AL 134 - AL 238 PROGRAM & CLINICAL MANUAL
RADIOLOGIC TECHNOLOGY (RADIOGRAPHER) PROGRAM

2016-2018

WASHBURN UNIVERSITY OF TOPEKA
SCHOOL OF APPLIED STUDIES
TOPEKA, KS
I certify that I have received a copy of the Washburn University Radiographer Program Student Manual. I understand that these policies apply to each and every course within the Radiographer Program. I understand that I am responsible for providing my own medical insurance, completion of the physical examination form prior to clinical education, maintaining a current CPR certification, providing transportation to and from campus and the clinical facility, providing proof of a second negative tuberculin skin test (PPD) at the beginning of Fall Semester of the second year, and any additional requirements requested by the clinical facility.

I further certify that I have read and fully understand the academic and clinical policies set forth by the Radiographer Program and agree to abide by those requirements. I understand that I have responsibilities as a student in this program and that I may be dismissed from the program if I disregard these policies or ignore my role in the educational process.

Printed Name: ______________________________________________________

Signature: _________________________________________________________

Date: _____________________________________________________________
By signing this agreement, I, __________________________, understand that it is the policy of the Radiographer Program at Washburn University to obtain and maintain health insurance throughout the Radiographer Program, including all academic semesters and clinical rotations. I agree to obtain health insurance and provide a copy of the insurance card and policy number prior to the program start date. Furthermore, I understand that the program may request documentation of health insurance coverage at any time during my education in the Radiographer Program at Washburn University and failure to do so is considered grounds for dismissal from the Radiographer Program. I will notify the Program Director/Clinical Coordinator should any changes in health insurance coverage occur.

Complete either Part I or Part 2 below as applicable.

Part 1: I verify that I continue to have the same health insurance information as submitted by the July deadline for incoming radiographer students.

Student Signature ___________________________ Date ______________________

Part 2: Complete the following information only if new health insurance has been obtained since the July deadline.*

Health Insurance Company ______________________________________________________

Policy Number ________________________________________________________________

Name of Policy Holder _________________________________________________________

Student Signature ___________________________ Date ______________________

Witness Signature ___________________________ Date ______________________

*Attach a copy of the new insurance card.
WASHBURN UNIVERSITY
ALLIED HEALTH DEPARTMENT
RADIOGRAPHER PROGRAM

TO: Admitted Students

**Please initial each item and sign below.**

**ACKNOWLEDGEMENT OF PROGRAM POLICIES AND PROCEDURES**

_____ I have read and fully understand the academic and clinical policies set forth by the Radiographer Program and agree to abide by those requirements. I understand that I have responsibilities as a student in this program and that I may be dismissed from the program if I disregard these policies or ignore my role in the educational process.

**AUTHORITY TO PROVIDE CREDENTIALS TO POTENTIAL EMPLOYERS**

_____ I hereby authorize the Faculty members of the Radiographer Program at Washburn University to release information regarding my potential job skills, including academic and clinical performance. This may be done at my request or at the potential employer's request.

_____ I hereby authorize the Faculty members of the Radiographer Program at Washburn University to release information regarding my potential job skills, including academic and clinical performance **only** at my request.

**AUTHORIZATION FOR RELEASE OF WRITTEN DOCUMENTATION**

_____ I hereby authorize the faculty of the Radiographer Program to use any written documentation from the clinical internships (confidentiality of patient, facility, physician, and Radiographer staff will be maintained), written documentation of practical examinations and patient treatment scenarios of case analysis for educational purposes.

**CLINICAL AFFILIATION REQUIREMENTS**

_____ I understand that I will be participating in clinical education during the course of my schooling in the Radiographer Program. As a student in this program I understand and agree to the following:

1. I must abide by the rules, policies, and procedures of the clinical affiliate.
2. If the clinical education site requests additional requirements such as (but not limited to) a drug screen (at student cost), attendance at their organization’s orientation, and completion of HIPAA/OSHA training I will complete the requested requirements.
3. I must have reliable transportation and that I am responsible for all costs incurred during travel to and from the Clinical Site, i.e. gas, lodging, meals etc.
4. Clinical hours will be held between fall and spring semesters, spring and summer semesters, and summer and fall semesters.
5. Each student is required by the clinical facility to obtain an influenza vaccination **EACH** fall.
CONFIDENTIALITY AGREEMENT

I understand that as a student in the Radiographer Program at Washburn University I will work with medical records of actual patients in health care facilities and in the classroom. As a student in the Radiographer Program, I may receive direct or indirect information about current or former patients from other employees, other students, or faculty. It is imperative that confidentiality of the patients’ records be maintained for legal and ethical reasons, including confirmation that a patient is receiving radiologic technology examinations/treatments.

Pertaining to Classroom and Clinical Patient Information/Confidentiality, I:

1. Agree to keep all patient/client information confidential according to HIPAA Privacy laws.
2. Understand that any student who breaches patient confidentiality in any manner, where sufficient evidence exists, may be dismissed from the clinical education site and from the Radiographer Program.

MAINTAINING CURRENT HEALTH INSURANCE COVERAGE

I understand that it is the policy of the Radiographer Program at Washburn University to obtain and maintain health insurance throughout the Radiographer Program, including all academic semesters and clinical rotations. I agree to obtain health insurance and provide a copy of the insurance card and policy number prior to the program start date. Furthermore, I understand that the program may request documentation of health insurance coverage at any time during my education in the Radiographer Program at Washburn University and failure to do so is considered grounds for dismissal from the Radiographer Program. I will notify the Program Director/Clinical Coordinator should any changes in health insurance coverage occur.

MAINTAINING CURRENT CPR CERTIFICATION

I understand that it is the policy of the Radiographer Program at Washburn University to obtain and maintain CPR certification throughout the Radiographer Program, including all academic semesters and clinical rotations. I agree to maintain CPR and provide a copy of the CPR card prior to the program start date and at anytime the certification is renewed. Failure to maintain certification may be considered grounds for dismissal from the Radiographer Program.

ACADEMIC MISCONDUCT POLICY

I understand that all students at Washburn University are expected to conduct themselves appropriately and ethically in their academic work and in the clinical setting. Inappropriate and unethical behavior includes (but is not limited to) giving or receiving unauthorized aid on examinations or in the preparation of papers or other assignments, knowingly misrepresenting the source of academic work, falsifying time records, or misrepresenting clinical documentation. Washburn University’s Academic Impropriety Policy describes academically unethical behavior in greater detail and explains the actions that may be taken when such behavior occurs. For guidelines regarding protection of copyright, consult www.washburn.edu/copyright/students. For a complete copy of the Academic Impropriety Policy, contact the office of the Vice President for Academic Affairs, Morgan 262, or go on-line to: www.washburn.edu/admin/fac-handbook/FHSEC7.htm#VIII
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. All pregnant students in the Washburn University Radiographer Program must make the final decision as to their acceptance or non-acceptance of this risk. The National Regulatory Commission currently states that the dose equivalent to the embryo/fetus during the entire pregnancy, due to the occupational exposure of a declared pregnant woman, cannot exceed 0.5 rem. The NCRP recommends that fetal exposure be restricted to an equivalent dose of 0.05 rem per month.

I understand that if I am pregnant or become pregnant during my enrollment in the Radiographer Program, I shall review the full Pregnancy Policy of the Radiographer Program located in the Clinical Manual. I understand that declaring my pregnancy is voluntary and that I am not considered pregnant until I provide written documentation to the program. I may seek the advice and counsel of the Medical Physicist or Radiation Safety Officer of the facility in which I train as well as seek the advice and counsel of my attending physician when determining my options.

SUBSTANCE ABUSE POLICY

University Policy
The Washburn University Student Conduct Code, approved by the Board of Regents, provides a procedure and rules by which a student will be afforded due process in the matter of alleged violations of university standards, rules and requirements governing academic and social conduct of students. Possession of alcohol and controlled substances on University property or in conjunction with University sponsored activities, except as expressly permitted by state law and University policies, is prohibited (See Student Conduct Code, II Violations P and Q). Directed Practice or Clinical Education is a University sponsored activity activated by student enrollment. A student shall be subject to disciplinary action or sanction upon violation of listed conduct proscriptions.

Allied Health Program Policy
Allied Health education requires directed practice or clinical education in a variety of health care settings. Health care facilities may be located within Topeka, within East Kansas or outside the state of Kansas. The Student Conduct Code remains in force regardless of student location. Allied Health Programs follow a Code of Ethics, which requires every provider (as well as students) to maintain a competent level of practice. As students involved in clinical education are in direct contact with patients, it is the policy of the Allied Health Department that students performing in clinical education be unimpaired by the consumption of alcohol or controlled substance. Students, who are found to be under the influence of drugs or alcohol, are subject to disciplinary action up to termination from the academic program in which they are enrolled.

I understand that it is the policy of the Radiographer Program at Washburn University that students be unimpaired by the consumption of alcohol or a controlled substance in the classroom or clinical setting and should a student be found to be under the influence of drugs or alcohol, the student will be subject to disciplinary action up to termination from the academic program in which the he or she is enrolled.

STUDENT SUPERVISION

I understand that radiographer students be supervised by a qualified radiographer when performing examinations. I understand the requirements of direct and indirect supervision and agree to abide by such.
STUDENT EMPLOYMENT

_____ I understand that students may see and obtain employment, outside of clinical education hours, while completing the Radiographer Program. Students may not work overnight shifts and then arrive for clinical education hours as this action puts the clinical site and their patients at risk. As well, it is the policy of the program that the scheduled didactic and clinical courses be the number one priority of the employed student. Assignments, meetings, clinical hours, etc. will not be rearranged to accommodate work schedules.

Employment of a student in a clinical affiliate facility cannot substitute for clinical education requirements. In cases where students are employed at a clinical site, employment hours will not be during scheduled clinical hours. Students will not receive any wage or salary from clinical affiliates for clinical education hours used to satisfy the clinical education requirement of the program.

While in the employment of the health facility, the individual is not covered by the University liability or worker's compensation policy. As an employee of the health facility, the student is subject to all of the rules, policies and requirements established by the employer.

RULES OF ETHICS

The ARRT requires that all prospective and/or enrolled Radiography students be aware of the “established policy” if the individual has been convicted or a crime. The By-Laws of the ARRT requires that applicants for certification and registered technologists be of a good moral character. This could include but is not limited to, the conviction of either a felony or any offense (misdemeanor or felony) indicating a lack of good moral character for purposes of determining an applicant’s fitness for registration or a registrant’s right to continue holding a certificate. An applicant who has been convicted of an offense involving moral turpitude may be eligible for registration (assuming he or she has met all other qualifications for registration) if he or she has served his or her sentence(s) (including parole) and has had his or her civil rights restored. The Board of Trustees of the ARRT shall inquire into the circumstances surrounding the commission of the crime in order to determine whether it was an offence involving moral turpitude.

Students concerned that a conviction record could compromise their career may now have the ARRT application pre-reviewed. The “Ethics Pre-application” may be downloaded at https://www.arrt.org/pdfs/Ethics/Ethics-Review-Pre-Application.pdf or may be requested by honing the ARRT office at 651.687.0048

_____ I am aware of the ARRT pre-application review.

RULES OF ETHICS AND BACKGROUND CHECK

A requirement for all allied health majors is a criminal background check. Successful completion of the Radiographer Program requires participation in clinical practicum courses. Students can only be placed in clinical practicum courses after a background check has been completed which discloses they do not present a criminal history according to ARRT guidelines.

_____ I attest that no criminal offenses have occurred since my submission of the background check for the radiographer program. If at any time any offense occurs, I will report such to the program director.
ESSENTIAL FUNCTIONS

Radiography involves the provision of direct care for individuals and is characterized by the application of verified knowledge in a skillful performance of radiological technical functions. Therefore, in order to be retained in the program, all applicants should possess:

1) Sufficient visual acuity, such as is needed in the accurate preparation and administration of contrast media and for observation necessary for patient assessment and nursing care.
2) Sufficient auditory perception to receive verbal communication from patients and members of the health care team and to assess health needs of people through the use of monitoring devices, such as cardiac monitors, stethoscopes, intravenous infusion pumps, fire alarms, etc.
3) Sufficient communication skills (speech, reading and writing) to interact with individuals and to communicate their needs promptly and effectively, as may be necessary.
4) Sufficient gross and fine motor coordination to respond promptly and to implement the skills including the manipulation of equipment, positioning and lifting patients, required in meeting health needs of the patient.

For more detailed information, please see the Essential Functions listed at the program website [http://www.washburn.edu/main/sas/allied-health/radiologic-technology](http://www.washburn.edu/main/sas/allied-health/radiologic-technology).

I have been informed of the Essential Functions of the Washburn University Radiographer Program. I have reviewed the requirements and have asked questions if I was unfamiliar with the standards and skills listed. If I believe I require accommodations, I will request an appropriate accommodation with the Student Services Office (Morgan Hall, Room 135). I realize that it could take up to 2 months to complete the process. I have the ability to meet the standards and skills listed in the Essential Functions and agree to complete the educational requirements for the radiographer program.

______________________________
Signature

______________________________
Date
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Information related to specific radiology clinicals (AL134 – AL238) will be located within the online learning system for that clinical course. This is accessible through My Washburn and then My Courses tab.
SECTION I:
PROGRAM INFORMATION
WELCOME

The Radiographer Program, School of Applied Studies, Washburn University of Topeka, believes that quality patient care is provided by individuals receiving quality instruction, consistent with professional, educational and instructional guidelines.

Washburn is pleased to have you enrolled as a student in radiologic technology (radiographer). You should be proud of your selection into this program, for enrollment is limited. Acceptance into the program signifies belief in your ability to become a member of a demanding profession.

The radiographer program does require a commitment from an individual in terms of time. The scheduled theory classes and clinical education account for approximately 35 hours each week. The study time required by an individual will be beyond that. A more specific listing of hours and assignments may be found under Degree Requirements and Clinical Education Plan.

The program is designed to help you develop the knowledge, skills, and attitude required to successfully complete the program. As questions or problems arise, please feel free to discuss these with faculty. We are here to assist you in your development to a professional.

This manual is designed to assist in the orientation of new students and to clarify policies and procedures governing your actions and practices while a radiographer student. It is expected that students will be familiar with the following information. This manual is subject to change and/or amendment at the discretion of the program and clinical faculty. After review, if you have any questions, please contact a faculty member for clarification. For additional information, refer to the University catalog which is available online at www.washburn.edu.
### DEGREE REQUIREMENTS

RADIOLOGIC TECHNOLOGY ASSOCIATE OF SCIENCE

<table>
<thead>
<tr>
<th>Major Courses</th>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>AL101 Foundations of Health Care</td>
<td>3</td>
</tr>
<tr>
<td>AL120 Radiographic Procedures &amp; Patient Care I</td>
<td>3</td>
</tr>
<tr>
<td>AL121 Radiographic Procedures &amp; Patient Care II</td>
<td>3</td>
</tr>
<tr>
<td>AL130 Radiographic Exposure I</td>
<td>3</td>
</tr>
<tr>
<td>AL131 Radiographic Exposure II</td>
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</tr>
<tr>
<td>AL134 Radiology Clinical I</td>
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<tr>
<td>AL135 Radiology Clinical II</td>
<td>3</td>
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<tr>
<td>AL220 Radiographic Procedures III</td>
<td>2</td>
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<td>AL230 Radiologic Equipment Operation</td>
<td>2</td>
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<tr>
<td>AL231 Radiation Protection &amp; Biological Effects</td>
<td>2</td>
</tr>
<tr>
<td>AL236 Radiology Clinical III</td>
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<tr>
<td>AL237 Radiology Clinical IV</td>
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<tr>
<td>AL238 Radiology Clinical V</td>
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</tr>
<tr>
<td>AL321 Advanced Radiographic Imaging</td>
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<tr>
<th>Related Major Courses</th>
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<tbody>
<tr>
<td>BI250 Introduction to Anatomy *</td>
<td>3</td>
</tr>
<tr>
<td>BI230 Introduction to Human Physiology *</td>
<td>3</td>
</tr>
<tr>
<td>AL320 Human Disease</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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</tbody>
</table>

### University Requirements

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<tr>
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<tr>
<td>EN101 Freshman Composition</td>
<td>3</td>
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<tr>
<td>WU101 Washburn Experience (Freshman Only)</td>
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<tr>
<td>Social Science Electives</td>
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</tr>
<tr>
<td>Humanities Electives</td>
<td>6</td>
</tr>
<tr>
<td>Natural Science Electives (MA112 or MA 116) (BI 100)</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>23</strong></td>
</tr>
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</table>

*Biology prerequisite (BI100)*

**TOTAL CREDIT HOURS** 72
PROGRAM MISSION STATEMENT

The Radiologic Technology/Radiographer Program is focused on development of qualified medical imaging technologists who provide optimum patient care through technical competency and professional conduct.

PROGRAM GOALS AND OUTCOMES
1. Students and graduates will demonstrate clinical competence.
   Outcome 1: Students will apply positioning skills.
   Outcome 2: Students will validate proper patient care.

2. Students will utilize critical thinking and problem-solving skills.
   Outcome 1: Students will be able to adapt positioning for trauma patients.
   Outcome 2: Students will perform non-routine exams.

3. Students will evaluate the significance of professional growth and development.
   Outcome 1: Students will display knowledge of identified professional organizations.
   Outcome 2: Students will recognize the importance of professional behavior.

4. Students will be able to communicate effectively.
   Outcome 1: Students will demonstrate written communication skills.
   Outcome 2: Students will demonstrate oral communication skills.

UNIVERSITY FACILITIES

The Radiographer Program has faculty offices in Benton Hall on the Washburn campus. An energized radiographic laboratory is located on campus in Benton Hall. The laboratory is utilized for procedures and exposure laboratory session. It is also available for individual student practice/assignments when instructors are available. Rules for laboratory use are posted and must be adhered to. Radiographic facilities at the major affiliates may also be utilized for required laboratory assignments, practice and competencies.

