencies, students may perform procedures with limited supervision.

CLINICAL INSTRUCTOR EVALUATION - Accomplished by the Clinical Instructor during the semester on a regular basis to evaluate cognitive, psychomotor, and affective domain objectives. Clinical staff also assists in the process by providing evaluation of each student to the Clinical Instructor.

FACULTY EVALUATION - Accomplished by a full-time MRT faculty member twice a semester to evaluate cognitive, psychomotor, and affective domain objectives.

FINAL COMPETENCIES – During the last clinical course (RADR 2361), successful completion of six (6) final competencies is required to document technical competency.

LABORATORY: Performance evaluations are incorporated in the laboratory setting to integrate cognitive learning with psychomotor skills and appropriate affective behaviors. Laboratory performance, however, does not and should not enter into the Clinical Competency Evaluation system. Laboratory evaluations merely prepare the learner for clinical participation.

CLINICAL PARTICIPATION: Clinical participation consists of the observation, assistance, and performance in the clinical environment. The student refines and expands performance and is evaluated by a required number of clinical competencies using CRT Form # 8, Clinical Competency Grade Sheet.

TERMINAL COMPETENCIES: During the final clinical course, a final assessment for attainment of terminal competencies is accomplished and documented.
A. INTRODUCTION

The Code of Federal Regulations in 10 CFR Part 19, "Notices, Instructions and Reports to Workers: Inspection and Investigations," in Section 19.12, "Instructions to Workers," requires instruction in "the health protection problems associated with exposure to radiation and/or radioactive material, in precautions or procedures to minimize exposure, and in the purposes and functions of protective devices employed." The instructions must be "commensurate with potential radiological health protection problems present in the work place."

The Nuclear Regulatory Commission's (NRC) regulations on radiation protection are specified in 10 CFR Part 20, "Standards for Protection Against Radiation"; and Section 20.1208, "Dose to an Embryo/Fetus," requires licensees to "ensure that the dose to an embryo/fetus during the entire pregnancy, due to occupational exposure of a declared pregnant woman, does not exceed 0.5 rem (5 mSv)." Section 20.1208 also requires licensees to "make efforts to avoid substantial variation above a uniform monthly exposure rate to a declared pregnant woman." A declared pregnant woman is defined in 10 CFR 20.1003 as a woman who has voluntarily informed her employer, in writing, of her pregnancy and the estimated date of conception.

This regulatory guide is intended to provide information to pregnant women, and other personnel, to help them make decisions regarding radiation exposure during pregnancy. This Regulatory Guide 8.13 supplements Regulatory Guide 8.29, "Instruction Concerning Risks from Occupational Radiation Exposure" (Ref. 1), which contains a broad discussion of the risks from exposure to ionizing radiation.

Other sections of the NRC regulations also specify requirements for monitoring external and internal occupational dose to a declared pregnant woman. In 10 CFR 20.1502, "Conditions Requiring Individual Monitoring of External and Internal Occupational Dose," licensees are required to monitor the occupational dose to a declared pregnant woman, using an individual monitoring device, if it is likely that the declared pregnant woman will receive, from external sources, a deep dose equivalent in excess of 0.1 rem (1 mSv). According to Paragraph (e) of 10 CFR 20.2106, "Records of Individual Monitoring Results," the licensee must maintain records of dose to an embryo/fetus if monitoring was required, and the records of dose to the embryo/fetus must be kept with the records of dose to the declared pregnant woman. The declaration of pregnancy must be kept on file, but may be maintained separately from the dose records. The licensee must retain the required form or record until the Commission terminates each pertinent license requiring the record.

The information collections in this regulatory guide are covered by the requirements of 10 CFR Parts 19 or 20, which were approved by the Office of Management and Budget, approval numbers 3150-0044 and 3150-0014, respectively. The NRC may not conduct or sponsor, and a person is
not required to respond to, a collection of information unless it displays a currently valid OMB control number.

B. DISCUSSION

As discussed in Regulatory Guide 8.29 (Ref. 1), exposure to any level of radiation is assumed to carry with it a certain amount of risk. In the absence of scientific certainty regarding the relationship between low dose exposure and health effects, and as a conservative assumption for radiation protection purposes, the scientific community generally assumes that any exposure to ionizing radiation may cause undesirable biological effects and that the likelihood of these effects increases as the dose increases. At the occupational dose limit for the whole body of 5 rem (50 mSv) per year, the risk is believed to be very low.

The magnitude of risk of childhood cancer following in utero exposure is uncertain in that both negative and positive studies have been reported. The data from these studies "are consistent with a lifetime cancer risk resulting from exposure during gestation which is two to three times that for the adult" (NCRP Report No. 116, Ref. 2). The NRC has reviewed the available scientific literature and has concluded that the 0.5 rem (5 mSv) limit specified in 10 CFR 20.1208 provides an adequate margin of protection for the embryo/fetus. This dose limit reflects the desire to limit the total lifetime risk of leukemia and other cancers associated with radiation exposure during pregnancy.

In order for a pregnant worker to take advantage of the lower exposure limit and dose monitoring provisions specified in 10 CFR Part 20, the woman must declare her pregnancy in writing to the licensee. A form letter for declaring pregnancy is provided in this guide or the licensee may use its own form letter for declaring pregnancy. A separate written declaration should be submitted for each pregnancy.

C. REGULATORY POSITION

1. Who Should Receive Instruction

Female workers who require training under 10 CFR 19.12 should be provided with the information contained in this guide. In addition to the information contained in Regulatory Guide 8.29 (Ref. 1), this information may be included as part of the training required under 10 CFR 19.12.

2. Providing Instruction

The occupational worker may be given a copy of this guide with its Appendix, an explanation of the contents of the guide, and an opportunity to ask questions and request additional information. The information in this guide and Appendix should also be provided to any worker or supervisor who may be affected by a declaration of pregnancy or who may have to take some action in response to such a declaration.

Classroom instruction may supplement the written information. If the licensee provides classroom instruction, the instructor should have some knowledge of the biological effects
of radiation to be able to answer questions that may go beyond the information provided in this guide. Videotaped presentations may be used for classroom instruction. Regardless of whether the licensee provides classroom training, the licensee should give workers the opportunity to ask questions about information contained in this Regulatory Guide 8.13. The licensee may take credit for instruction that the worker has received within the past year at other licensed facilities or in other courses or training.

3. Licensee's Policy on Declared Pregnant Women

The instruction provided should describe the licensee's specific policy on declared pregnant women, including how those policies may affect a woman's work situation. In particular, the instruction should include a description of the licensee's policies, if any, that may affect the declared pregnant woman's work situation after she has filed a written declaration of pregnancy consistent with 10 CFR 20.1208. The instruction should also identify who to contact for additional information as well as identify who should receive the written declaration of pregnancy. The recipient of the woman's declaration may be identified by name (e.g., John Smith), position (e.g., immediate supervisor, the radiation safety officer), or department (e.g., the personnel department).

4. Duration of Lower Dose Limits for the Embryo/Fetus

The lower dose limit for the embryo/fetus should remain in effect until the woman withdraws the declaration in writing or the woman is no longer pregnant. If a declaration of pregnancy were withdrawn, the dose limit for the embryo/fetus would apply only to the time from the estimated date of conception until the time the declaration is withdrawn. If the declaration is not withdrawn, the written declaration may be considered expired one year after submission.

5. Substantial Variations Above a Uniform Monthly Dose Rate

According to 10 CFR 20.1208(b), "The licensee shall make efforts to avoid substantial variation above a uniform monthly exposure rate to a declared pregnant woman so as to satisfy the limit in paragraph (a) of this section," that is, 0.5 rem (5 mSv) to the embryo/fetus. The National Council on Radiation Protection and Measurements (NCRP) recommends a monthly equivalent dose limit of 0.05 rem (0.5 mSv) to the embryo/fetus once the pregnancy is known (Ref. 2). In view of the NCRP recommendation, any monthly dose of less than 0.1 rem (1 mSv) may be considered as not a substantial variation above a uniform monthly dose rate and as such will not require licensee justification. However, a monthly dose greater than 0.1 rem (1 mSv) should be justified by the licensee.