UNIVERSITY CATALOG

Individuals enrolled in the program should familiarize themselves with the following sections and policies in the University on-line catalog (www.washburn.edu).

1. Equal Opportunity Policy Statement
2. Sexual Harassment
3. General University Information
4. Academic Policies and Regulations
5. Grading System
6. Admission and Attendance
7. Student Support Services
8. Financial Information
9. Withdrawals
FACULTY

Radiographer Program Full-time Faculty:
Jera Roberts, Associate Professor and Program Director, 1983;
   RT(R)(M) Stormont-Vail Regional Medical Center, 1972; BA Health Care Management,
   Ottawa University, 1980; MS Technical Teacher Education, Pittsburg State University, 1986;
   Education Specialist Degree, Pittsburg State University, 1989.

Hillary A. Lolley, Clinical Coordinator/Lecturer 2012;
   RT(R) Associates of Science from Washburn University 2005; BHS Bachelors of Health
   Services Administration, Baker College 2010, MBA Masters of Business Administration, Baker
   College 2013.

Radiographer Adjunct Instructors are:
   • Toni Caldwell
   • Linda Croucher

ADVISORY COMMITTEE

A representative committee has been appointed to assist in the evaluation and coordination of the program.
The advisory committee should be representative of the groups involved in or affected by the educational
program. A student representative from the first year class & from the second year class will be on the
committee. The student members of the advisory committee have the responsibility to gather concerns from
class members, attend all advisory meetings and report the committee’s activities back to their respective
class.

REASONABLE ACCOMMODATION

If you have a special need that may require accommodation, contact the Student Services Office. You may
also inform program instructors. For more information, see course syllabi.

SPECIAL COSTS

In addition to the University tuition and fees, a radiographer student is expected to provide:
   a. uniforms - approximately $125
   b. transportation to the clinical site
   c. identification markers ($25)
   d. CPR certification or recertification (approximately $25)
   e. KSRT membership ($50 program)
   f. health insurance
   g. Radiologic Technology Student Organization membership ($5 annually). This fee is due
      September 1st (or next class session) and is payable via cash or check (Washburn
      University).
   h. Trajecsys system onetime cost of 150.00 for two years. This system is used for tracking
      clinical paperwork.
   i. Verified Credentials estimated cost of 95.00 onetime fee. This system is used for tracking
      immunizations and other program documentation.

Membership in the American Society of Radiologic Technologists (national technologist organization) is
optional.
CERTIFICATION

Candidates for certification by the American Registry of Radiologic Technologists (ARRT) must meet the ethics, education, and examination requirements as described in the ARRT Rules and Regulations and must agree to comply with the ARRT Rules and Regulations and the ARRT Standards of Ethics.

Upon successful completion of all requirements (didactic and clinical competency), students may take the ARRT on-line examination. Any incomplete course work will delay one’s eligibility for the national exam. The cost of the national examination is $200.

Candidates must comply with the "Rules of Ethics" contained in the ARRT Standards of Ethics. The Rules of Ethics are standards of minimally acceptable professional conduct for all Registered Technologists and candidates. The Rules of Ethics are intended to promote the protection, safety and comfort of patients. Registered Technologists and candidates engaging in any of the conduct or activities noted in the Rules of Ethics, or who permit the occurrence of such conduct or activities, have violated the Rules of Ethics and are subject to sanctions. One issue addressed by the Rules of Ethics is the conviction of a crime, including a felony, a gross misdemeanor, or a misdemeanor with the sole exception of speeding and parking violations. All alcohol and/or drug related violations must be reported. Offenses that occurred while a juvenile and that are processed through the juvenile court system are not required to be reported to ARRT. Conviction as used in this provision includes a criminal proceeding where a finding or verdict of guilt is made or returned but the adjudication of guilt is either withheld, deferred, or not entered, or the sentence is suspended or stayed; or a criminal proceeding where the individual enters a plea of guilty or nolo contendere (no contest). All potential violations must be investigated by the ARRT in order to determine eligibility. Registered technologists and candidates who violate the Rules of Ethics must provide the ARRT with a written explanation, including court documentation of the charges, with the application for examination. The court documentation must verify the nature of the conviction, the nature of the sentence imposed by the courts, and the current status of the sentence. If an applicant is convicted between the time of application and the exam administration date, it is the applicant's responsibility to inform the ARRT immediately and begin the review process.

Individuals who have violated the Rules of Ethics may request a pre-application review of the violation in order to obtain a ruling of the impact on their eligibility to apply for ARRT examination. The individual may submit a pre-application form at any time either before or after entry into an approved educational program, but not within 6 months of graduation. This review may enable the individual to avoid delays in processing the application for examination that is made at the time of graduation. The pre-application must be requested directly from the ARRT. Submission of a pre-application request form does not waive the application of examination, the examination fee, or any of the other application procedures. Ethics pre-application information and forms may be found at: https://www.arrt.org/index.html?content=ethics/preapp.htm
Study/Test Taking Tips - Radiography Program

Budget Time
- Make a calendar and post it where you can actually see it
- The calendar is your written contract
- Be certain to take 1 or 2 days off each week from study
- What subject areas are you stronger or weaker in?
- You need preparation time for classes, as well as review time
- Examination preparation is another category
- The calendar focuses you on a study topic(s), rather than "what should I study tonight"

Study
- What is the need for regular study (reading for class preparation, worksheet, etc.) versus the need for quiet study (examination preparation, a difficult topic, etc.)?
- For actual quiet time: library, have someone take the kids, etc.
- How do you learn: reading, seeing, hearing, writing or a combination of?
- Skim through the entire chapter and then read the first section; at the end of each section, stop and think about what was read
- Read small sections versus larger sections at one time
- Stop and think about what was just read, take notes, compare to the objectives
- Reread the sections if material is still not clear at the end of a chapter
- At home after class: read your notes from that day, rewrite the notes if unclear, and make a notation to ask the instructor at the next class for still unclear points
- Several smaller study sessions are more effective than one marathon study session; take breaks
- Recite material out loud
- In regards to note taking in class: don't need full sentences, but concepts and key points
- Link your thought(s) with a mental picture
- Audio-tape lectures; listen back on your way home
- Note cards are good for: specific facts, key concepts and practice questions
- Practice concepts at clinical if possible
- Need time to prepare for an examination. Study material at least 2 times before a test

Test Taking
- Negative relaxation techniques: don't cram just before the exam; don't run late in travel time to the exam; one sign of increased stress is a jaw tightly clenched
- Positive relaxation techniques: relax for a couple of minutes just before the exam; take deep, slow breaths; if you notice increased stress during an exam - stop, close your eyes and count to 5 or 10 while concentrating on your breathing
- When beginning the exam, make a few notes
- You don't have to answer the questions in exact order. But remember that rereading a question uses up time
- Read the entire question then determine exactly what is being asked. Is it a definition versus a comparison versus factors that are increased, decreased or maintained?
- What are the key words in the question?
- You may need to underline the key words in a question in order to stay focused
- A rule of thumb: if a recall question takes you more than 1 minute to answer, mark it and move on
- Recognize incorrect answers as well as correct answers
- Have a procedure for marking each choice as you read it as to "no", "maybe", or "yes". You may end up with two "yes" answers, then decide which is best for the situation
- Don't read into the question. If you hear yourself thinking "if" or "but", stop and read the question again
- On the test, draw diagrams, make sample problems, etc. that assist you in thinking out the question and bring you to the answer.
- If you don't understand a question at all, ask for clarification.
- Don't keep changing your answers.
- Be certain that you don't leave any question unanswered.
SECTION II: CLINICAL GUIDELINES AND POLICIES
THE PATIENT

A Patient is the most important person in any hospital,
A Patient is not dependent on us -- we are dependent on him,
A Patient is not an interruption of our work -- he is the purpose of it,
A Patient does us a favor when he calls -- we are not doing him a favor by serving him,
A Patient is part of our business -- not an outsider,
A Patient is not a cold statistic -- he is a flesh and blood human being with feelings and emotions like our own,
A Patient is not someone to argue or match wits with,
A Patient is a person who brings us his wants -- it is our job to fill those wants,
A Patient is deserving of the most courteous and attentive treatment we can give him,
A Patient is the life blood of this and every other business.

CLINICAL EDUCATION DESCRIPTION

The radiologic technologist is assigned to various rooms in the radiology department and is expected to be proficient in all aspects of each room.

Therefore, diagnostic clinical or medical imaging is a vital portion of a student's education in the evolution to an effective radiologic technologist.

In order to ensure the student's clinical ability and understanding of the didactic relationship to the clinical setting, the competency evaluation system is utilized.

A student begins his/her clinical education by observation of general department procedures. Students then progress to clinical participation by assisting a staff RT in the execution of duties (passive mode). Upon completing simulated examination in AL 120 and AL 121 Laboratory, the student moves to an active mode of assisting a staff RT in the performance of radiographic examinations. As the student gains experience, he/she will move into an active state of performance. The student will actually perform the examination under direct supervision of a staff RT. When a student feels he/she has mastered a particular examination, a category evaluation for competency can be requested. Upon passing the category competency, the level of direct supervision is removed (Exceptions: first semester students are always under direct supervision and repeats are always under direct supervision). The student may then gain clinical experience under indirect supervision. Continued competency evaluations will be held periodically to re-examine the student's clinical skills. A final competency evaluation of non-related radiographic examinations must be completed prior to graduation.

1. Observation
2. Passive mode of assistance
3. AL 120 and AL 121 Laboratory evaluations
4. Active mode of performance with direct supervision
5. Competency evaluation(s)
6. Active mode of performance with indirect supervision
7. Continued competency evaluations
8. Final competency evaluation
CLINICAL TERMINOLOGY

Clinical Laboratory: After instructor demonstration and student practice, the student will demonstrate the essential clinical skills under simulated conditions.

Simulation: The student shall perform the examination on either a phantom or a live subject (not a patient) and simulate the exposure of radiation.

Direct Supervision: A radiologic technologist present in the radiographic control area of a specified radiologic installation.

Indirect Supervision: A radiologic technologist present in a radiologic department and immediately available to assist the student as needed.

Category: A series of related radiographic examinations that demonstrate ability in an area of the human body, i.e. upper extremity.

Competency: The ability to function within a realm of limited supervision and assume those duties and responsibilities as set forth in course and clinical objectives.

Competency Evaluation: The procedure by which a student's performance and the resulting image is evaluated.

Continued Competency Evaluation: Radiographic examinations that demonstrate a student's sustained clinical ability

Final Evaluation: A series of non-related radiographic views that demonstrate the ability to radiograph the human body according to accepted professional standards.

CLINICAL AFFILIATES

Clinical education is obtained through the institutions listed below:

Atchison Hospital, 800 Raven Hill Dr, Atchison, KS, 66002; 913-360-5392
Coffey Health Systems, 801 N 4th, Burlington, KS 66839; 620-364-2121, ext 233
Colmery-O'Neil Veterans Administration Medical Center, 2200 Gage Blvd., Topeka, KS, 66622; 785-350-3111, Extension 52688
Cotton-O'Neil Clinic, 901 Garfield, Topeka, KS, 66606; 354-9591, ext 120
Geary Community Hospital, 1102 St. Mary's Road, Junction City, KS, 66441; 785-238-4131
Hiawatha Community Hospital, 300 Utah, Hiawatha, KS, 66434; 785-742-2131 x270; short term rotation only
Holton Community Hospital, 1110 Columbine Drive, Holton, KS; 785-364-9638
Lawrence Memorial Hospital, 825 Maine, Lawrence, KS, 66044; 785-749-6100
Mercy Health Center of Manhattan, 1823 College Ave, Manhattan, KS, 66502; 785-776-2888
Nemaha Valley Community Hospital, 1600 Community Drive, Seneca, KS, 66538; 785-336-2189 x155
Newman Regional Health, 1201 W 12th, Emporia, KS, 66801; 620-341-7893
Ottawa Family Physicians, 1418 S Main, Suite 5, Ottawa, KS; 785-242-1620, Ext 343
St. Francis Hospital and Medical Center, 1700 West 7th, Topeka, KS, 66606; 785-295-8011
Stormont-Vail Regional Health Center, 1500 West 10th, Topeka, KS, 66604; 785-354-6171
Truman Medical Center, 7900 Lee’s Summit Rd, Kansas City, MO 64139; 816-404-7000
TMC Lakewood, 7900 Lee’s Summit Road, Kansas City, MO 64139; 816-404-7000

CLINICAL INSTRUCTORS

Mitzzi White, RT(R), Stormont-Vail Regional Medical Center, 2007
Sherrie Shaw, RT(R), St. Francis Hospital and Medical Center, 2006
Kelli Esser, RT(R), St. Francis Hospital and Medical Center, 2007*
Wendy Morstorf, RT(R), VA Medical Center, 2002
Amy Kolterman, RT(R), Mercy Health Center of Manhattan, 2004
Shannon Bailey, RT(R), Lawrence Memorial Hospital, 2012
Taylor Rockhold, RT(R), Lawrence Memorial Hospital, 2012*
Angie Brown, RT (R)(M), Atchison Hospital, 2008
Leslea Moranz, RT(R)(CT)(M), Atchison Hospital, 1998*
Lynn Bolen, RT(R), Coffey Health Systems, 2007
Janae Pritchett, RT(R), Coffey Health Systems, 2007
Tarra Egger, RT(R), Geary Community Hospital, 2010
Kristen Saylor, RT(R), Hiawatha Community Hospital, 2008
Scott DeBarge, RT(R)(CT), Holton Community Hospital, 2011
Penny Barger, RT(R), Cotton-O’Neil Clinic, 2014
Chelsea Ginn, RT(R), Newman Regional Health, 2011
Bonnie Nordhus, RT(R), Nemaha Valley Community Hospital, 2008
Heather Burkdoll, RT(R)(BD), Ottawa Family Physicians, 2010
*Back-up
David Armstrong BS RT(R) (CT)(BD), Truman Medical Center, 2015
Priyanka Patel, RT(R)(N)(CT), 2015
CLINICAL EDUCATION DUTIES

Staff Technologists
Qualifications:
  Hold ARRT certification or equivalent and active registration in the pertinent discipline
Duties:
  Complete Performance Evaluations
  Complete laboratory evaluations
  Complete category competency evaluations and continued competency evaluations
  Assist & supervise students
  Review image quality with students
  Assures direct/indirect supervision – as appropriate
  Assures images are repeated in the presence of a qualified radiographer

Clinical Instructors
Qualifications:
  Proficient in supervision, instruction and evaluation; two years full-time experience in the professional discipline; holds ARRT certification or equivalent and active registration in the pertinent discipline; be knowledgeable of program goals and curriculum, clinical objectives and evaluation system.
Duties:
  Schedule Change Approval
  Complete Performance Evaluations and review as needed
  Perform competency, continued competency & laboratory evaluations
  Inform students of hospital procedures & policies
  Communicate program goals & requirements to staff
  Clinical education planning
  Clinical demonstrations
  Counseling
  Clinical orientation for new students
  Assist & supervise students
  Attend clinical instructor and advisory board meetings
  Time sheet approval
  Inspect student uniforms

Washburn University Faculty
Duties:
  Tardy, Absence, & Compensation Records
  Performance Evaluation Review
  Course Syllabus Preparation
  Room Rotation Assignment
  Competency Evaluations & Continued Competency Evaluations
  Competency evaluation verification
  Laboratory Evaluations
  Clinical Education Planning
  Clinical Demonstrations
  Counseling
  Clinical Orientation
  Student Assistance & Supervision
CHAIN OF COMMAND

The chain of command in radiology is as follows: Radiologist-in-charge, Radiologists, Radiology Director, Lead Technologist, Staff Technologists, and Students.

Each radiologic technologist has the combined duty of: 1) completion of clinical examinations, and 2) instruction of students. The first duty includes providing proper patient care, completion of the correct examination, correct image latitude and maintaining the patient flow. The second duty includes providing instruction in patient care, exposure factor selection, positioning skills and professionalism development.

One method of positioning will be demonstrated by faculty to the student in the laboratory. The student should keep in mind that this is not the only acceptable method. The student should observe, listen and try various methods and eventually decide upon a method best suited to him/her.

The technologist you are working with is in charge of that room or examination. The technologist has expertise which will be demonstrated to the student. However, due to the comparison of clinical ability between the technologist and student, the student demonstrates a greater need for practice with the technical aspects. The technologist should not perform the majority of examinations.

The technologist in each assigned area will also (on a daily basis):
   a. determine the time for the lunch break
   b. check for proper room cleanliness and supplies
   c. approve departure time
   d. approve practice time for positioning laboratory

If the technologist is not available, then the supervising or lead technologist in diagnostic radiology should be contacted.

CLINICAL SUPERVISION

Students must have adequate and proper supervision during all clinical assignments. The student to radiography clinical staff ratio must be maintained at 1:1 at all times, regardless of competency achievement. However, if an uncommon procedure is performed (such as skull imaging), it is acceptable for more than one student to be temporarily assigned to one RT(R).

After demonstrating competency, students may perform procedures with indirect supervision. Indirect supervision is defined as that supervision provided by a qualified radiographer immediately available to assist students regardless of the level of student achievement. "Immediately available" is interpreted as the 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 equipment is in use.

Students who have not yet achieved competency in an exam remain under direct supervision of a RT. Direct supervision is explained as:

A. A qualified registered radiographer reviews the request for the examination to determine the capability of the student to perform the examination with reasonable success; or to determine if the condition of the patient contraindicates performance of the examination by the student.

B. A qualified radiographer is physically present during the conduct of the examination.

C. The qualified registered radiographer reviews and approves the radiographs prior to the
dismissal of the patient. Medical judgment may supersede this provision.

D. A qualified radiographer must be physically present during the conduct of a repeat image and must approve the student’s procedure prior to re-exposure.