D. IMPLEMENTATION

The purpose of this section is to provide information to licensees and applicants regarding the NRC staff's plans for using this regulatory guide. Unless a licensee or an applicant proposes an acceptable alternative method for complying with the specified portions of the NRC regulations, the methods described in this guide will be used by the NRC staff in the evaluation of instructions to workers on the radiation exposure of pregnant women.
REFERENCES


APPENDIX: QUESTIONS AND ANSWERS CONCERNING PRENATAL RADIATION EXPOSURE

1. Why am I receiving this information?
   The NRC regulations (in 10 CFR 19.12, "Instructions to Workers") require that licensees instruct individuals working with licensed radioactive materials in radiation protection as appropriate for the situation. The instruction below describes information that occupational workers and their supervisors should know about the radiation exposure of the embryo/fetus of pregnant women. The regulations allow a pregnant woman to decide whether she wants to formally declare her pregnancy to take advantage of lower dose limits for the embryo/fetus. This instruction provides information to help women make an informed decision whether to declare a pregnancy.

2. If I become pregnant, am I required to declare my pregnancy?
   No. The choice whether to declare your pregnancy is completely voluntary. If you choose to declare your pregnancy, you must do so in writing and a lower radiation dose limit will apply to your embryo/fetus. If you choose not to declare your pregnancy, you and your embryo/fetus will continue to be subject to the same radiation dose limits that apply to other occupational workers.

3. If I declare my pregnancy in writing, what happens?
   If you choose to declare your pregnancy in writing, the licensee must take measures to limit the dose to your embryo/fetus to 0.5 rem (5 millisievert) during the entire pregnancy. This is one-tenth of the dose that an occupational worker may receive in a year. If you have already received a dose exceeding 0.5 rem (5 mSv) in the period between conception and the declaration of your pregnancy, an additional dose of 0.05 rem (0.5 mSv) is allowed during the remainder of the pregnancy. In addition, 10 CFR 20.1208, "Dose to an Embryo/Fetus," requires licensees to make efforts to avoid substantial variation above a uniform monthly dose rate so that all the 0.5 rem (5 mSv) allowed dose does not occur in a short period during the pregnancy. This may mean that, if you declare your pregnancy, the licensee may not permit you to do some of your normal job functions if those functions would have allowed you to receive more than 0.5 rem, and you may not be able to have some emergency response responsibilities.
4. Why do the regulations have a lower dose limit for the embryo/fetus of a declared pregnant woman than for a pregnant worker who has not declared?

A lower dose limit for the embryo/fetus of a declared pregnant woman is based on a consideration of greater sensitivity to radiation of the embryo/fetus and the involuntary nature of the exposure. Several scientific advisory groups have recommended (References 1 and 2) that the dose to the embryo/fetus be limited to a fraction of the occupational dose limit.

5. What are the potentially harmful effects of radiation exposure to my embryo/fetus?

The occurrence and severity of health effects caused by ionizing radiation are dependent upon the type and total dose of radiation received, as well as the time period over which the exposure was received. See Regulatory Guide 8.29, “Instruction Concerning Risks from Occupational Exposure” (Ref. 3), for more information. The main concern is embryo/fetal susceptibility to the harmful effects of radiation such as cancer.

6. Are there any risks of genetic defects?

Although radiation injury has been induced experimentally in rodents and insects, and in the experiments was transmitted and became manifest as hereditary disorders in their offspring, radiation has not been identified as a cause of such effect in humans. Therefore, the risk of genetic effects attributable to radiation exposure is speculative. For example, no genetic effects have been documented in any of the Japanese atomic bomb survivors, their children, or their grandchildren.

7. What if I decide that I do not want any radiation exposure at all during my pregnancy?

You may ask your employer for a job that does not involve any exposure at all to occupational radiation dose, but your employer is not obligated to provide you with a job involving no radiation exposure. Even if you receive no occupational exposure at all, your embryo/fetus will receive some radiation dose (on average 75 mrem (0.75 mSv)) during your pregnancy from natural background radiation. The NRC has reviewed the available scientific literature and concluded that the 0.5 rem (5 mSv) limit provides an adequate margin of protection for the embryo/fetus. This dose limit reflects the desire to limit the total lifetime risk of leukemia and other cancers. If this dose limit is exceeded, the total lifetime risk of cancer to the embryo/fetus may increase incrementally. However, the decision on what level of risk to accept is yours. More detailed information on potential risk to the embryo/fetus from radiation exposure can be found in References 2-10.