The Washburn University program policy is that first semester students are under direct supervision for all examinations performed. Thereafter, as each examination competency has been successfully passed, students may drop to indirect supervision. *Indirect supervision is defined as supervision provided by a qualified radiographer immediately available (in the location where the procedure is being performed) to assist students regardless of the level of student achievement.*

The repeat policy remains in force with indirect supervision. Professional action towards any patient involves a concern for radiation safety. As such, every student technologist must repeat all radiographic examinations while a registered radiographer is physically present with the student. If a registered technologist is not available, the patient should be told that there will be a short wait until a registered technologist arrives. A counseling report will be completed on any student repeating radiographs without the direction of and presence of a radiographer.
CLINICAL EDUCATION PLAN

A plan for the clinical education segment of the program has been devised. This allows faculty to: 1) provide a plan for the scheduling of the clinical experience, as well as 2) compute the credit hour value of each course.

The plan is flexible in design and may be altered to fit the needs of the radiographer students and program.

AL 134 - Fall Semester I

Weeks 1 & 2
Clinical Orientation - Tuesday and Thursday
Weeks 3-15
Tuesday and Thursday - 8 hours/day
Week 16
No scheduled clinical - clinical hour completion & final examinations
Fall Recess
Monday Only - No lecture class/labs
Thanksgiving Recess
Wednesday, Thursday & Friday - No clinical
Semester Break
2 weeks - No clinical
AL 134 = approximately 248 clock hours = 3 credit hours

AL 135 - Spring Semester I

Winter Intersession
10 days clinical
Monday thru Friday - 8 hours/day
Weeks 1-15
Tuesday and Thursday - 8 hours/day
Saturday, optional – 8 hours/day
Weeks 1-15
Fridays, every other - 8 hours
Saturday, optional – 8 hours
Week 16
No scheduled clinical - clinical hour completion & final examinations
Spring Recess
5 days - no clinical
Semester Break
4-5 days - No clinical
AL 135 = approximately 360 clock hours - 3 credit hours

AL 236 - Summer Session I

Summer Intersession
1 week clinical
Monday thru Friday – 8 hours/day
Weeks 1-8
32 hours/week
Week 3
*May begin Evening shifts
Session Break
2 weeks - No clinical
AL 236 = approximately 296 clock hours = 3 credit hours
AL 237 - Fall Semester II

Fall Intersession
2 weeks clinical
Monday thru Friday - 8 hours/day

Weeks 1-15
Monday, Wednesday and Friday - 8 hours/day
Saturday, optional – 8 hours/day
* Evening shifts

Week 16
No scheduled clinical - clinical hour completion & final examinations

Fall Recess
Monday & Tuesday - No clinical

Thanksgiving Recess
Wednesday, Thursday and Friday - No clinical

Semester Break
2 weeks - No clinical

AL 237 = approximately 432 clock hours = 4 credit hours

AL 238 - Spring Semester II

Winter Intersession
2 weeks
Monday thru Friday - 8 hours/day

Weeks 1-15
Monday, Wednesday, Friday - 8 hours/day
Saturday, optional – 8 hours/day
* Evening shifts

Week 16
No scheduled clinical - clinical hour completion & final examinations

Spring Recess
No clinical

AL 238 = approximately 392 clock hours = 4 credit hours

* = A total of 12 shifts completed between June 1st and mid-May.

Clinical Education Plan - Rotation Emphasis
AL 134 - Diagnostic, surgery/mobile, and transport (at selected sites)
AL 135 - Diagnostic, surgery/mobile
AL 236 - Diagnostic, surgery/mobile, evening
AL 237 - Diagnostic, surgery/mobile, evening & imaging modality
AL 238 - Diagnostic, surgery/mobile, evening & imaging modality

Total hours are approximately 1728; credit hours for clinical education are computed at a range of 80-120 clock hours. Example: AL134 Radiology Clinical I has an assigned credit hour value of 3.0 which computes to 82.6 clock hours per credit hour. As per accreditation policy:

- Students cannot be scheduled for more than 10 clinical hours in any one day regarding student and patient safety.
- The combination of didactic and clinical hours cannot exceed 40 hours weekly.
- Hours exceeding the previous stated limitations are voluntary on the student’s part.

Updated 11/20/14
RADIATION PROTECTION GUIDELINES

Students will practice radiation protection for the patient, self and others. Following are some radiation protection guidelines:

1. Position yourself behind the lead lined control area when making an exposure.
2. Wear protective devices such as lead aprons, gloves, glasses and thyroid shields when in a room where fluoroscopic and/or radiographic examinations are being performed.
3. Use immobilization devices to hold patients.
5. Always wear monitoring device while in all clinical education areas. Wear monitoring device at collar level. Place outside of apron when wearing lead apron. Monitoring device should be left in the department in the designated area when not being worn. Report any accidental damage to or loss of device to your clinical instructor immediately.
6. Minimize dose by selecting exposure factors appropriate to the patient and the examination.
7. Collimate to the desired anatomy.
8. Use lead shielding if it won't compromise the examination.
9. Report equipment malfunctions to appropriate personnel.
10. When performing mobile examinations, stand at least 6 feet from the x-ray source and wear a lead apron when the exposure is being made.
11. Under no circumstances will the student radiographer or any other human serve as a model for test exposures or experimentation.

RADIATION MONITORING PROCEDURE

First year students are issued a radiation monitoring badge during on-campus lab-related courses of radiographic procedures, radiographic exposure and radiology clinical. The monitoring period lasts for two months with a new badge supplied at that time. All on-campus badges are managed by the program’s clinical coordinator, i.e. ordering, review of reports and necessary follow-up. Cost of the monitoring badge service is $66 per student for one year. Payment of the $66 fee occurs prior to entry into the program and is nonrefundable. This on-campus monitoring badge is separate from the clinical-issued monitoring badge described below. This fee will be added to your Washburn tuition and fees costs for AL 130.

Each clinical education setting will issue a radiation monitoring device to each student assigned to that site. The monitoring devices are worn for one or two months, depending on the facility's procedure. At the end of that period, the radiation safety officer or designated person will collect/distribute the badges. The radiation monitoring report will be received and reviewed by each site.

Always wear monitoring device at collar level while in all clinical education areas. Monitoring devices should be left in the department in the designated area when not being worn; they are not to be worn home.

1. Report any accidental damage to or loss of device to the clinical instructor immediately.
2. Report equipment malfunctions to appropriate personnel.
3. For occupational radiation workers, NCRP Report #116 recommends:
   a. Annual effective dose equivalent limit of 5 rem (50 mSv).
   b. Cumulative effective dose equivalent limit of 1 rem X age in yrs. (10 mSv X age)
4. For education & training purposes in which the student is under the age of 18 years:
   a. Annual effective dose equivalent limit of 0.1 rem (1 mSv)

Students must review and document their radiation detection device report in coordination with the interval during which badges are collected. For example, if badges are turned in monthly, a monthly review of the report is necessary. If badges are turned in quarterly, a quarterly review of the report is required. Reports are typically posted within the department for personnel review. Students are required to ask the CI at that clinical education site about the location of the report postings. After each review
the student must name the Technologist or Clinical Instructor that reviewed the report with them and document the dose values within the Trajecsys system.

- If the report values are less than the defined Level I value, no action is necessary.
- If the report values are between the Level I and Level II values, the Clinical Coordinator will communicate with the CI at the clinical education site and the student to review clinical activity and identify possible actions that would reduce future exposures.
- If the report value exceeds the established Level II values, the Clinical Coordinator will contact the CI at the clinical education site to inquire about the possible causes of the excessive dose and inquire about investigational activities. The Clinical Coordinator will communicate with the student regarding the excessive values. A report will be completed by the Clinical Coordinator and reviewed/approved by the clinical site RSO. Conclusions from the report will identify required modifications or corrective actions. A copy of the report will be reviewed with the student and provided to the student for signature.

See tables below for the NRC 10CFR20 annual occupational dose limits for adults and the investigational limits that will be utilized by the program.

### 10CFR20 Annual Occupational Dose Limits

<table>
<thead>
<tr>
<th></th>
<th>Level 1 (10% of annual limit)</th>
<th>Level II (30% of annual limit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Effective Dose Equivalent for Adults</td>
<td>5 rem or 0.05 Sv TEDE in calendar year</td>
<td>15 rem or 0.15 Sv LDE in calendar year</td>
</tr>
<tr>
<td>Lens of the eye</td>
<td>15 rem or 0.15 Sv LDE in calendar year</td>
<td>50 rem or 0.5 Sv (DDE + CDE) in calendar year</td>
</tr>
<tr>
<td>Individual organ</td>
<td>50 rem or 0.5 Sv (DDE + CDE) in calendar year</td>
<td>50 rem or 0.5 Sv SDE in calendar year</td>
</tr>
<tr>
<td>Skin or extremity</td>
<td>50 rem or 0.5 Sv SDE in calendar year</td>
<td></td>
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</tbody>
</table>

### MONTHLY Occupational Safety and Health Administration as low as reasonably achievable investigational levels

<table>
<thead>
<tr>
<th></th>
<th>Level 1 (10% of annual limit)</th>
<th>Level II (30% of annual limit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Effective Dose Equivalent</td>
<td>41mrem/month</td>
<td>125mrem/month</td>
</tr>
<tr>
<td>Sum of Deep Dose Equivalent to Any Individual Organ or Tissue Other Than Lens of Eye</td>
<td>416mrem/month</td>
<td>1250mrem/month</td>
</tr>
<tr>
<td>Eye Dose Equivalent</td>
<td>125mrem/month</td>
<td>375mrem/month</td>
</tr>
<tr>
<td>Shallow Dose Equivalent</td>
<td>416mrem/month</td>
<td>1250mrem/month</td>
</tr>
</tbody>
</table>
QUARTERLY Occupational Safety and Health Administration as low as reasonably achievable investigational levels

<table>
<thead>
<tr>
<th></th>
<th>Level 1</th>
<th>Level II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Effective Dose Equivalent</td>
<td>125mrem/quarter</td>
<td>375mrem/quarter</td>
</tr>
<tr>
<td>Sum of Deep Dose Equivalent to Any Individual Organ or Tissue Other Than Lens of Eye</td>
<td>1250mrem/quarter</td>
<td>3750mrem/quarter</td>
</tr>
<tr>
<td>Eye Dose Equivalent</td>
<td>375mrem/quarter</td>
<td>1125mrem/quarter</td>
</tr>
<tr>
<td>Shallow Dose Equivalent</td>
<td>1250mrem/quarter</td>
<td>3750mrem/quarter</td>
</tr>
</tbody>
</table>

Updated 12/2014

PROFESSIONALISM

This term denotes competence or skill expected of an individual enrolled in an allied health care program or working in a patient-care related field. There are several traits seen in a professional such as, but not limited to:

- Placing the patient first; improving their quality of care
- Striving to become an expert in the field through learning
- Doing more than expected
- Able to communicate effectively, i.e. verbally, non-verbally and written
- Honesty in the classroom and clinical setting
- Following policies in a consistent manner
- Commitment to confidentiality
- Positive attitude
- Appearance that shows you care about yourself as a person; therefore, have the capacity to care about others

When an incident occurs that displays a lack of professionalism, the program first seeks to fact-find and then makes a determination of the best course-of-action. Actions within the program may include: Verbal warning, written warning, grade deduction, suspension ranging from one to three days or withdrawal from the program. The program may also choose to refer the student to the Vice President’s Office for breach of student conduct or academic impropriety policy. For more information, see http://www.washburn.edu/current-students/policies-forms/academic-policies.html.

HEALTH

All students are required to submit evidence of good health and immunization. Upon acceptance to the program, each student is sent a medical record form. This form must be completed and returned to the clinical coordinator prior to the beginning of AL 134 Clinical Education I. The physical examination required on the medical record form may be performed at Student Health Services if an individual is enrolled at Washburn University. An individual is required to pay for the laboratory work however.

Any illness or leave of absence requiring a physician's signature will be reflected in an individual's file.

Injuries received at a clinical site during assigned clinical education will be treated at the student's expense. Hospital worker’s compensation does NOT cover students during their learning experience.

Any student diagnosed as having a communicable disease will contact the program director
immediately. The director will in turn contact the infection control nurse at the appropriate clinical site.

Communicable disease may include, but is not limited to the following: AIDS, hepatitis, resistant staph, strep throat, pneumonia, influenza, meningitis, German measles, scabies, impetigo, chicken pox or rubeola measles.

Any student who has been treated, hospitalized or absent due to pregnancy, surgery, injury, serious physical or mental illness or emotional disorders must present medical documentation of:

a. Ability to participate without restriction in classroom, college laboratories and clinical areas.

b. Adequate physical, mental and/or emotional ability to continue in the program of study.

The Hepatitis A vaccination is available at Student Health. Hepatitis A is a highly contagious viral disease. It attacks the liver. Based on recent statistics, about 124,000 people in the United States are infected each year. It is most commonly spread from person to person, mostly through fecal contamination and then hand to mouth contact, or through food prepared by infected food handlers. The cost is approximately $25.00. You would receive a booster one year later.

The Hepatitis B series is approximately $25.00 per injection. Following the first injection, the second shot is given a month later and the third is given 5 months later. A titer, which tests antibody level, should then be performed.
STUDENT INCIDENTS/INJURIES

Students must report clinical incidents to the clinical instructor/department manager and Washburn University faculty. A student involved in a clinical incident/injury will follow hospital protocol. Realize that any treatment/testing is at the expense of the student. The student will write a summary of the incident/injury and any treatment/testing which will be kept in the student file.

LIABILITY INSURANCE

Washburn University provides all enrolled students in the radiographer program, as well as other allied health students, with liability insurance. Additional coverage is available, if desired, by the individual.

PROGRAM & DEPARTMENTAL HONORS

SAS School Honors: In the School of Applied Studies, students are eligible to receive School honors upon graduation if they fulfill the following minimum requirements:

Associate Degree Honors
1. A minimum grade point average of 3.5 in the major and correlate courses, with a minimum of 30 hours of degree courses completed at Washburn University.
2. Grade point averages are calculated on all required major and required correlated courses applied to the Associate degree,
3. The recommendation of the department. Individual departments may specify additional requirements.

Outstanding Radiographer Student
In addition to School of Applied Studies Honors, one individual may be identified by each allied health program. Criteria for the Radiographer Program are:
1. Minimum 3.50 cumulative grade point average and
2. Evidence of a quality scholarship project and
3. Recommend participation in community service (previous 3 years) and/or involvement in a professional society.

SEXUAL HARASSMENT

Sexual harassment may be defined as sexual oriented behavior, demand, comment, or physical contact, initiated by an individual at the workplace, that is a term or condition of employment, a basis for employment decisions, or that interferes with the employee's work or creates a hostile or offensive working environment.

While the above statement is speaking of wage-related employment, the same may be applied in the education setting as a student. As such, a student has the right to report harassment.

Harassment situations should be reported to either the Clinical Coordinator or Program Director. Prior to appropriate action by faculty, you will be asked to write down the incident(s) in detail. The student statement should be notarized and reviewed again with faculty, to be certain that all facts are clearly understood. If the student does not feel adequate resolution has been achieved, Carol Vogel [Affirmative Action Office] should be contacted. See Sexual Harassment Policy, University Catalog.

You may review a complete copy of the policy & complaint procedures for sexual harassment, equal education & employment opportunity online under the student tab of MyWashburn.

STUDENT EMPLOYMENT

It is recognized that individuals may seek and obtain employment at a health facility associated as a clinical education center with the University. It is the policy of the radiographer program that the
scheduled didactic and clinical courses be the number one priority of that employed individual. Assignments will not be rearranged to accommodate the work schedule. Employment of a student in a clinical affiliate/health facility cannot substitute for clinical education requirements. In cases where students are employed at any of the clinical sites, employment hours will not be during scheduled clinical hours. Students will not receive any wage, salary, etc. from clinical affiliates for any clinical education hours used to satisfy the clinical education requirement of the program.

While in the employment of the health facility, the individual is not covered by the University liability policy. As an employee of the health facility, the student is subject to all of the rules, policies, and requirements established by the employer. Students are not allowed to perform competency examinations when completing radiographic examinations as an employee.

**CLINICAL EDUCATION FOCUS**

Clinical emphasis is patient care and skill development. Students should refrain from involvement in department politics. Be as neutral as possible in these situations. Should situations arise involving patient care, contact Washburn faculty.

**DUE PROCESS/GRIEVANCE PROCEDURE**

Within any education or work setting, grievances or complaints may arise for a variety of reasons. Due process refers to the formal resolution of a grievance or complaint. At the University level, policies and procedures exist in regards to Student Conduct, Academic Impropriety and Grade Appeal. These are presented in the University catalog.

The student should try to deal as an individual with the clinical problem, if possible. If there is fear of reprisal, if the problem affects more than one student, or if the problem continues, the clinical instructor or University faculty will intercede on the student's behalf. The student should report the incident within 21 days after occurrence. Radiography Faculty will have 21 days to investigate, take action, and report back to the student. During investigation, Faculty may consult with the Radiology Manager and/or Radiologist-in-Charge as deemed necessary.

If satisfactory results are not obtained, the student has 7 days to submit a written petition to the chairperson of Allied Health. The chairperson has two weeks to respond. If the student still has not received satisfactory results, the student has 7 days to submit a written petition as a final appeal to the Associate Dean, School of Applied Studies. The Associate Dean has 10 days in which to respond.

An individual may be released from the Radiologic Technology program for failure to follow University policies and procedures as presented in Student Conduct and Academic Impropriety. While clinical education is conducted off-campus, said policies and procedures are still in force. Each clinical education setting accepts students for fulfillment of clinical objectives, with quality patient care as the overall goal.

1. If a student demonstrates serious deficiencies, a contract for continuance and correction may be created between the program, clinical education setting and student. Breach of the contract by the student will result in program dismissal.
2. Clinical education settings have the right to cancel a student's affiliation based on improper behavior.

**COURSE GRADE COMPUTATION**

When computing radiologic technology course grades, all components (exams, quizzes, homework, etc.) will be computed to the closest tenth point. (Example: 94.5, 89.3, or 86.8) All evaluation criteria will then be given the proper weights, added together, and rounded up to the closest whole number to
COURSE GRADE DEFICIENCY

Enrollment in any Radiologic Technology course is based on acceptance to the program, as well as achieving and maintaining a minimum grade average. Since radiography is a profession in which less than adequate performance may result in poor patient care, standards must be maintained which are high enough to ensure the effectiveness and competency of our graduates. Accordingly, the program grading system may be somewhat different than for other Washburn University courses. Achieving less than the minimum grade average will serve to bar one from enrolling in any subsequent Radiologic Technology course. The program uses the following grading scale, with 78 being the minimum for passing.

A  92 - 100  
B  85 - 91  
C  78 - 84  
D  70 - 77  
F  Under 70

A student who receives a final grade of D or F or withdrawal from a Radiologic Technology course will be removed from the program's course-of-study. To appeal a course grade, see Grade Appeal Policy located in the University catalog.

A student who wishes to repeat the course may appeal to the Radiologic Technology Program Director. A petition, which contains information regarding the reason(s) for the course grade, specific explanations of changes to be made to assure future passing grades, rational for continuing in the program, etc., must be submitted within 2 weeks of notification. The Radiologic Technology Retention Committee will then convene. The committee is composed of the program director, the clinical coordinator, the medical advisor, and a minimum of one clinical instructor.

The committee will consider the following: 1) Is this the first D, F or withdrawal from a Radiologic Technology course, and 2) will there be space available in the course and/or program. The committee will also review: 1) the course syllabus, 2) course work completed by the student, 3) grades the student has received in radiologic technology and other courses, and 4) the petition. The committee will make a final decision. Possible findings of the committee might include: 1) approval to repeat the course*; or 2) permanent withdrawal from the program.

*If the course is a prerequisite to an upcoming AL course, the student would be unable to continue the AL curriculum until successful completion of the failed course. If the course is not a prerequisite to future AL courses, it could be possible for the student to continue in the program and repeat the course the following year. Radiologic Technology curriculum must be completed within a maximum of three years from the initial fall starting date.

A student who receives a grade of D or F or withdraws a second time from any AL course is permanently withdrawn from the program.

The Retention Committee will be activated within 2 weeks from receiving the student petition. The student will receive a written decision prior to the beginning of the next semester. Developed 4/95; Reviewed by SAS Dean and WU legal office 1/97; Revised 1/97.

See also “University Grade Appeal which is located within the online University Catalog”.

STUDENT PROGRAM STATUS APPEALS COMMITTEE

Students appealing a decision related to acceptance into the program, termination of status in a program, should follow the steps outlined below.

The student must have met and argued their case with the program director or coordinator. If satisfaction is not obtained, the student may then approach the chair of the department to argue their case. Following meeting with the chair of the department, if the student is still not satisfied with the outcome, they may appeal to the Student Program Status Appeals Committee (SPSAC).

It is critical that the student understand the following:

1. The burden of proof rests with the student who is responsible to present evidence to support his/her claim.

2. The decision of the SPSAC is final.

In the final stage of the appeal process;

1. the student must submit a letter of appeal to the SPSAC.

2. the program director will submit any material used to make his/her recommendation.

3. the department chair will submit any material related to his/her recommendation.

4. the SPSAC will schedule the meeting(s) for arguments to be heard by the student and either the program director or chair.

5. the student will be allowed to make a presentation to the committee. The program director/chair will be allotted an equal amount of time to present. The amount of time allotted is at the discretion of the committee as long as both parties have equal time allowed. No one other than these two individuals will be allowed to make a presentation or accompany the speakers at the hearing.

6. at the close of the hearing the committee will determine by a vote of 3 out of 4 whether the student has proven whether the relief sought should be awarded.

7. the chair of the SPSAC will notify, in writing, the student and the department chair.

Program Status Appeals Committee (SPSAC)

The SPSAC will be composed of faculty from the SAS (School of Applied Studies) with the Associate Dean presiding as chair of the committee. Members of the committee will be appointed by the Dean of the SAS. The Dean will seek to appoint members who do not have a conflict of interest with the petitioner. However, all appointments are final and can not be challenged. The committee members will number no less than four and representative of a minimum of two departments.
COMPLAINT RESOLUTION POLICY

The Radiologic Technology/Radiographer program at Washburn University is accredited by the Joint Review Committee on Education in Radiologic Technology 20 N. Wacker Drive, Ste. 2850, Chicago, Illinois 60606-3182, 312-704-5300, email: mail@jrcert.org. As such, the program is under guidelines titled "Standards for an Accredited Educational Program in Radiologic Sciences".

A copy of the Standards may be obtained from the program director or the clinical instructor. The standards are also located in the Radiology classroom and at each clinical site. If, at any time, one disagrees that the Washburn University Radiologic Technology program is in compliance with the Standards, a written complaint will be made to the Program Director and Clinical Coordinator. The program will investigate the complaint, consult with the Dean of SAS and respond in a written format within 21 days.

If the student does not feel there has been resolution, the student has the right to contact the JRCERT. All good faith efforts by all parties must be made in an effort to solve the conflict before the JRCERT is contacted. This is simply good policy and the JRCERT will expect that this has occurred before it is contacted.

In the event that the program has allegations or complaints relating to its non-compliance with the "Standards", and the JRCERT, after its due process, agrees that the complaint is valid, the program will make every effort to immediately correct the situation.

JRCERT contact information:
The Joint Review Committee on Education in Radiologic Technology
20 N Wacker Drive, Suite 2850
Chicago, Illinois  60606-3182
312.704.5300

VENIPUNCTURE POLICY

Radiologic Technology students are introduced to infection control, aseptic technique, pharmacology, and drug administration in lecture classes. A lab session is held giving students the opportunity to perform venipuncture on an artificial arm. A mandatory one week rotation is completed at a local laboratory with formal instruction during the second year of the program.

Each clinical site has the option to allow or not allow students to perform venipuncture during clinical education. Any contrast injection MUST be under direct supervision.

CELLPHONE/BEEPER POLICY

Cellular phones, pagers & beepers are not permitted to be turned on or used within the classroom or clinical setting (lunch only). Please give your family members the following numbers for emergency situations. Jera: 785-670-2173; Hillary: 785-670-1535; Susan (allied health secretary): 785-670-2176. See pages 29 and 30 for clinical phone numbers.

CLINICAL DRESS POLICY

Clothing is a form of non-verbal communication that reflects confidence in ability and judgment, personal behavior and sense of professional image. Patient's perceptions of competence and professionalism of the radiographer are often based on first impressions, which are then processed into stereotypic responses to the image the radiographer presents; thus, the first impression of the radiographer in uniform is the strongest statement of professionalism. It is essential that you present yourselves as professionals; therefore a strict dress code policy has been developed. This policy will be enforced by the clinical
instructor and faculty. Final authority for interpretation lies with the Program Director. Various items pertain to patient/student safety. Students should have the following items in their possession during clinical education: lead markers, ID badge, monitoring device, positioning pocket guide, watch and pen.

General
- All garments are to be clean, pressed, properly sized, appropriate length and in good repair. Hospital scrub clothes are to be worn only when assigned to surgery or if clothing becomes soiled or damaged during clinical.
- Earrings, necklaces, rings, etc may be worn in moderation. Earrings will be confined to the ear lobe. For safety reasons, no dangling earrings are allowed. If a student has body piercing, only jewelry for ear piercing may be visible during clinical education experiences. Tongue rings are not allowed. Necklaces are to be worn inside the shirt or blouse. Safety and patient care concerns are the primary issues concerning this policy.
- Hair, including beards and mustaches, is to be clean, neatly groomed, and kept in such a way as not to interfere with student duties or safety. Hair longer than shoulder length will be tied back in a neat manner to prevent contamination and to decrease the spread of microorganisms. Hairstyles should be conservative and professional.
- Use of excessive fragrances must be avoided. Cosmetics should be conservatively applied.
- Personal hygiene practices are to be sufficient to ensure cleanliness and the absence of noticeable body odor.
- An ID badge should be worn at all times.
- A radiation monitoring badge will be provided and must be worn at all times.
- Nails must be short and well manicured. Artificial nails and nail jewelry are not to be worn.
- Appropriate undergarments are to be worn at all times.
- Shoes are to be kept clean and polished. Clogs and sandals are prohibited.

Male and Female allowed dress includes:
- Solid navy blue scrubs*, pull-over v-neck top, elastic or drawstring waist, may not be low-rise.
- The fit of the scrubs must allow for freedom of movement and entirely cover the body when reaching up, reaching over and bending down (no skin seen). Scrubs should not be as tight fitting as everyday clothes.
- “Washburn University Radiology Student” must be embroidered in white lettering on the left-hand side of the top
- White or blue hose or socks
- Solid white or color that coordinates with the navy scrubs (no bright colors) uniform or athletic shoes (no high tops, no open toe or open heel) are required.
- If a lab coat is worn, it must be white.
- Only all white shirts or T-shirts may be worn under the scrub top. No design or wording on shirt.

Note: Students who do not meet the dress code will be dismissed from their clinical assignment by the Clinical Instructor. Students may return to the assignment when they are properly dressed. Any hours missed will constitute an unexcused absence and must be completed during finals week. Failure to comply with the dress code may result in a verbal warning. Continued non-adherence to the policy will result in a written statement(s) accompanied by a grade deduction for clinical education.

Students must abide by the clinical site’s dress code should it be more stringent than the university policy.
- Students assigned to Stormont Vail Health Care must cover all tattoos per the facility’s policy.
- *Students assigned to Truman Medical Center must wear SEIL blue scrubs along with
an white lab jacket.
COMPENSATION TIME

A responsibility of any radiologic technologist is to attend to the patient as well as completing the procedure. This necessitates placing the patient as a priority. A result of this priority is that breaks, lunch and/or departure time may be delayed. It is the responsibility of each student technologist to complete the examination, whether it is through observation, assistance or performance.

Be aware that breaks and lunch will be taken as the patient schedule permits. Breaks are considered a privilege; however, the student should notify the clinical coordinator if a situation occurs in which a lunch break is not possible. Compensation time will not be given for a missed lunch break.

It is recognized that a schedule for clinical hours is developed for each semester of education. It is again mentioned that while everyone (students, faculty and staff technologists) prefers to leave as scheduled, your responsibility is not fulfilled until patient examinations are completed. If you are unable to stay on a specific day (doctor appointment, job obligation), inform the clinical instructor or faculty.

In requiring student technologists to complete patient examinations past the scheduled departure time, compensation time will be returned to the student as registered on the time sheets. Guidelines for this policy are as follows:

a. Compensation time will not accumulate until 15 minutes beyond the scheduled departure time. In order to receive the time for additional clinical education, the student must have arrived by the scheduled time on that day.
b. A student staying beyond the scheduled time but not for examination performance (waiting for a ride, performing lab evaluations) should sign out at the scheduled time and will not receive comp time.
c. In order to receive compensation time, a schedule change form must be completed and signed by the supervising technologist stating the case involved in.
d. The time accumulated is recorded by faculty on the compensation time form. This record of compensation time is compiled solely from the time sheet. Credit will only be given if time is noted on the time sheet and a schedule change form is completed and signed by the supervising technologist.
e. A student wishing to use compensation time should notify the clinical instructor at that facility.
f. Any usage of compensation time requires the completion of a schedule change request form and approval by the clinical instructor prior to usage.
g. Compensation time acquired may be used as clinical hour completion at the end of the semester.
h. No more than 8 hours of compensation time may be carried over to the following semester.

CLINICAL ATTENDANCE – PART 1 (TARDY & ABSENCE)

A good attendance record for the clinical portion of the program is extremely important. Clinical rotations provide the varied experiences necessary in developing clinical skills and problem-solving ability. Absence from clinical results in missed experiences that are not possible to attain by any other method than completing the required number of clinical hours. Clinical absences reduce the number of days the student has to complete clinical education requirements. A good attendance record is also considered vital by future employers and clinical rotations give the facilities an opportunity to observe future employees.
If a clinical absence or tardy is unavoidable, the student must contact the assigned clinical affiliate (phone) and Washburn University faculty (phone or email) PRIOR to scheduled clinical education. Early notification allows time for making schedule adjustments to best meet the needs of students. Failure to call the clinical site prior to scheduled clinical hours will result in a **minimum** deduction of two (2) percentage points from the final clinical grade. Upon arrival the day after an absence has occurred, the student **MUST** complete a schedule change form.

University Closing: Closures for inclement weather are posted on the University website and on IAlert and announced on major radio & TV stations. Students are excused from clinical and classes when the university is closed due to weather. During inclement weather, but when WU is not closed, students should use prudent judgment pertaining to clinical attendance. As always, contact the clinical instructor and faculty prior to scheduled clinical education per non-attendance policy.

First year radiographer students are allowed 3 days (24 hours) of excused absences during the first year (fall, spring & summer). Second year students are allowed 3 days (24 hours) of excused absences during the second year (fall and spring). **Any absences beyond the 3 days must be made-up according to policy.** The 3 days (24 hours) may be used as you deem necessary (illness, vacation, appointments, etc.) The student is required to notify the clinical facility prior to scheduled clinical on the day of absence or the absence may be approved by the clinical instructor prior to a planned absence. The 3 days (24 hours) may be utilized in 8 hour or less increments (you must use a minimum of 1 hour). Any absences must be documented on a schedule change form which must be completed prior to the absence or upon the return to clinical education. **At the conclusion of the first year, one may transfer over 8 hours of attendance/compensation time. Any remaining hours must be used by the end of summer session. All hours must be utilized prior to graduation.**

Make-up policy: Should make-up hours be required, they must be scheduled with the written permission of the appropriate clinical instructor and follow the guidelines as stated in each clinical course syllabus. Make-up hours will be scheduled during finals week. If make-up consists of more than 24 hours, arrangements will be made in consultation with the program director or clinical coordinator. Weekday absences should be made-up during weekdays, evening absences must be made-up during evening hours. Night hours (3rd shift) will not be utilized for make-up hours. The hours must be completed prior to the conclusion of finals week of the appropriate fall/spring semester or no later than one week after the end of the summer semester. Extenuating circumstances will be reviewed on an individual basis.  

Clinical attendance is reflected in the final grade in all courses involving clinical hours. Attendance includes absence, late arrival (beyond 30 minutes), and early departure. The following would be considered an excused absence and would not affect the clinical grade:

1. You or your child under physician care (note from physician or copy of prescription and completion of schedule change form required within 1 week of return to clinical
2. Court appearance (clinical must have prior notification with schedule change form completed and documentation of court attendance)
3. Funeral (clinical must have prior notification with schedule change form completed)
4. Students who are in need of a particular clinical day off may arrange for pre-approval with the clinical instructor. A schedule change form **MUST** be completed. A minimum of 1 clinical day of notice will be required for a day to be considered pre-approved. Clinical hours missed due to a pre-approved absence must be completed at the time approved by the clinical instructor.
Each following unexcused occurrence will result in the following grade deductions:

<table>
<thead>
<tr>
<th># Unexcused Hrs</th>
<th>Deduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-8 hours</td>
<td>2 point deduction</td>
</tr>
<tr>
<td>9-16 hours</td>
<td>4 point deduction</td>
</tr>
<tr>
<td>17-24 hours</td>
<td>6 point deduction</td>
</tr>
<tr>
<td>25-32 hours</td>
<td>8 point deduction</td>
</tr>
<tr>
<td>&gt; 32 hours</td>
<td>Faculty withdrawal from the program with resulting grade of “F”</td>
</tr>
</tbody>
</table>

Students who attend clinical education must be able to actively participate in clinical activities or will be instructed to leave and the missed hours will need to be rescheduled.

Absence scenarios

1) It is the beginning of the year and you have 24 hours of excused absence. You are ill and call in sick for the day. Eight (8) hours will be deducted from the 24 hours of excused absence hours you have. You will complete a schedule change form upon return to clinical.

2) You are at clinical and become ill. You leave 5 hours early (after completing a schedule change form). 5 excused hours will be deducted from the number of excused absence hours you have.

3) You have an appointment and need to be absent from clinical for 2 hours. You have completed a schedule change form and your clinical instructor has signed it. The 2 hours will be deducted from the number of excused absence hours you have.

4) You are ill and call in sick. You have utilized your 24 excused absence hours. You will make-up the 8 hours during finals week of the semester in which the absence occurred. For this absence to be excused, you must present a note from a physician or copy of prescription within 1 week and complete a schedule change form upon return to clinical. Without the aforementioned the absence will be considered unexcused and will affect the clinical grade.

5) You have an appointment and need to be absent for 3 hours. You have 1 hour of excused absence remaining so the 3 hours will be deducted from this. You will need to complete the remaining 2 hours at a time agreed upon by you and the clinical instructor. Because the absence was pre-approved, the remaining 2 hours will be considered excused.

6) You find your have a flat tire and will be late to clinical. This will probably make you approximately 2 hours late. You call your clinical instructor, it is determined that you have remaining excused hours. The 2 hours will be deducted from those hours.

Clinical hours missed during the semester will be completed during the final examination period of that semester and will be scheduled with the approval of the clinical instructor. Acquired compensation time may be used toward clinical completion hours during final examination week. An individual with more than 24 hours to complete may complete hours prior to finals week (scheduled at the discretion of university and clinical faculty), but must leave 24 hours for completion during the final examination period.

Be aware that non-completion of clinical education hours will result in an "F" grade for that clinical education course.

A good attendance record also includes promptness. Tardiness is also a trait considered undesirable by clinical staff as well as future employers. Any time in excess of 30 minutes is considered clinical absence time. Be reminded that students are expected to be in their assigned area at the appropriate
time, **not arriving** at the facility.

One tardy is allowed per clinical course without a penalty. Each following occurrence will result in the following grade deductions: *If a student clocks in 3 minutes late a tardy will be documented.*

<table>
<thead>
<tr>
<th># Tardiness</th>
<th>Deduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 point deduction</td>
</tr>
<tr>
<td>2</td>
<td>2 point deduction</td>
</tr>
<tr>
<td>3</td>
<td>4 point deduction</td>
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<tr>
<td>4</td>
<td>6 point deduction</td>
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<tr>
<td>5</td>
<td>8 point deduction</td>
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<tr>
<td>6</td>
<td>10 point deduction</td>
</tr>
<tr>
<td>7</td>
<td>12 point deduction</td>
</tr>
<tr>
<td>8</td>
<td>14 point deduction</td>
</tr>
</tbody>
</table>

Excessive absences/tardiness may result in dismissal from the program. This decision would be made in conjunction with the assigned clinical education setting and the radiographer program.