8. What effect will formally declaring my pregnancy have on my job status?

Only the licensee can tell you what effect a written declaration of pregnancy will have on your job status. As part of your radiation safety training, the licensee should tell you the company's policies with respect to the job status of declared pregnant women. In addition, before you declare your pregnancy, you may want to talk to your supervisor or your radiation safety officer and ask what a declaration of pregnancy would mean specifically for you and your job status. In many cases you can continue in your present job with no change and still meet the dose limit for the embryo/fetus. For example, most commercial power reactor workers (approximately 93%) receive, in 12 months, occupational radiation doses that are less than 0.5 rem (5 mSv) (Ref.
11). The licensee may also consider the likelihood of increased radiation exposures from accidents and abnormal events before making a decision to allow you to continue in your present job. If your current work might cause the dose to your embryo/fetus to exceed 0.5 rem (5 mSv), the licensee has various options. It is possible that the licensee can and will make a reasonable accommodation that will allow you to continue performing your current job, for example, by having another qualified employee do a small part of the job that accounts for some of your radiation exposure.

9. **What information must I provide in my written declaration of pregnancy?**
   You should provide, in writing, your name, a declaration that you are pregnant, the estimated date of conception (only the month and year need be given), and the date that you give the letter to the licensee. A form letter that you can use is included at the end of these questions and answers. You may use that letter, use a form letter the licensee has provided to you, or write your own letter.

10. **To declare my pregnancy, do I have to have documented medical proof that I am pregnant?**
    NRC regulations do not require that you provide medical proof of your pregnancy. However, NRC regulations do not preclude the licensee from requesting medical documentation of your pregnancy, especially if a change in your duties is necessary in order to comply with the 0.5 rem (5 mSv) dose limit.

11. **Can I tell the licensee orally rather than in writing that I am pregnant?**
    No. The regulations require that the declaration must be in writing.

12. **If I have not declared my pregnancy in writing, but the licensee suspects that I am pregnant, do the lower dose limits apply?**
    No. The lower dose limits for pregnant women apply only if you have declared your pregnancy in writing. The United States Supreme Court has ruled (in United Automobile Workers International Union v. Johnson Controls, Inc., 1991) that "Decisions about the welfare of future children must be left to the parents who conceive, bear, support, and raise them rather than to the employers who hire those parents" (Reference 7). The Supreme Court also ruled that your employer may not restrict you from a specific job "because of concerns about the next generation." Thus, the lower limits apply only if you choose to declare your pregnancy in writing.

13. **If I am planning to become pregnant but am not yet pregnant and I inform the licensee of that in writing, do the lower dose limits apply?**
    No. The requirement for lower limits applies only if you declare in writing that you are already pregnant.

14. **What if I have a miscarriage or find out that I am not pregnant?**
    If you have declared your pregnancy in writing, you should promptly inform the licensee in writing that you are no longer pregnant. However, if you have not formally declared your pregnancy in writing, you need not inform the licensee of your nonpregnant status.

15. **How long is the lower dose limit in effect?**
    The dose to the embryo/fetus must be limited until you withdraw your declaration in writing or you inform the licensee in writing that you are no longer pregnant. If the
declaration is not withdrawn, the written declaration may be considered expired one year after submission.

16. If I have declared my pregnancy in writing, can I revoke my declaration of pregnancy even if I am still pregnant?

Yes, you may. The choice is entirely yours. If you revoke your declaration of pregnancy, the lower dose limit for the embryo/fetus no longer applies.

17. What if I work under contract at a licensed facility?

The regulations state that you should formally declare your pregnancy to the licensee in writing. The licensee has the responsibility to limit the dose to the embryo/fetus.

18. Where can I get additional information?

The references to this Appendix contain helpful information, especially Reference 3, NRC Regulatory Guide 8.29, "Instruction Concerning Risks from Occupational Radiation Exposure," for general information on radiation risks. The licensee should be able to give this document to you.