Any grievance related to deductions due to clinical non-attendance must be presented to the Program Director within one month of absence.

**CLINICAL ATTENDANCE – PART II**

Regular attendance during radiology clinical (patient-related) is essential since it directly relates to skill development, along with maintenance of established skills. When a student misses either a block of time or multiple days on various occasions during a course, the student’s clinical performance is directly impacted. A student cannot develop proficiency or maintain skill when not actively practicing on a routine, scheduled basis. Continuity of patient care cannot be sustained which is a listed item in the “Patient’s Bill of Rights”. The professional documents of “Code of Ethics” and “Practice Standards” also address providing quality patient care.

The clinical attendance policy (Part I) allows students 24 clock hours (3 days) of clinical absence during each year of the Radiographer Program. The policy also addresses grade deductions related to excessive, unexcused absence. Even when a student is under the care of a physician, absence from clinical has a derogatory effect on patient care. If a student is under the care of a physician for a disability, they must contact the Washburn University Student Services Office to arrange for a possible reasonable accommodation. A reasonable accommodation may not fundamentally alter the nature of the program.

A student will be withdrawn from any enrolled clinical course and given a failing grade (F) when excessive absence occurs. Excessive absence is defined as missing 20% of the required clinical hours (beyond the allowed 24 clock hours or 3 days). Whether a student is under the care of a physician or not, the excessive absence policy applies. When a student receives a failing grade of a clinical course, this precludes them from continuing in the program due to course prerequisites.

Legal Office Approved: May 2013
TIME SHEET

Clocking in from your mobile phone constitutes fraud, and counts as unprofessional behavior. Points will be deducted per policy.

A time sheet is utilized by students at each clinical site via the online tracking system (Trajecsys). The purposes of this recording device are:

1. To provide a record of completed hours of clinical education regarding clinical absence and tardy.
2. To provide a review tool for clinical instructors and program instructors.
3. To give a record of compensation hours.

NOTE:
A. Each student is expected to record his/her arrival and exit times, not that of his/her classmates.
B. Failure to sign in and out on a given day constitutes an absence of eight (8) hours.
C. Failure to sign in or out on a given day will constitute a tardy and a possible grade deduction (see tardy policy).
D. Should a student stay beyond the scheduled departure time completing a patient exam, the student will submit a time exemption via the T-system.

ID MARKER (IMAGE) POLICY

It is the expectation of the Radiographer Program that students will place their right/left marker on each image prior to exposure, rather than annotate the data post-exposure. The focus of this practice relates not only to attention and accuracy of detail during exam performance, but also to potential medicolegal issues. If annotation of the right/left marker occurs during a competency evaluation, full credit will not be given in this section.
Supervision and Repeats

Until a student achieves and documents competency in any given procedure, all clinical assignments shall be carried out under the direct supervision of a qualified radiographer.

The parameters of direct supervision are:
1. RT(R) reviews the procedure in relation to the student's level of achievement;
2. RT(R) evaluates the patient's condition in relation to the student's ability and knowledge;
3. RT(R) is physically present during the examination conduct of the procedure, and
4. RT(R) reviews and approves the procedure and/or image.

All student radiographs will be reviewed by an RT(R) regardless of the level of competency of the student. Students will not dismiss patients until the radiographs have been reviewed by an RT(R). The reviewing RT(R) will determine the need for repeated radiographs at that time and will be responsible for directly supervising the student repeating the radiograph.

In support of professional responsibility for provision of quality patient care and radiation protection, unsatisfactory radiographs shall be repeated only in the presence of a qualified radiographer, regardless of the student's level of competency.

After demonstrating competency, students may perform procedures with indirect supervision. Indirect supervision is defined as that supervision provided by a qualified radiographer immediately available to assist students regardless of the level of student achievement. "Immediately available" is interpreted as the presence of a qualified radiographer adjacent to the room or location where a radiographic procedure is being performed. This does not include being available by phone, intercom or pager, but within verbal distance. This availability applies to all areas where ionizing radiation equipment is in use.

All students will document their repeat images along with necessary correction and initials of the supervising technologist on the designated form. The form will be submitted to Washburn faculty at mid-semester and at the end of the semester. The form should be initialed by the clinical instructor prior to submission to Washburn.

Failure to follow the above policy will result in documentation of the incident and a decrease in the clinical grade.

Revised: 2/4/04; 7/09; 7/10; 7/11; 12/14
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. All pregnant students in the Washburn University Radiologic Technology Program must make the final decision as to their acceptance or non-acceptance of this risk. The NCRP currently states that the dose-equivalent to the embryo and fetus should be limited to 0.5 rem (5 mSv) during the entire gestation period or 0.05 rem (0.5 mSv) in a month. Based on the above information, these guidelines shall be followed:

Upon confirmation of pregnancy, the student initiates the first step of declaring her pregnancy by voluntarily notifying the Program Director or clinical coordinator in writing. In the absence of the voluntary, written disclosure, a student cannot be considered pregnant. Detailed program policies will then be reviewed to provide the student with a complete understanding of her status in the program whether she chooses to complete the program during her pregnancy or following pregnancy leave.

The student should, upon notification of pregnancy, seek counsel with the Medical Physicist or the Radiation Safety Officer of the facility in which she trains relating to her recent exposure history, acceptable exposure levels, and radiation protection procedures. Documents concerning protection of and dose to the embryo will be provided. The pregnant student should seek the advice and counsel of her attending physician.

1. The student may voluntarily declare the pregnancy and provide verification. Once the pregnancy is declared, the student may elect from one of the following options:
   a. Submit a written request to withdraw from the program,
   b. Elect to continue in the program with stipulated modifications,
   c. Elect to continue in the program without any pregnancy modifications,
   d. Elect to take a leave of absence from clinical, or
   e. Elect to take a leave of absence from the program
   f. Declaration of pregnancy may be withdrawn at any time

   Once pregnancy is disclosed, the student will provide verification of pregnancy to ensure that protective measures for the fetus and mother are initiated. (see forms)

2. If pregnancy is documented and the student elects to remain in the program, the student will:
   b. Receive medical clearance by the physician that she will be physically capable to participate in normal clinical education activities (see form)
   c. Perform or participate in all functions and/or procedures
   d. Sign a release form which states Washburn University and its educational clinical sites will not be liable for injuries incurred.
   e. Review the clinical facility’s radiation protection guidelines with the Radiation Safety Officer.

The declared pregnant student must follow the established program policies and meet the same clinical and educational criteria as all other students before graduation and recommendation of the national certifying examination. The pregnant student must also follow the policies established by the clinical facility and will sign the current pregnancy form utilized by the facility. A copy will be kept in the University file.
The declared pregnant student must abide by the following rules regarding her radiation monitoring during her pregnancy:

1. The declared pregnant student will be provided with a second personnel radiation monitor with instructions to wear it at waist level and under the protective apron (when utilized). The radiation monitoring report associated with this badge should reflect that it is a fetal dose monitor. If at any time the abdominal badge suggests the dose to the fetus may be approaching recommended limits, the individual will be removed from areas in which radiation hazards exist.

2. During pregnancy, aprons of a minimum of 0.5 mm lead equivalent with wrap-a-around or front and back protection should be utilized at all times when in the areas of potential radiation exposure (maternity protective apron should be worn, if available). In fluoroscopic areas, declared pregnant students will refrain from patient handling during the fluoroscopic procedures, and will avoid proximity to the patient and to the source of radiation during spot film exposure.

3. If pregnancy is documented and the student elects to remain in the program without any pregnancy modifications, the student will:

   Continue clinical and didactic education without modification or interruption. The student accepts full responsibility for her own actions and the health of her baby. She relieves Washburn University, its faculty, and the clinical site of any responsibilities in case of adverse effects.

4. Should the student elect to take a leave of absence from the clinical assignments during her pregnancy, the following will occur:

   The student and faculty will determine if an incomplete may be given for the course or if the student should withdraw from the clinical course. The length of pregnancy leave will be determined by the student's attending physician and a written release must be given to the program director prior to returning to clinical. Leave should not be less than 6 weeks. Either situation may result in a delay of graduation and/or sitting for the ARRT examination.

5. Should the student elect to take a leave of absence from the program, the following will occur:

   If the student notifies the Program Director of her desire to return, she will be reinstated in the program. Depending on the semester of leave, reinstatement would be after completion of pregnancy leave at the appropriate semester of the next academic year. The length of pregnancy leave will be determined by the student's attending physician and a written release must be given to the program director prior to returning to clinical. Leave should not be less than 6 weeks. Graduation and ARRT examination dates could be affected.

6. Course of action (if declaring pregnancy):
1. Notification of pregnancy sent to program director or clinical coordinator. The Program will inform the clinical facility and provide copy of notification.
2. Read NRC Regulatory Guide 8.13 and appendix; discuss with clinical coordinator and Radiation Safety Officer.
3. Complete Washburn University/clinical facility release form and physician verification of pregnancy form and send to clinical coordinator.
4. Copies of forms will then be provided to the clinical facility and the student.

7. At any time, a student may retract her declaration of pregnancy by submitting the request in writing to the Program Director/Clinical Coordinator.
NOTIFICATION OF PREGNANCY

Formal, voluntary notification is the only means by which the clinical facility and the Washburn University Radiologic Technology program can ensure the dose to the embryo-fetus. In the absence of the voluntary, written disclosure, a student cannot be considered pregnant. Written notification should be given to the Program Director or Clinical Coordinator. Notification of the pregnancy will be communicated to appropriate personnel at the clinical site.

This form should be used for declaration of pregnancy.

DECLARATION OF PREGNANCY

I, ____________________________, am declaring that I am pregnant. I believe that I became pregnant in _______________, __________ (only the month and year need be provided.

(month)   (year)

I understand the radiation dose to my embryo/fetus during my entire pregnancy will not be allowed to exceed 0.5 rem (5 mSv) (unless that dose has already been exceeded between the time of conception and submitting this letter).

STUDENT SIGNATURE                     DATE

PROGRAM DIRECTOR OR
CLINICAL COORDINATOR SIGNATURE

I wish to withdraw my declaration of pregnancy.

STUDENT SIGNATURE                     DATE

PROGRAM DIRECTOR OR
CLINICAL COORDINATOR SIGNATURE
I, ___________________________, a student of the Washburn University Radiologic Technology Program currently assigned to ____________________________, am declaring my pregnancy. I understand the implications (of radiation and other hazards) stated in the Pregnancy Policy and NRC Regulatory Guide 8.13, and agree to adhere to the stated guidelines. I will not hold Washburn University or the clinical education facility/facilities liable in case of abnormalities to this pregnancy which may be caused by radiation exposure.

______________________________  ____________________________
Student Signature                  Date

Witnessed by: ________________________________  ____________________________
Program Director or Clinical Coordinator       Date

______________________________  ____________________________
Radiation Safety Officer of Facility                  Date

______________________________  ____________________________
Chairman, Department of Radiology                  Date
WASHBURN UNIVERSITY
RADIOLOGIC TECHNOLOGY PROGRAM

PHYSICIAN’S AWARENESS OF PREGNANCY

Student Name       DOB       SS#

The student named above is presently enrolled in the Washburn University Radiologic Technology Program. Due to the nature of the program, this student may be exposed to ionizing radiation or other hazards (i.e. lifting, possible exposure to contagious disease, etc). In order to determine the appropriate precautions, we need the following information:

1. Approximate date of conception ________________________________

2. Approximate date of delivery ________________________________

3. Present health status _________________________________________

   __________________________________________________________

4. Will the student be under your care during her pregnancy?  ____ Yes  ____ No

5. Do you recommend her continuation with Clinical Education?  ____ Yes  ____ No

6. Do you recommend that she continue in the program?  ____ Yes  ____ No

7. Recommended length of maternity leave__________________________

*Note: A written release is required before this student may return to clinical education.

______________________________
Physician’s Printed Name

______________________________   ________________________
Physician’s Signature            Date
University Policy
The Washburn University Student Conduct Code, approved by the Board of Regents, provides a procedure and rules by which a student will be afforded due process in the matter of alleged violations of university standards, rules and requirements governing academic and social conduct of students. Possession of alcohol and controlled substances on University property or in conjunction with University sponsored activities, except as expressly permitted by state law and University policies, is prohibited [See Student Conduct Code, II. Violations P and Q].

Directed Practice or Clinical Education is a University sponsored activity activated by student enrollment. A student shall be subject to disciplinary action or sanction upon violation of listed conduct proscriptions.

Allied Health Program Policy
Allied Health education requires directed practice or clinical education in a variety of health care settings. Health care facilities may be located within Topeka, within northeast Kansas or outside the state of Kansas. The Student Conduct Code remains in force regardless of student location.

Allied Health Programs follow a Code of Ethics, which requires every provider [as well as students] to maintain a competent level of practice. As students involved in clinical education are in direct contact with patients, it is the policy of the Allied Health Department that students performing in clinical education be unimpaired by the consumption of alcohol or controlled substance. Students who are found to be under the influence of drugs or alcohol, are subject to disciplinary action up to termination from the academic program in which they are enrolled.

Procedure
Reasonable suspicion to believe a student is under the influence of alcohol or controlled substance may exist when:

a) a controlled substance or alcoholic or cereal malt beverage is in the possession of the student, on his/her person or under her/his control. Under his/her control includes, but it not limited to the student's locker, automobile, book bag, duffel bag; or,

b) appearance of impairment, including, but not limited to: Increased drowsiness, decreased motor coordination, changes in pupil size, excitation, euphoria, alcohol odor on the breath, intoxicated behavior without alcohol odor, increased or repeated errors, decreased concentration, memory problems, notable change in verbal communication (stuttering, loud, incoherent, slurred, etc.) or written communication, frequent or unexplained disappearances, irrational or aggressive behavior (verbal or physical) and/or disorientation.

The contact person (clinical instructor, clinical supervisor, etc.) shall:

a) Evaluate whether possession or behavior change(s) constitute reasonable suspicion that a student is under the influence of controlled substance(s) or alcohol;

b) Document the conditions giving rise to the reasonable suspicion and shall, with at least one witness, obtain from the student a listing of all medications, prescription and over-the-counter, the student is taking;
c) Contact the appropriate administrator at the health facility and the designated Allied Health Faculty contact person to report the matter;

d) Relieve the student from performing duties at the facility;

e) present, in the company of at least one witness, the student with consent/refusal form for laboratory testing of student’s urine and/or blood samples; and

f) In the event student consents to testing, arrange for the collection of the appropriate urine and/or blood sample. If student assignment is at a hospital, appropriate testing will be done there. If not, the student should be driven to a facility that can provide testing. The student is responsible for any costs associated with testing.

Laboratory testing may include, but is not limited to, any or all of the following tests:

g) Blood alcohol
   Urine drug screen for street/illegal drugs:
   Amphetamines/methamphetamines,
   Cocaine,
   Class opiates,
   Phencyclidine (PCP),
   Marijuana,
   Class barbiturates, and
   Class benzodiazepines

Urine drug screen for prescription drugs

The student, once relieved from performance of his/her duties, executing the consent/refusal form, and, if consent is given, giving samples, shall be provided transportation to his/her residence.

In the event test results are negative, the student may return to his/her health care assignment after consultation with Allied Health Faculty. If the results are positive, the matter will be reported to the Chair of Allied Health for appropriate action.
I, ____________________________, SS# _________________________, hereby consent to provide a urine and/or blood sample for the purpose of testing for the presence of controlled substance [unlawful drugs and prescription drugs] at a designated laboratory. I understand that I am responsible for payment of said laboratory testing. I authorize release of the test results to the appropriate Allied Health Program Faculty at Washburn University. Test results may be released to other parties as applicable, such as the Chairperson of Allied Health. Call prior to faxing the report to Washburn University, Allied Health Department, 785-231-1027. I understand that refusing to provide a sample(s), tampering with samples or providing false information on a specimen's chain of custody form, may constitute grounds for termination in the educational program. I understand that failure to pass the drug/alcohol test may result in disciplinary action up to and including termination.

Laboratory testing includes the following tests:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Student Signature: ________________________________________________________

Clinical Instructor/Supervisor Signature: ______________________________________

Witness Signature: _________________________________________________________

Date and Time: __________________________________________________________________

REFUSAL FORM FOR DRUG AND ALCOHOL TESTING

I, ____________________________, SS# _________________________, do not consent to provide a urine and/or blood sample for the purpose of reasonable cause testing. I understand that refusal to participate in testing may result in my termination in the educational program.

Student Signature: ________________________________________________________

Clinical Instructor/Supervisor Signature: ______________________________________

Witness Signature: _________________________________________________________

Date and Time: __________________________________________________________________
Alcohol and Drug Policy

Washburn University, as an institution receiving federal financial aid for students in attendance, has adopted policies for prohibiting the use of alcohol and other drugs by students and employees in the workplace in compliance with the federal laws and regulations of the U.S. Department of Education. In addition, the University has adopted and implemented an alcohol and other drug prevention program. As part of this program, the University is required to provide the following information annually to all students and employees.

Washburn University prohibits the unlawful possession, use/consumption or distribution of illicit drugs and alcohol by students and employees on the University property or as part of any of its activities. The sale and/or possession of alcoholic beverages is prohibited on campus except as approved by the Washburn University Board of Regents. (On occasion, state law does permit the University to designate "non-classroom instruction" areas where alcohol liquor may be consumed.)

Violations of this policy, applicable city ordinances, or state law will result in disciplinary action as well as criminal prosecution. The Washburn University Student Disciplinary Code and Drug-Free Workplace Policy contain these prohibitions and establish appropriate sanctions for violation of University policy.

Summary of State and Federal Laws Concerning Alcohol and Other Drugs

Federal, state and local laws provide severe penalties for the unlawful possession, use, or distribution of illicit drugs and alcohol.

Under Kansas state statutes:
1. Possession of alcoholic liquor/cereal malt beverage by a person 18 to 20 years of age is a Class C Misdemeanor, punishable by confinement up to one month and/or a minimum fine of $200. The person also may be requested to submit to a State approved rehabilitation /educational awareness program and/or perform 40 hours of community service.
2. Furnishing alcoholic beverages/cereal malt beverage to a minor may lead to imprisonment up to 6 months and/or a minimum fine of $200.
3. Possession of certain controlled substances may be punishable on a first offense with imprisonment of up to 23 months and/or a fine of up to $100,000.
4. Possession with intent to sell narcotics may lead, on a first conviction, to imprisonment of up to 57 months and/or a fine up to $300,000. Personal and real property used in connection with drug trafficking may be seized.

Under federal law:
1. Simple possession of controlled substances, other than for possession of a controlled substance with a mixture or substance with a cocaine base, is punishable on a first offense by one year in prison and/or a fine up to $1,000.
2. First conviction for distribution of narcotics or controlled substances to a person under 21 years of age may result in a sentence of 20 years to life in prison and/or a $2,000,000 fine.
3. The distribution and/or manufacture of narcotics or controlled substances in or near schools, colleges, playgrounds, community centers, and video arcades is also punishable by imprisonment from 20 years to life and/or a fine of $2,000,000.

Enforcement

As required by law, University officials will forward to the appropriate law enforcement authorities any knowledge they have about suspected violations of laws relating to alcohol and other drugs.

Faculty and staff – sanctions

The WU Policies, Regulations, and Procedures Manual states that employees who violate the University's prohibitions on the use of alcohol and other drugs will be subject to disciplinary action, which may result in temporary suspension of employment without pay or permanent termination of employment with the University.

Students – sanctions

As prescribed in the Student Conduct Code, students who are found to be in violation of the University's policies on the use of alcohol and other drugs may be subject to disciplinary sanctions. These sanctions may include suspension from the University for a stated period of time or expulsion from the University with no possibility of return. The University also reserves the right to notify the parents of students under the age of 21 who have violated the University's alcohol and other drug
policies.

LOCAL AND ON-CAMPUS REFERRAL INFORMATION

On Campus

Alcohol and other drug awareness information is available through Student Health Services, the Counseling and Testing Services, the Office of Student Life, the Alcohol and Drug Abuse Program in the School of Applied and Continuing Education, and the University Police Department. Staff members of the Counseling and Testing Services are available for students and employees to talk about possible substance abuse problems and to make appropriate referrals. In addition, a list of drug counseling and rehabilitation programs in the Topeka/Shawnee County area is available from the Washburn Human Resources Office and the Counseling and Testing Services.

Counseling and Testing Services -- Center for Learning and Student Success (CLASS) (Morgan Hall 122, 670-1299). Counselors provide initial assessment and referral resources if needed and a postalcohol treatment (if done) update/follow up. Counseling Services will also provide similar assistance to Washburn faculty and staff.

Student Health Services (Morgan Hall 170, 670-1470) - Personnel are prepared to provide initial evaluation, referral and emergency medical support.

University Police Department (Morgan Hall 156, 670-1153) - University Police Department provides emergency assistance and maintains a 24-hour phone line.

Off Campus

<table>
<thead>
<tr>
<th>Recovery Center at St. Francis</th>
<th>Al-Anon &amp; Al - Teen Family Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>4646 NW Fielding Rd. Topeka, KS 66618 246-3100</td>
<td>357-8725</td>
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<table>
<thead>
<tr>
<th>Women's Recovery Center</th>
<th>Sims-Kemper Clinical Counseling &amp; Recovery Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>1324 SW Western Topeka, KS 66604 233-5885</td>
<td>1709 SW Medford Ave. Topeka, KS 66604 233-0666</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Battered Women's Task Force</th>
<th>Valeo Behavioral Health Care - Recovery Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>YWCA 225 SW 12 Topeka, KS 66612 354-7927</td>
<td>330 SW Oakley Dr. Topeka, KS 66606 233-1730</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alcoholics Anonymous</th>
<th>Shawnee Regional Prevention &amp; Recovery Services, Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2100 SW Central Park Ave. Topeka, KS 66611 296-9309</td>
<td>2209 SW 29th Topeka, KS 66611 266-8666</td>
</tr>
</tbody>
</table>
Health Effects of Alcohol and Other Drugs

Alcohol
Alcohol is "legal", but it is a drug just the same. Alcohol kills more people and causes more diseases and social problems than all the other drugs put together. Drinking can cause addiction, and it doesn't matter who you are or what you do for a living. Long-term, heavy drinking is linked to a range of health problems, including heart and liver disease, cancer, ulcers, pancreatitis, and stroke. On average, alcoholics' lives are shortened by 12 years because of drinking.

Drinking is of special concern for pregnant women. Women who drink alcohol during pregnancy may give birth to infants with physical deformities, brain damage, and mental retardation. Collectively, these symptoms are known as Fetal Alcohol Syndrome (FAS); and they are irreversible. If you are pregnant or nursing, do not drink or use drugs.

Other Possible Effects: high blood pressure; increased susceptibility to infection; impotence; diarrhea; enlarged heart; brain atrophy; deficits in problem solving, abstract thinking and difficult memory tasks; links to violence and aggression; accidental death and injury; dementia; blackouts; seizures; memory loss; hallucinations; nausea; and headaches.

Stimulants or Amphetamines (Dexedrine, Methamphetamine or "Crystal", "Crank", and "Speed")
This is a group of drugs that increases alertness and physical activity. Amphetamines increase heart and breathing rates and blood pressure, dilate pupils and decrease appetite. A user can experience insomnia, loss of appetite, sweating, dry mouth, blurred vision, and dizziness. In addition to the physical effects, users feel restless, anxious and moody, become excitable and have a false sense of power and security. People who use large amounts of the drug experience amphetamine psychosis --- they have auditory, visual and tactile hallucinations, feel intensely paranoid/suspicious, have irrational thoughts and beliefs (delusions), and are mentally confused. Amphetamine overdose can also cause cardiac arrhythmias, headaches, convulsions, hypertension, rapid heart rate, coma and death. Amphetamines are psychologically and physically addictive.

Nicotine
Nicotine is the active chemical found in tobacco. Its chief hazards are cancer of the lungs, larynx and mouth. Exposure to second-hand smoke also increases these health risks, even for a non-smoker. Nicotine is a highly addictive stimulant and contributes to approximately 340,000 Americans' deaths annually.

Caffeine
Caffeine is a stimulant found in coffee, tea, soft drinks, cocoa, and in some over-the-counter drugs (e.g., aspirin, diet pills, cough and cold remedies). High doses may cause nausea, diarrhea, insomnia, headaches, nervousness/agitation, and trembling. Caffeine may increase rates of miscarriage and low birth weight. Caffeine withdrawal symptoms include fatigue, headache, nausea and irritability.

Cocaine/Crack
Cocaine is an extremely addictive stimulant. The intense euphoria is short-lived and prompts users to use again and again. Physical effects of cocaine/crack use include increases in blood pressure, heart rate, respiration and body temperature. Continued use produces insomnia, hyperactivity, anxiousness, agitation and malnutrition. Overdoses can be lethal.

Anabolic Steroids
Steroids are lab-made versions of the male sex hormone, testosterone. Side effects include liver and kidney dysfunction, high blood pressure, heart disease, degeneration of the testicles, premature baldness, and acne. Abnormal aggression, mood swings and psychiatric symptoms are linked to steroid use.
Hallucinogens
(LSD, PCP, DMT, Mescaline and Psilocybin) Hallucinogens are a group of drugs that are very unpredictable. "Bad trips" are not uncommon, and the user may experience morbid hallucinations and feel panicked, confused, paranoid and out of control. The heightened suggestibility and intensified emotions that hallucinogens create worsen any pre-existing emotional problems. Physical effects of hallucinogen use include dilated pupils; sweating; insomnia; loss of appetite; tremors; and increased body temperature, heart rate and blood pressure.

Narcotics (Opium, Morphine, Codeine, Heroin)
Narcotics are used medically to relieve pain. Narcotics are also used inappropriately for their mood-altering effects and are both physically and psychologically addictive. Medical problems associated with narcotic abuse include infection of the heart valves, skin abscesses, congested lungs, liver disease, tetanus, anemia and pneumonia. Death can occur from overdose.

Sedatives/Barbiturates (Valium, Librium, Xanax, Quaaludes)
Sedatives have appropriate medical uses, but are also drugs of abuse. They cause slurred speech, disorientation and "drunken-like" behavior. They are physically and psychologically addictive. Withdrawal symptoms include anxiety, insomnia, tremors, delirium, convulsions, and possible death.

Marijuana
Marijuana has over 400 different chemical compounds and contains even more cancer-causing agents than are found in tobacco. Even low doses interfere with coordination, perception of time passage, reasoning and judgment, all of which make driving under its influence extremely dangerous. Marijuana use causes short-term memory loss, decreases sperm and testosterone production in men, and may disrupt the menstrual cycle and cause miscarriage and stillbirth in women.
SECTION III:
CLINICAL OBJECTIVES
CLINICAL ASSIGNMENT

Radiographer students are assigned to a cluster of radiology facilities for clinical education (patient related) prior to the start of the program. Clinical education provides the opportunity to apply knowledge learned in the classroom and lab setting, as well as development of the necessary skills to be successful as a radiographer. Entry-level skill is mandatory in the areas of patient care, communication, radiation safety, routine and non-routine procedures, professionalism, equipment usage and proper application of radiation. Through assignment at two or more radiology facilities, the radiographer student develops the necessary flexibility and adaptability with exam protocols, equipment, variable patients and different radiologists.

Students are typically assigned to one primary clinical site for the initial year of the program and then rotate out during the second year for an extended period. Assignment to a secondary clinical site ranges from 8-16 weeks depending on a variety of factors, i.e. pediatric volume.

- When transferring to another clinical site, two documents are completed on the T-system: Orientation (to the applicable site) and Room Rotation Checklist. These documents must be completed in the first two weeks of the new assignment as part of the orientation process.

Clinical education assignments for the current academic year include:

- **Group 1**: Atchison (with clinic), Stormont-Vail Health Care/Cotton-O’Neil Clinic and VAMC (Topeka).
- **Group 2**: St. Francis Health, Holton Community Hospital, Nemaha Valley Community Hospital and Hiawatha Community Hospital
- **Group 3**: Geary Community Hospital (with orthopedic clinic) and Mercy Regional Health Center
- **Group 4**: Newman Regional Health (plus orthopedic office), Coffey County Medical Center and Ottawa Family Physicians
- **Group 5**: Lawrence Memorial Hospital, Ransom Memorial Hospital, Ottawa Family Physicians, and VAMC (Leavenworth)
- **Group 6**: Truman Medical Center, Truman Medical Center Lakewood

CLINICAL EDUCATION SITE DESCRIPTIONS

- **Atchison Hospital, Atchison**: acute care community hospital and clinic
  - 25-bed inpatient facility with emergency department, medical and surgical services
- **Coffey County Medical Center, Burlington**: acute care community hospital
  - 36-bed acute care facility with emergency medical services, medical and surgical services
- **Geary Community Hospital, Junction City**: acute care community hospital and orthopedic clinic
  - 36-bed acute care facility with emergency department, bariatric unit, medical and surgical services
- **Hiawatha Community Hospital, Hiawatha**: acute care community hospital
  - Less than 25-bed facility with emergency department, medical and surgical services
- **Holton Community Hospital, Holton**: acute care community hospital
  - Less than 25-bed facility with emergency department, medical and surgical services
- **Lawrence Memorial Hospital, Lawrence**: regional hospital
  - Over 50-bed acute care with emergency department, medical and surgical services, orthopedics, radiation oncology
- **Mercy Regional Health Center, Manhattan**: regional hospital
  - Over 50-bed acute care with emergency department, medical and surgical services, orthopedics
- **Nemaha Valley Community Hospital, Seneca**: acute care community hospital
  - Less than 25-bed facility with emergency department, medical and surgical services
- **Newman Regional Health, Emporia**: acute care community hospital and orthopedic clinic
  - 25-bed critical access, emergency, medical and surgical services
- **Ottawa Family Physicians**: family practice office
Family medicine, i.e. pediatrics, adults, geriatric care, minor surgery, radiology

- St. Francis Health: regional hospital
  - Over 100-bed Level III trauma center, emergency department, medical and surgical services, radiation oncology, dialysis, orthopedics
- Stormont Vail Health Care and Cotton-O'Neil Clinic: regional hospital and clinic
  - Over 100-bed Level II trauma center, emergency department, medical and surgical services, radiation oncology, orthopedics, neonatal ICU
  - Out-patient clinic
- Truman Medical Center: regional hospital and clinic
  - Over 100-bed Level I trauma center, emergency department, medical and surgical services, radiation oncology, orthopedics
- VA Medical Center, Topeka: medical and surgical facility for veterans
  - Acute care and long term care
- VA Medical Center, Leavenworth: medical and surgical facility for veterans
  - Acute care and long term care

**DIAGNOSTIC ROTATIONS**

Diagnostic or medical imaging comprises the major component of the radiographer program. Diagnostic rotation areas include: fluoroscopy, general, chest, genitourinary, surgery and mobile. Clinical experience in diagnostic radiology is obtained primarily through weekday scheduling. However, evening, weekend, and holiday shifts offer the student a varied experience with diagnostic examination performance. Objectives and guidelines are available for each of these clinical areas. Diagnostic hours may vary with the needs of each health facility.

Atchison Hospital:
Diagnostic 8:00am – 430pm

Coffey County Medical Center:
Diagnostic 8-430pm

Geary Community Hospital:
Diagnostic 8-430pm

Hiawatha Community Hospital:
Diagnostic 8-430pm

Holton Community Hospital:
Diagnostic 8-430pm

Lawrence Memorial Hospital:
Diagnostic 8-430pm

Mercy Regional Health Center
Diagnostic 7-330pm alternating with 830-530pm

Nemaha Valley Community Hospital
Diagnostic 8-430pm

Newman Regional Health
Diagnostic 8-430pm

Ottawa Family Physicians
Diagnostic 8-430pm
Stormont Vail Health Care & Cotton-O’Neil Clinic
Diagnostic 8-430pm
Surgery 730-4pm
Saturday 8-430pm

St. Francis Health
Diagnostic 730-4pm
Surgery 730-4pm

Truman Medical
Diagnostic 7-330pm alternating with 8-430pm

VA Medical Centers, Topeka and Leavenworth
Diagnostic 8-430pm
RADIOLOGIC TECHNOLOGY TERMINAL COMPETENCIES

The following represents skills which should be attained by the end of the second year of education. Terminal competencies shall include:

Professional Responsibility
1. The graduate will support the profession’s code of ethics and comply with the profession’s scope of practice.
2. The graduate will accept responsibility for personal and professional growth through continuing education.

Interpersonal Communication
1. The graduate will demonstrate knowledge and skills relating to verbal, nonverbal and written medical communications in patient care intervention and professional relationships.

Patient Care and Management
1. The graduate will provide basic patient care and comfort and anticipate patient needs.
2. The graduate will recognize emergency patient conditions and initiate first aid and basic life-support procedures.

Imaging Procedures
1. The graduate will operate medical imaging equipment, processing equipment and accessory devices.
2. The graduate will position the patient and medical imaging system to perform procedures.
3. The graduate will evaluate radiographic images for appropriate positioning and image quality.
4. The graduate will demonstrate knowledge of anatomy, physiology and pathology.

Radiation Protection
1. The graduate will practice radiation protection for the patient, self and others.

Quality Assurance
1. The graduate will demonstrate knowledge and skills relating to quality assurance activities.
2. The graduate will recognize equipment malfunctions and report them to the proper authority.

Clinical Education
1. The graduate will competently perform a full range of radiologic procedures.

Critical Thinking and Problem Solving
3. The graduate will display independent judgment in the completion of medical imaging procedures which encompasses ethical behavior, communication, patient care, imaging routines, radiation safety and quality assurance.
GENERAL DIAGNOSTIC ROTATION

Students will observe and perform diagnostic examinations throughout the clinical phase of the education program. Competency evaluations are required.

Objectives
a. Provide consistent radiation protection for the patient and operator.
b. Attend to each patient's safety and comfort.
c. Act in a professional manner at all times.
d. Demonstrate proper body mechanics.
e. Observe proper isolation techniques.
f. Demonstrate the ability to attain accurate vital signs.
g. Communicate in an effective manner with patients, physicians and other allied health workers.
h. Demonstrate proper processing technique.
i. Observe the principles of sterile technique.
j. Demonstrate proper usage and care of radiographic equipment such as the overhead tube and radiographic table.
k. Provide accurate administration of contrast media.
l. Develop expertise in radiographic positioning.
m. Develop efficiency with exposure factor selection.
n. Gain an accurate patient history through the review of the requisition, chart and patient questioning.
o. Operate support equipment such as gastric pump, IV pump, oxygen tank, catheters, splints and drug administration materials.
p. Accurately perform CPR if needed.
q. Demonstrate competency through the evaluation process on chest, abdomen, upper extremity, lower extremity, spine, and IVU.
r. Demonstrate the ability to perform non-routine examinations.

FLUOROSCOPY ROTATION

Students will observe and perform fluoroscopy examinations throughout the clinical phase of the education program. Competency evaluations are required.