For information on legal aspects, see Reference 7, "The Rock and the Hard Place: Employer Liability to Fertile or Pregnant Employees and Their Unborn Children--What Can the Employer Do?" which is an article in the journal Radiation Protection Management.

You may telephone the NRC Headquarters at (301) 415-7000. Legal questions should be directed to the Office of the General Counsel, and technical questions should be directed to the Division of Industrial and Medical Nuclear Safety.

You may also telephone the NRC Regional Offices at the following numbers: Region I, (610) 337-5000; Region II, (404) 562-4400; Region III, (630) 829-9500; and Region IV, (817) 860-8100. Legal questions should be directed to the Regional Counsel, and technical questions should be directed to the Division of Nuclear Materials Safety.

REFERENCES FOR APPENDIX


National Council on Radiation Protection and Measurements, Considerations Regarding the Unintended Radiation Exposure of the Embryo, Fetus, or Nursing Child, NCRP Commentary No. 9, Bethesda, MD, 1994.


Standards for an Accredited Educational Program in Radiography

http://www.jrcert.org/acc_standards.html

EFFECTIVE JANUARY 1, 2011

Adopted by:
The Joint Review Committee on Education in Radiologic Technology - April 2010

The Joint Review Committee on Education in Radiologic Technology (JRCERT) is dedicated to excellence in education and to the quality and safety of patient care through the accreditation of educational programs in the radiologic sciences.

The JRCERT is the only agency recognized by the United States Department of Education (USDE) and the Council on Higher Education Accreditation (CHEA) for the accreditation of traditional and distance delivery educational programs in radiography, radiation therapy, magnetic resonance, and medical dosimetry. The JRCERT awards accreditation to programs demonstrating substantial compliance with these STANDARDS.

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Appendix C: Competency Requirements
APPENDIX C: RADIOGRAPHY

Didactic and Clinical Competency Requirements

Eligibility Requirements Effective January 2005*

Candidates for certification are required to meet the Professional Requirements specified in Article II of the ARRT Rules and Regulations. This document identifies the minimum didactic and clinical competency requirements for certification referenced in the Rules and Regulations. Candidates who complete a formal educational program accredited by a mechanism acceptable to the ARRT will have obtained education and experience beyond the requirements specified here.

Didactic Requirements

Candidates must successfully complete coursework addressing the topics listed in the ARRT Content Specifications for the Examination in Radiography. These topics are presented in a format suitable for instructional planning in the ARRT Radiography Curriculum (2002).

Clinical Requirements

As part of their educational program, candidates must demonstrate competence in the clinical activities identified in this document. Demonstration of clinical competence means that the program director or designee has observed the candidate performing the procedure, and that the candidate performed the procedure independently, consistently, and effectively. Candidates must demonstrate competence in the areas listed below.

- Six mandatory general patient care activities.
- Thirty-six mandatory radiologic procedures.
- Fifteen elective radiologic procedures to be selected from a list of 30 procedures.

Documentation

The following pages identify specific clinical competency requirements. Candidates may wish to use these pages, or their equivalent, to record completion of the requirements. The pages do NOT need to be sent to the ARRT.

To document that the didactic and clinical requirements have been satisfied, candidates must have the program director (and authorized faculty member if required) sign the ENDORSEMENT SECTION of the Application for Certification included in the Certification Handbook.

* Note: Candidates who complete their educational program during 2005 or 2006 may use either the previous requirements (effective 2001) or the current requirements (effective 2005). Candidates who graduate after December 2006 may no longer use the previous competency requirements.
Radiography
Clinical Competency Requirements

The clinical competency requirements include the six general patient care activities listed below and a subset of the 66 radiologic procedures identified on subsequent pages. Demonstration of competence should include variations in patient characteristics (e.g., age, gender, medical condition).

1. General Patient Care

   Requirement: Candidates must demonstrate competence in all six patient care activities listed below. The activities should be performed on patients; however, simulation is acceptable (see endnote) if state or institutional regulations prohibit candidates from performing the procedures on patients.