Objectives
a. Provide consistent radiation protection for the patient and operator.
b. Attend to each patient's safety and comfort.
c. Act in a professional manner at all times.
d. Demonstrate proper body mechanics.
e. Observe proper isolation techniques.
f. Demonstrate the ability to attain accurate vital signs.
g. Communicate in an effective manner with patients, registered radiologic technologists, physicians and other allied health workers.
h. Demonstrate proper processing technique.
i. Observe the principles of sterile technique.
j. Demonstrate proper usage and care of radiographic equipment such as the image intensifier, video camera, overhead tube, television, and radiographic table.
k. Provide accurate administration of contrast media.
l. Develop expertise in radiographic positioning.
m. Develop efficiency with exposure factor selection.
n. Gain an accurate patient history through the review of the requisition, chart and patient questioning.
o. Provide radiologist assistance through professionally approved methods.
p. Operate support equipment such as gastric pump, IV pump, oxygen tank, catheters, and drug administration materials.
q. Accurately perform CPR if needed.
r. Demonstrate competency through the evaluation process on barium enema, Upper GI and special examinations.
s. Demonstrate the ability to perform examinations such as small bowel, barium swallow, sialogram, myelogram, etc.

SURGERY AND MOBILE CLINICAL

Surgery and portable (mobile) radiography are an integral functioning portion of radiology. While knowledge and competency in these areas are essential for employment in a hospital facility, it is not a required function in a clinic setting. However, the adaptation skills learned in these areas as related to positioning, exposure factors and patient care prove invaluable in the diagnostic clinic. Students will observe and perform surgical mobile examinations throughout the clinical phase of the program. Students are required to complete competency evaluations in both the surgical C-arm and portable/mobile areas.

Objectives
a. Locate the surgical department within the hospital.
b. Identify within the surgery department the areas of:
   - locker or changing rooms
   - darkroom facilities
   - mobile equipment storage area
   - control desk
   - surgical suites
c. Dress in surgical clothes according to the department guidelines.
d. Describe the procedure for checking the schedule for possible cases in which radiology may be involved.
e. Be oriented to the procedure used to alert the radiographer that surgery is ready for their assistance.
f. Describe the difference between areas and personnel located within a surgical suite that are considered "sterile" and should not be touched or walked near, versus "safe" areas in which radiographer will perform their duties.
g. Be punctual and observe assigned hours.
h. Observe, assist or perform all radiology cases.
i. Observe proper radiation protection for patients, nursing personnel, and operators.
j. Attend to patient comfort and safety.
k. Demonstrate proper usage and care of all mobile units.
l. Demonstrate proper usage and care of all mobile fluoroscopy units (C-arm).
m. Demonstrate proper processing technique.
n. Develop competency in the positioning aspect of surgical radiography.
o. Develop competency in exposure factor selection.
p. Demonstrate completion of examinations.
q. Complete tasks as delegated by the surgery technologist in radiology.
r. Understand the role of the radiographer during various examinations.
WEEKEND CLINICAL (DAY HOURS)

It is recognized that the maximum patient load in radiology is performed in the morning and early afternoon hours. Emergency and overflow compose the later afternoon examinations. In order to provide each student with a solid base in clinical and to utilize examinations, students have the option of performing a limited number (2 per semester) of Saturday clinicals. A student electing to perform a Saturday clinical will forego Friday daytime clinical in the preceding week. This will allow the student ample time to complete required studies. Clinical instructors, with faculty input, will approve Saturday clinicals.

If the clinical instructor is not assigned that particular day, the supervising technologist will be the clinical instructor.

A student unable to attend a scheduled weekend clinical will follow the standard reporting procedure. Completion of these hours will occur during finals on weekend hours.

Objectives

a. To provide additional opportunities for skill development in contrast studies, thorax, abdomen, extremity, spine and surgery.
b. To expand the ability to function under different management styles (supervisors, protocols, staff technologists).
c. To further the technologist-patient relationship.
d. To develop and maintain professionalism.
e. To provide consistent radiation protection for the patient and operator.
f. To perform under continued supervision by a technologist as competency dictates.
g. To document ability by completion of competency evaluations.

EVENING CLINICAL

While day clinical education provides students with a variety of experiences, it is recognized that other time frames also provide valuable learning situations. Radiology functions on the evening shift are composed of pre-admit, trauma and in-patient examinations. Fluoroscopy is seldom performed, while orthopedic examinations increase in frequency. Surgical cases will involve primarily orthopedic reductions. Portable cases involve CCU and ICU chest examinations, and emergency room trauma. A greater number of pediatric patients is seen during the evening hours.

The required evening rotation may begin June 1st and will consist of twelve (12) shifts, occurring in summer session I (beginning June 1st), fall semester II, and spring semester II. Hours will be 2:30-10:30pm and will utilize the evenings of Monday, Tuesday, Wednesday, Thursday, Friday, Saturday and Sunday. A maximum of three (3) shifts may be completed on the 12:15pm to 8:15am shift. A minimum of six (6) rotations must be completed on weekends (Friday, Saturday, and Sunday).

Assignment to the evening shifts will be determined by the student and Clinical Instructor. Options for completion include consecutive weeks on evenings or a mix of day and evening shifts. However, a student must not exceed 40 hours per week of class and clinical assignments.

Evening Clinical Objectives

a. Perform radiographic procedures with a focus on trauma, orthopedic, surgical reduction, mobile and pediatric.
b. Knowledge building under both routine and non-routine situations.
c. Equipment manipulation under non-routine situations.
d. Attend to each patient’s comfort and safety, being alert to emergency situations.
e. Expand the ability to function under different management styles.
f. Further develop the decision making ability of a technologist (no radiologist available, more responsible for patient flow)
g. Communicate directly with attending physicians using professional behavior.
h. Improve the technologist-patient relationship with patients under a variety of stress (emergency, pediatric, parents of pediatric patients).
i. Perform under supervision by a technologist as competency dictates.
j. To document ability by completion of competency evaluations.

Due to the limited number of assignments to evening clinical, compensation time may NOT be used during this rotation.

Any absences from an assignment to evening clinical must be completed during evening hours.

At the clinical instructors and faculty meeting the following guidelines were adopted concerning completion of evening clinical:

1. 12 evening shifts will be completed by each student during the second year (fall semester, spring semester or summer session). Students should not wait until the later part of the second year to complete this required clinical rotation since a delay in graduation could occur.
2. Students will place their requests for evening hours on the schedule change form and submit to the clinical instructor. The clinical coordinator may contact the evening supervisor for approval and return an answer to the student. A one week period for this process should be allotted.
3. Only one student will be scheduled for each evening shift.
4. A record of evening shifts will be kept in each student's clinical folder.
5. Any changes in the approved schedule must be made at least 48 hours in advance.
6. No evenings may be scheduled when on rotations other than diagnostic (Ex: MR, CT, OR, other facility).
7. Performance evaluations are required to be completed (1 for every 4 evening shifts- 3 total).
8. If a holiday is worked the student will only receive compensation time for the exact time present.
Low Patient Workload Guidelines
Radiology workloads consistently occur in peaks and valleys. During peak workload sessions, students actively participate and learning results. During the sessions of low patient availability however, students may fall into a non-learning mode. Rather than provide students with “free leave,” faculty and clinical instructors should stimulate the student to further the learning level. Listed below are suggestions for educators.

1. Demonstrate room warm-up procedures.
2. Demonstrate review of a patient chart.
3. Demonstrate/practice patient care techniques: BP, pulse, CPR, turn on O2 tanks, etc.
4. Practice equipment usage: C-arm, mobile, radiographic, fluoroscopic, etc.
5. Clean cassettes, other equipment or assigned area.
6. Perform required QA tests such as reject analysis.
7. Assist with supply orders.
8. Send to medical library for 30 minutes of professional reading.
9. Image critique: A) Have students access several of their performed cases for review and/or B) Have RT access interesting and unusual cases.
10. Anatomy review (see clinical syllabus).
11. Medical terminology review (see clinical syllabus).
12. Simulated positioning by students on routine and non-routine examinations: Merchants, baby chests, c-spines, etc.
13. Send to other imaging modalities for observation.
14. Examination or quizzes: Using laboratory evaluation form, ask the student to complete various examinations.
SECTION IV:
CLINICAL EVALUATIONS
There are core clinical competencies that all individuals must demonstrate to establish eligibility for ARRT certification. These requirements are in addition to graduation from an educational program accredited by a mechanism acceptable to ARRT. The requirements listed are the minimum core clinical competencies necessary to establish eligibility for participation in the ARRT Radiography Examination. ARRT encourages individuals to obtain education and experience beyond these core requirements.

Students must demonstrate competency in all 33 of the mandatory Radiological Procedures. At least 29 of the 33 mandatory Radiological Procedure competencies must be demonstrated on patients (not phantoms or simulated). Students must demonstrate competency in at least 20 of the 41 elective Radiological Procedures. One elective imaging procedure must be from head section. Two elective imaging procedures must be from the fluoroscopy studies section, one of which must be either an upper GI or a Barium Enema. Fifteen (15) of the electives must be demonstrated on patients. The remaining five (5) may be demonstrated by simulation.

Students must also demonstrate competency in various patient care activities. These activities should be performed on patients, however some may be simulated.

ARRT recommends that educational programs include a mechanism of continuing and terminal competency evaluation to assure students maintain proficiency during the course of the program. Competency demonstration should incorporate patient-specific variations such as age and pathology.

Failure to pass an evaluation within two (2) attempts will require completion of the remedial policy with additional patient examinations prior to the third attempt. (See clinical syllabi for complete remedial policy.)

**Failed Competency Policy:**
If a mandatory competency evaluation is failed, the student must repeat that competency within the same semester. If the student fails to complete the repeat in the same semester, they will accrue 0% for that exam. However, the student is still required to successfully repeat the competency evaluation even if they receive a 0%, so the ARRT guidelines are met.

Competency evaluation scoring is recorded as a whole number only (no tenths or hundreds 00.00) even though the Trajecsys online tracking system does list the grade/score beyond a whole number.

*What is meant by "trauma extremity"?* "Trauma" procedures refer to radiographic examinations of the extremity or other anatomic structure in which the patient cannot move and assume the position used for routine radiographic procedures. Radiographic and accessory equipment are moved around the patient to avoid causing additional injury or discomfort. Professional judgment and creativity are a part of trauma radiography.

*What if the radiologist produces all radiographs?* Since the students cannot complete radiographs following radiologist fluoroscopy, the procedure should be simulated. Simulation includes phantom and/or peer positioning. Simulation should include a verbal explanation of steps that cannot be completed in the simulated setting. Overheads generally completed as a part of a fluoroscopic procedure may be done on a positioning phantom. If simulation includes peer positioning, administration of contrast agents and radiation exposure is not allowed. Evaluation of radiographic images should be simulated with radiographs from a teaching file.

**CLINICAL COMPETENCY EVALUATIONS**

Competency evaluations will be performed in each clinical course. Each student will request competency evaluations prior to the end of each semester. A minimum number of specific examinations must be performed prior to specific evaluations.

A score of 86 is required to successfully complete a competency evaluation. A grade of less than 86 (within two attempts) will result in remedial course work (see remedial policy). A record of each category evaluation will remain in a permanent portion of each student's file.
CONTINUED COMPETENCY EVALUATIONS – Continued competency evaluations CANNOT be completed the same semester as the original competency (since the purpose is to demonstrate continued skill)

Students will demonstrate continued competency on a variety of examinations. These competencies will be completed during AL135, AL236, and AL237. Continued competencies will consist of seventeen (17) examinations previously completed as category competencies. An examination may be utilized only once as a continued competency. Only one (1) examination of the chest may be utilized.

Continued competencies must include each of the following examinations: KUB, shoulder, knee, trauma extremity, hip, and two (2) spines. The remaining competencies are the choice of the student/technologist. Continued competencies require a passing grade of 92 or above.

The clinical instructor will complete a general competency via Trajecsys and then the student will add the exposure factor information. Program faculty will verify and then release for student review.

FINAL COMPETENCY EVALUATIONS

A final evaluation will be conducted during the last 8 weeks of AL 238 (after spring break). A minimum grade of 92% must be achieved to obtain a competency rating. A grade of less than 92% will require the exam to be repeated and a possible incomplete for the course. This could delay graduation.

The clinical instructor will complete a general competency via Trajecsys and then the student will add the exposure factor information. Program faculty will verify and then release for student review. All final series competency evaluations must be demonstrated on patients. The final series will consist of the following examinations:

1) KUB
2) 3 upper extremities
3) 3 lower extremities
4) 2 spines
5) Chest (any mode)
6) Mobile study

Each clinical course will require the following evaluations:

AL 134: Minimum of 7 evaluations (maximum 12)
AL 135: Minimum of 11 evaluations, (maximum 16) plus 4 continued competency evaluations
AL 236: Minimum of 12 evaluations, (maximum 17) plus 6 continued competency evaluations
AL 237: Minimum of 13 evaluations, (maximum 18) plus 7 continued competency evaluations
AL 238: Any remaining competency examinations & final competency evaluations
<table>
<thead>
<tr>
<th>COMPETENCY RECORD</th>
<th>NAME ______________________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandatory: 33</td>
<td>Elective: 20</td>
</tr>
<tr>
<td>Continued: 17</td>
<td>Final: 11</td>
</tr>
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</table>

**MANDATORY (33)**

<table>
<thead>
<tr>
<th>Chest &amp; Thorax</th>
<th>Pt / Sim</th>
<th>Category</th>
<th>Continued</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chest, routine 18-65</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Chest, routine &gt;65</td>
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</tr>
<tr>
<td>Chest AP, Wheelchair/ Stretcher</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ribs</td>
<td></td>
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</table>

**Upper Extremities**

<table>
<thead>
<tr>
<th>Finger or thumb</th>
<th>Pt / Sim</th>
<th>Category</th>
<th>Continued</th>
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</tr>
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<tbody>
<tr>
<td>Hand</td>
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</tr>
<tr>
<td>Wrist</td>
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</tr>
<tr>
<td>Forearm</td>
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<tr>
<td>Elbow</td>
<td></td>
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</tr>
<tr>
<td>Humerus</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Shoulder</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Trauma Shoulder w/ Scapular Y, Transthoracic or Axillary</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Trauma upper extremity (non-shoulder) ‡</td>
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**Lower Extremities**

<table>
<thead>
<tr>
<th>Foot</th>
<th>Pt / Sim</th>
<th>Category</th>
<th>Continued</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Ankle</td>
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</tr>
<tr>
<td>Tibia &amp; Fibula</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knee</td>
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<tr>
<td>Femur</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trauma Lower Extremity ‡</td>
<td></td>
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</tr>
<tr>
<td>Spine and Pelvis</td>
<td>Pt / Sim</td>
<td>Category</td>
<td>Continued</td>
<td>Final</td>
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<tr>
<td>-----------------</td>
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</tr>
<tr>
<td>Cervical spine</td>
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<tr>
<td>Thoracic spine</td>
<td></td>
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<tr>
<td>Lumbosacral spine</td>
<td></td>
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<tr>
<td>Pelvis</td>
<td></td>
<td></td>
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<tr>
<td>Hip (min AP &amp; lateral)</td>
<td></td>
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<tr>
<td>Cross Table Lateral Hip</td>
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<table>
<thead>
<tr>
<th>Abdomen KUB</th>
<th>Pt / Sim</th>
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<tbody>
<tr>
<td>Abdomen, Supine (KUB)</td>
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<tr>
<td>Abdomen, upright</td>
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<table>
<thead>
<tr>
<th>Surgical Studies</th>
<th>Pt / Sim</th>
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<tbody>
<tr>
<td>C-Arm Orthopedic (w/images)</td>
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<table>
<thead>
<tr>
<th>Mobile Studies</th>
<th>Pt / Sim</th>
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</thead>
<tbody>
<tr>
<td>Chest</td>
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</tr>
<tr>
<td>Abdomen</td>
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<tr>
<td>Port Orthopedic (OR, RR or pt. room)</td>
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<table>
<thead>
<tr>
<th>Pediatrics (6 or Younger)</th>
<th>Pt / Sim</th>
<th>Category</th>
<th>Continued</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chest, routine</td>
<td></td>
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<table>
<thead>
<tr>
<th>OTHER STUDIES</th>
<th>Pt / Sim</th>
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</thead>
<tbody>
<tr>
<td>Multiple Exam</td>
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<table>
<thead>
<tr>
<th>ELECTIVE (20)</th>
<th>Pt / Sim</th>
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<tbody>
<tr>
<td>Chest &amp; Thorax</td>
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<tr>
<td>Chest, Lateral Decubitus</td>
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<tr>
<td>Sternum</td>
<td></td>
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<tr>
<td>Soft-Tissue Neck</td>
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<table>
<thead>
<tr>
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<th>Pt / Sim</th>
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</thead>
<tbody>
<tr>
<td>Scapula</td>
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<tr>
<td>Clavicle</td>
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<tr>
<td>AC Joints</td>
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<table>
<thead>
<tr>
<th>Lower Extremities</th>
<th>Pt / Sim</th>
<th>Category</th>
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</thead>
<tbody>
<tr>
<td>Patella</td>
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<tr>
<td>Toes</td>
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<tr>
<td>Calcaneus (Os calcis)</td>
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*Must complete 1 exam from Head list*

<table>
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<tr>
<th>Head</th>
<th>Pt / Sim</th>
<th>Category</th>
<th>Continued</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skull (min 3 projections)</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Category</td>
<td>Pt / Sim</td>
<td>Continued</td>
<td>Final</td>
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<tr>
<td>Sinuses (min 2 projections)</td>
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<tr>
<td>Facial Bones (min 2 projections)</td>
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<tr>
<td>Orbits</td>
<td></td>
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<td></td>
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<tr>
<td>Zygomatic Arches</td>
<td></td>
<td></td>
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<tr>
<td>Mandible (panorex acceptable)</td>
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<tr>
<td>Nasal Bones</td>
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<table>
<thead>
<tr>
<th>Spine and Pelvis</th>
<th>Pt / Sim</th>
<th>Category</th>
<th>Continued</th>
<th>Final</th>
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</thead>
<tbody>
<tr>
<td>Trauma C-spine (cross table lateral)</td>
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<tr>
<td>Scoliosis series</td>
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<tr>
<td>Sacrum/Coccyx</td>
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<tr>
<td>Sacroiliac Joints</td>
<td></td>
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<table>
<thead>
<tr>
<th>Abdomen</th>
<th>Pt / Sim</th>
<th>Category</th>
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</thead>
<tbody>
<tr>
<td>Abdomen Decubitus</td>
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<tr>
<td>IVU</td>
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Must complete 2 exams from this group (*one must be UGI or BE*)

<table>
<thead>
<tr>
<th>Fluoroscopy Studies</th>
<th>Pt / Sim</th>
<th>Category</th>
<th>Continued</th>
<th>Final</th>
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<tbody>
<tr>
<td>Upper GI (Double/Single)</td>
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<tr>
<td>Barium Enema (Double/Single)</td>
<td></td>
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<tr>
<td>Small Bowel Series</td>
<td></td>
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<tr>
<td>Esophagus (min RAO)</td>
<td></td>
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</tr>
<tr>
<td>Cystography/Cystourethrography (with images)</td>
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<tr>
<td>ERCP</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Myelography (with images)</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Arthrography (with images)</td>
<td></td>
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<table>
<thead>
<tr>
<th>Surgical Studies</th>
<th>Pt / Sim</th>
<th>Category</th>
<th>Continued</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-Arm (non-orthopedic)</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Pediatrics (6 or Younger)</th>
<th>Pt / Sim</th>
<th>Category</th>
<th>Continued</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Abdomen</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile Study</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Upper Extremity</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Lower Extremity</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
OTHER STUDIES | Pt / Sim | Category | Continued | Final
--- | --- | --- | --- | ---
Long Legs |  |  |  |  
Wt. Bearing Foot or Knee |  |  |  |  
Spine: flexion & extension |  |  |  |  
T-Tube Cholangiogram |  |  |  |  
Casted Extremity |  |  |  |  
Sternoclavicular Joint |  |  |  |  
TMJ |  |  |  |  

Do not comp. on more than 3 of the "other studies" elective examinations.