<table>
<thead>
<tr>
<th>General Patient Care</th>
<th>Date Completed</th>
<th>Competence Verified By</th>
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<tbody>
<tr>
<td>CPR</td>
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<tr>
<td>Vital signs (blood pressure, pulse, respiration, temperature)</td>
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<tr>
<td>Sterile and aseptic technique</td>
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<tr>
<td>Vempuncture</td>
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<tr>
<td>Transfer of patient</td>
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<tr>
<td>Care of patient medical equipment (e.g., oxygen tank, IV tubing)</td>
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</table>
Radiography
Clinical Competency Requirements (cont.)

2. Radiologic Procedures

*Requirement:* Candidates must demonstrate competence in all 36 procedures identified as mandatory (M). Procedures should be performed on patients; however, up to eight mandatory procedures may be simulated (see endnote) if demonstration on patients is not feasible.

Candidates must demonstrate competence in 15 of the 30 elective (E) procedures. Elective procedures should be performed on patients; however, electives may be simulated (see endnote) if demonstration on patients is not feasible.

Institutional protocol will determine the positions or projections used for each procedure.

Demonstration of competence includes requisition evaluation, patient assessment, room preparation, patient management, equipment operation, technique selection, positioning skills, radiation safety, image processing, and image evaluation.

<table>
<thead>
<tr>
<th>Radiologic Procedure</th>
<th>Mandatory or Elective</th>
<th>Date Completed</th>
<th>Patient or Simulated</th>
<th>Competence Verified By</th>
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<tbody>
<tr>
<td>Chest and Thorax</td>
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<tr>
<td>Chest Routine</td>
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<tr>
<td>Chest AP (Wheelchair or Stretcher)</td>
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<tr>
<td>Ribs</td>
<td>M</td>
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<tr>
<td>Chest Lateral Decubitus</td>
<td>E</td>
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<tr>
<td>Sternum</td>
<td>E</td>
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<tr>
<td>Upper Airway (Soft-Tissue Neck)</td>
<td>E</td>
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<tr>
<td>Upper Extremity</td>
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<td>Thumb or Finger</td>
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<tr>
<td>Hand</td>
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<td>Wrist</td>
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<td>Elbow</td>
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<td>Humerus</td>
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<tr>
<td>Shoulder</td>
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<tr>
<td>Trauma: Shoulder (Scapular Y, Transthoracic or Axillary)*</td>
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<tr>
<td>Clavicle</td>
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<tr>
<td>Scapula</td>
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<tr>
<td>AC Joints</td>
<td>E</td>
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<tr>
<td>Trauma: Upper Extremity (Nonshoulder)*</td>
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## Radiography

Clinical Competency Requirements (cont.)

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<th>Radiologic Procedure</th>
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<th>Date Completed</th>
<th>Patient or Simulated</th>
<th>Competence Verified By</th>
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<tr>
<td><strong>Lower Extremity</strong></td>
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<tr>
<td>Foot</td>
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<td>Ankle</td>
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<td>Knee</td>
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<td>Tibia-Fibula</td>
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<td>Femur</td>
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<tr>
<td>Trauma: Lower Extremity *</td>
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<tr>
<td>Patella</td>
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<td>Calcaneus (Os Calcis)</td>
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<td>Toe</td>
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<td><strong>Cranium</strong></td>
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<td>Skull</td>
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<td>Paranasal Sinuses</td>
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<td>Facial Bones</td>
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<td>Orbits</td>
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<td>Zygomatic Arches</td>
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<td>Mandible (Panorex acceptable)</td>
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<td><strong>Spine and Pelvis</strong></td>
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<tr>
<td>Cervical Spine</td>
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<tr>
<td>Trauma: Cervical Spine (Cross Table Lateral) *</td>
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<td>Thoracic Spine</td>
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<td>Hip</td>
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<td>Cross Table Lateral Hip</td>
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<td>Scoliosis Series</td>
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<td>Sacroiliac Joints</td>
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<td><strong>Abdomen</strong></td>
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<tr>
<td>Abdomen Supine (KUB)</td>
<td>M</td>
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<tr>
<td>Abdomen Decubitus or Upright</td>
<td>M</td>
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</tr>
<tr>
<td>Intravenous Urography</td>
<td>E</td>
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</tbody>
</table>
Candidates who complete their educational program during 2012 or 2013 may use either the version with the 2005 effective date or the version with the 2012 effective date. Candidates

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<table>
<thead>
<tr>
<th>Radiologic Procedure</th>
<th>Mandatory or Elective</th>
<th>Date Completed</th>
<th>Patient or Simulated</th>
<th>Competence Verified By</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fluoroscopy Studies</strong></td>
<td></td>
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<tr>
<td>Upper GI Series (Single or Double Contrast)</td>
<td>M</td>
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<tr>
<td>Barium Enema (Single or Double Contrast)</td>
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<tr>
<td>Small Bowel Series</td>
<td>E</td>
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<tr>
<td>Esophagus</td>
<td>E</td>
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<tr>
<td>Cystography/Cystourethrography</td>
<td>E</td>
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<tr>
<td>ERCP</td>
<td>E</td>
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<tr>
<td>Myelography</td>
<td>E</td>
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<td>Arthrography</td>
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<tr>
<td><strong>Surgical Studies</strong></td>
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<tr>
<td>C-Arm Procedure</td>
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<tr>
<td>Surgical Cholangiography</td>
<td>E</td>
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<tr>
<td>Retrograde Pyelography</td>
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<tr>
<td><strong>Mobile Studies</strong></td>
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<tr>
<td>Chest</td>
<td>M</td>
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<tr>
<td>Abdomen</td>
<td>M</td>
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<tr>
<td>Orthopedic</td>
<td>M</td>
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<tr>
<td><strong>Pediatrics (age 6 or younger)</strong></td>
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<tr>
<td>Chest Routine</td>
<td>M</td>
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<tr>
<td>Upper Extremity</td>
<td>E</td>
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<tr>
<td>Lower Extremity</td>
<td>E</td>
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<tr>
<td>Abdomen</td>
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<tr>
<td>Mobile Study</td>
<td>E</td>
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</table>

* Trauma is considered a serious injury or shock to the body. Modifications may include variations in positioning, minimal movement of the body part, etc.

Note: The ARRT requirements specify that certain clinical procedures may be simulated. Simulations must meet the following criteria: (a) the student is required to competently demonstrate skills as similar as circumstances permit to the cognitive, psychomotor, and affective skills required in the clinical setting; (b) the program director is confident that the skills required to competently perform the simulated task will generalize or transfer to the clinical setting. Examples of acceptable simulation include: demonstrating CPR on a mannequin; positioning a fellow student for a procedure without actually activating the x-ray beam, and evaluating an image from a teaching file; performing venipuncture by demonstrating aseptic technique on another person, but then inserting the needle into an artificial forearm or grapefruit.

**Note:** “Candidates who complete their educational program during 2012 or 2013 may use either the version with the 2005 effective date or the version with the 2012 effective date. Candidates
graduating after December 31, 2013, may no longer use the version with the 2005 effective date.” Visit https://www.arrt.org/pdfs/Disciplines/Competency-Requirements/RAD-Competency-Requirements.pdf

LONE STAR COLLEGE MEDICAL RADIOLOGIC TECHNOLOGY PROGRAM APPEALS AND DUE PROCESS PROCEDURE FLOW CHART

Student meets with Faculty Member within five (5) days of situation.

Problem resolved by meeting with Faculty; No further Action.

Problem NOT resolved by meeting with Faculty.

Student meets with Program Director within five (5) days of situation.

Problem resolved by meeting with Program Director; No further action.

Problem NOT resolved by meeting with Program Director.

Student submits written request to the Chair of Appeals Committee for a formal appeal procedure within five (5) business days of the situation. Student continues to attend lecture, lab, and clinical classes.*

The Chair of the Appeals Committee calls for a formal review within five (5) business days of the student’s request.

The Appeals Committee will make a decision on the student’s appeal the day of the formal review.

Appeal resolved; student accepts appeals decision; No further action.

Appeal resolved; however, student does not accept the decision. Student has five (5) business days to request in writing that the appeal be forwarded to the Division Dean.

The Dean will review the matter and recommend action within ten (10) business days.

Resolved; No further action.

Unresolved; student may take the matter to the college’s Chief Academic or Student Services Officer.