‡ Trauma is considered a serious injury or shock to the body. With trauma extremity modifications that include the movement of radiographic equipment around the patient to avoid causing additional injury or discomfort must be made.

All 33 mandatory procedures must be completed with a passing score. 29 of the 33 must be demonstrated on patients.

20 of the 41 elective procedures must be completed with a passing score.

One elective imaging procedure must be from the head section. Two elective imaging procedures must be from the fluoroscopy studies section, one of which must be either an upper GI or a Barium Enema. Fifteen (15) of the 20 electives must be demonstrated on patients. The remaining five (5) may be demonstrated by simulation.

Continued comps must include: KUB, shoulder, knee, trauma extremity, hip, 2 spines, & a BE, UGI or IVP. Only one (1) examination of the chest may be used.

The final competencies include: KUB, 3 upper extremities, 3 lower extremities, 2 spines, chest and mobile study.

<table>
<thead>
<tr>
<th>GENERAL PATIENT CARE</th>
<th>DATE COMPLETED</th>
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</thead>
<tbody>
<tr>
<td>CPR</td>
<td></td>
</tr>
<tr>
<td>Vital Signs (blood pressure, pulse, respiration)</td>
<td></td>
</tr>
<tr>
<td>Sterile &amp; Aseptic Technique via Surgery and Fluoroscopy Comps</td>
<td></td>
</tr>
<tr>
<td>Venipuncture Simulation Lab</td>
<td></td>
</tr>
<tr>
<td>Transfer of Patient via Orientation and Comp Evaluations</td>
<td></td>
</tr>
<tr>
<td>Care of patient medical equipment (oxygen tank, IV tubing)</td>
<td></td>
</tr>
</tbody>
</table>

Received

OR Objectives # 1

OR Objectives # 2

OR Objectives # 3
Fall 1
Comp ___________________

Spring 1
Comp ___________________
Cont. Comp ______________

Summer 1
Comp ___________________
Cont. Comp ______________

Fall 2
Comp. ____________________
Cont. Comp. ______________

Spring 2
Comp ____________________
Cont. Comp. ______________

Summer 2
Comp ____________________
Cont. Comp. ______________

Summary:
Mandatory Complete
Elective Complete
Final Complete
### Exam Preparation and Completion

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<tr>
<th>Task</th>
<th>Yes</th>
<th>Partial</th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td>Evaluate Requisition &amp; Prepare Room</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dismiss Patient, Complete Records &amp; Clean Room</td>
<td></td>
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</tbody>
</table>

### Projection 1:

- If RT makes a correction, then mark “No” in the applicable section

#### Produce Image

- Patient Prep & Assessment; Obtain History & Explain Exam
- Assist Patient & Correct Patient Positioning
- Perform with Confidence in Reasonable Time
- Correct IR w/ Proper Placement and/or Appropriate Collimation
- Control Panel Set Accurately
- Correct Tube Placement & Central Ray Entry
- Radiation Protection: gonadal shielding, exposure factors, etc.

#### Image Evaluation

- Demonstrated all required anatomical parts
- Proper Centering (anatomy/tube) & Correct Positioning
- Adequate Exposure Factors (FS, mAs, kVp, etc.)
- Correct Identification: R/L w/o annotation, Pt. ID, etc.
- **Recognize Acceptable Criteria:** Student submission of mAs, kVp, exposure indicator # and Identify Anatomy per list

### Projection 2:

- **Produce Image**
- Patient Prep & Assessment; Obtain History & Explain Exam
- Assist Patient & Correct Patient Positioning
- Perform with Confidence in Reasonable Time
- Correct IR w/ Proper Placement and/or Appropriate Collimation
- Control Panel Set Accurately
- Correct Tube Placement & Central Ray Entry
- Radiation Protection: gonadal shielding, exposure factors, etc.

#### Image Evaluation

- Demonstrated all required anatomical parts
- Proper Centering (anatomy/tube) & Correct Positioning
- Adequate Exposure Factors (FS, mAs, kVp, etc.)
- Correct Identification: R/L w/o annotation, Pt. ID, etc.
- **Recognize Acceptable Criteria:** Student submission of mAs, kVp, exposure indicator # and Identify Anatomy per list

### Projection 3:

- **Produce Image**
- Patient Prep & Assessment; Obtain History & Explain Exam
- Assist Patient & Correct Patient Positioning
- Perform with Confidence in Reasonable Time
- Correct IR w/ Proper Placement and/or Appropriate Collimation
- Control Panel Set Accurately
- Correct Tube Placement & Central Ray Entry
- Radiation Protection: gonadal shielding, exposure factors, etc.

#### Image Evaluation

- Demonstrated all required anatomical parts
- Proper Centering (anatomy/tube) & Correct Positioning
<table>
<thead>
<tr>
<th>Adequate Exposure Factors (FS, mAs, kVp, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correct Identification: R/L w/o annotation, Pt. ID, etc.</td>
</tr>
<tr>
<td><strong>Recognize Acceptable Criteria:</strong> Student submission of mAs, kVp, exposure indicator # and Identify Anatomy per list</td>
</tr>
</tbody>
</table>
COMPETENCY EVALUATION - GENERAL

Purpose: The competency evaluation is a measurable method by which an individual student's ability to accurately perform routine procedures can be documented. The assurance of a student's skill is obtained through performance of a patient examination by the student with observation and evaluation by faculty or a clinical coordinator.

The competency evaluation system enables faculty to ascertain that didactic theory and clinical skills are being brought together by a student. The attitude portion of the student technologist may also be reviewed. The competency evaluation system also allows the student to proceed from observation to active performance at an individual rate of development. The competency evaluation system lastly enables the staff technologist to provide the correct level of supervision.

Criteria for Competency Evaluations

Exam Preparation and Completion
Evaluate Requisition and Prepare Room
1. Identify procedures and any additional projections to be performed
2. Recall patient name and age
3. Identify mode of transportation
4. Recall history
5. Have room clean and orderly
6. Have appropriate image receptor(s) available
7. Have appropriate supplies accessible
8. Have x-ray unit turned on and prepared for exposures
9. Have tube in proper position

Dismiss Patient, Complete Records & Clean Room
1. Gives patient appropriate follow-up instructions
2. Dismisses patient properly (stat reading, call-report, etc.)
3. Completes paper work (computer procedures, complete nurses’ notes, etc.)
4. Radiographs placed with correct folder if applicable
5. Acquire readings and distribute as appropriate
6. Cleans all necessary equipment
7. Prepares room for next examination
8. Restocks any supplies

Produce Image
Patient Prep & Assessment; Obtain History & Explain Exam
1. Identifies correct patient
2. Ascertains patient is appropriately dressed
3. Removes artifacts (jewelry, dentures, elastic, etc.)
4. Introduces self to patient
5. Assesses patient's ability to move
6. Knows medications given
7. Assesses level of consciousness
8. Is able to recognize patient limitations
9. Asks appropriate questions to determine history and type of injury
10. Verifies that history matches requisition history and examination to be performed
11. Appropriate explanation to patient
12. Answers patient questions

Assist Patient & Correct Positioning
1. Assist patient from mode of transportation to table
2. Proper handling of IV's, catheters, etc.
3. Attends to patient safety and comfort
4. Attends to patient modesty
5. Converses with patient
6. Gives proper moving and breathing instructions
7. Follows proper transmission-based precautions
8. Patient properly positioned (AP, oblique, lateral, etc.)
9. Anatomy properly centered
10. Appropriate landmarks utilized
11. Adapt for patient's condition
12. Performs correct projections as per department protocol

Perform With Confidence in a Reasonable Time
1. Instills patient confidence
2. Performs without undue hesitation
3. Reasonable amount of time varies with difficulty of exam/patient

Correct IR w/ Proper Placement and/or Appropriate Collimation
1. Chooses correct size cassette (as applicable)
2. Correct cassette orientation for given situation (as appropriate)
3. Collimates to anatomic part

Control Panel Set Accurately
1. Proper factors selected
2. Adapts for changes in SID, grid, etc.
3. Utilizes exposure/technique chart
4. Adapts for patient conditions of size, disease, age, cast, etc.

Correct Tube Placement & Central Ray Entry
1. Tube direction correct
2. SID correct
3. CR angled correctly
4. CR centered to IR/part
5. Tube centered to Bucky

Radiation Protection: gonadal shielding, exposure factors, etc.
1. Collimates to part
2. Uses shielding as appropriate
3. Utilizes immobilization devices
4. Selects optimum technique factors
5. Adjusts technique for motion

Image Evaluation
Demonstrated all required anatomical parts

Proper Centering (anatomy/tube) & Correct Positioning
1. Anatomy centered to IR
2. Tube centered to part and IR
3. Part shown in proper prospective
4. Patient obliqued or rotated correctly

Adequate Exposure Factors (FS, mAs, kVp, etc.)
1. Proper brightness, gray scale and resolution
2. Compensation of factors for pathology
3. Correct exposure used to produce image
4. Proper exposure indication range

Correct Identification: R/L w/o annotation, Pt. ID, etc.
1. Correct R & L markers placed on the image before exposure, not annotated
2. R & L markers properly located
3. Other markers utilized as necessary
4. Patient information and date visible and correct
Recognize Acceptable Criteria; Student Submission of mAs, kVp, exposure indicator # and Identify Anatomy
1. Identifies correct position of anatomy
2. Identifies correctness of brightness, gray scale, resolution & distortion
3. Determines if patient identification is complete
4. Determines if radiation safety was provided for patient and operator
5. Recognizes if repeat is necessary
6. Student adds exposure factor data (mAs, kVp & exposure indicator #)
7. Student identifies applicable anatomy per list

**Repeat Image**
Deduct 5 points for each repeat from the final grade. This deduction will occur after Washburn University facility has reviewed the competency exam and manually deducts the points from the comp form within the Trajecsys system.
Exam Preparation and Completion

<table>
<thead>
<tr>
<th>Evaluate Requisition &amp; Prepare Room</th>
<th>Yes</th>
<th>Partial</th>
<th>No</th>
<th>NA</th>
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<tbody>
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<td>Control Panel Accurate for Fluoroscopy and/or Overhead Images</td>
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<tr>
<td>Assist Radiologist during Fluoroscopy</td>
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<td>Dismiss Patient, Send Images, Complete Records &amp; Clean Room</td>
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**Projection 1:**
If RT makes a correction, then mark “No” in the applicable section

<table>
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<tr>
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**Image Evaluation**

Demonstrated all required anatomical parts
Proper Centering (anatomy/tube) & Correct Positioning
Adequate Exposure Factors (FS, mAs, kVp, etc.)
Correct Identification: R/L w/o annotation, Pt. ID, etc.

**Recognize Acceptable Criteria:** Student submission of mAs, kVp, exposure indicator # and Identify Anatomy per list

**Projection 2:**

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Correct Identification: R/L w/o annotation, Pt. ID, etc.

**Recognize Acceptable Criteria:** Student submission of mAs, kVp, exposure indicator # and Identify Anatomy per list

**Projection 3:**

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Criteria for Fluoroscopy Competency Evaluations

Examination Preparation and Completion
Evaluate Requisition and Prepare Room
  1. Identify procedures and any special projections to be performed
  2. Recall patient name and age
  3. Identify mode of transportation
  4. Recall history
  5. Contrast media prepared
  6. Assemble sterile items as necessary
  7. Have appropriate supplies available
  8. Room clean and orderly
  9. Have appropriate cassettes as applicable
 10. Image intensifier prepared
 11. Table and bucky in proper position

Control Panel Accurate for Fluoroscopy and Overhead Images
  1. Proper factors set

Assist Radiologist during Fluoroscopy
  1. Instills confidence in radiologist
  2. Anticipates changes in the exam and acts appropriately

Dismiss Patient, Send Images, Complete Records and Clean Room
  1. Gives patient appropriate follow-up instructions
  2. Dismisses patient properly
  3. Completes paper work (computer procedures, charting, etc.)
  4. Acquire readings and distribute as appropriate (call report or stat)
  5. Cleans all necessary equipment
  6. Prepares room for next examination
  7. Restocks any supplies used

Projections
Patient Prep & Assessment; Obtain History & Explain Exam
  1. Identify correct patient
  2. Introduce self to patient
  3. Ascertain patient is appropriately dressed
  4. Remove artifacts (jewelry, dentures, applicable clothing, etc.)
  5. Assess patient's ability to move
  6. Know medications given
  7. Assess level of consciousness
  8. Know patient limitations
  9. Ask appropriate questions to determine history
 10. Verifies that history matches requisition history and examination to be performed
 11. Appropriate explanation to patient
 12. Answers patient questions

Assist Patient; Correct Patient Positioning
  1. Assist patient from mode of transportation to table
  2. Proper handling of IV's, catheters, etc.
  3. Attends to patient safety, comfort and modesty
  4. Converse with patient
  5. Gives proper moving and breathing instructions
  6. Follows proper transmission-based precautions
  7. Introduce patient to radiologist
  8. Assist with contrast media
  9. Demonstrates ability to properly position requested projections
Perform With Confidence in Reasonable Time
1. Instills patient confidence
2. Performs without undo hesitation
3. Reasonable amount of time varies with difficulty of exam/patient

Correct Image Receptor w/ Proper Placement and Appropriate Collimation
1. Chooses correct size image receptor (as applicable)
2. Correct cassette orientation for given situation (as appropriate)
3. Collimates to anatomic part

Correct Tube Placement & Central Ray Entry
1. Tube direction correct
2. SID correct
3. CR angled correctly
4. CR centered to IR/part
5. Tube centered to Bucky

Radiation Protection
1. Collimates to part
2. Uses shielding as appropriate
3. Utilizes immobilization devices
4. Selects optimum exposure factors
5. Adjusts exposure factors to prevent motion

Image Evaluation
Demonstrated all required anatomical parts

Proper Centering (anatomy/tube) & Correct Positioning
1. Anatomy centered to IR
2. Tube centered to part and IR
3. Part shown in proper prospective
4. Patient obliqued or rotated correctly

Adequate Exposure Factors
1. Proper brightness, gray scale and resolution
2. Compensation of factors for pathology
3. Correct exposure used to produce image
4. Proper exposure indication range

Correct Identification: R/L w/o annotation, Pt. ID, etc.
1. Correct R & L markers placed on the image before exposure, not annotated
2. R & L markers properly located
3. Other markers utilized as necessary
4. Patient information and date visible and correct

Recognize Acceptable Criteria; Student Submission of mAs, kVp, exposure indicator # and Identify Anatomy
1. Identifies correct position of anatomy
2. Identifies correctness of brightness, gray scale, resolution & distortion
3. Determines if patient identification is complete
4. Determines if radiation safety was provided for patient and operator
5. Recognizes if repeat is necessary
6. Student adds exposure factor data (mAs, kVp & exposure indicator #)
7. Student identifies applicable anatomy per list

Repeat Image
Deduct 5 points for each repeat from the final grade. This deduction will occur after Washburn University facility has reviewed the competency exam and manually deducts the points from the comp form with in the Trajecsys
MOBILE COMPETENCY SAMPLE (Located in the Trajecsys online tracking system)

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<td>Radiation Protection (collimation, technique, shielding, etc.)</td>
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</table>

**Image Evaluation**

- Demonstrated all required anatomical parts
- Proper Centering (anatomy/tube) & Correct Positioning
- Adequate Exposure Factors (FS, mAs, kVp, etc.)
- Correct Identification: R/L w/o annotation, Pt. ID, etc.

**Recognize Acceptable Criteria:** Student submission of mAs, kVp, exposure indicator # and Identify Anatomy per list
Criteria for Mobile Competency Evaluations

**Examination Preparation and Completion**
Evaluate Requisition and Select Correct Image Receptor

1. Identify procedures and special projections to be performed
2. Recall patient name and age
3. Recall history
4. Selects correct IR size as applicable

Completes Records

1. Completes paper work (computer procedures, charting, etc.)
2. Radiographs placed with correct folder as applicable
3. Leaves patient room as found
4. Acquire readings and distribute as appropriate (stat)

**Produced Images**
Prepare & Assess Patient; Obtain History & Explain Examination

1. Identify correct patient
2. Remove artifacts (jewelry, dentures, etc.)
3. Introduce self to patient
4. Assess ability to move
5. Know medications given
6. Assess level of consciousness
7. Know patient limitations
8. Ask appropriate questions to determine history and type of injury
9. Verifies that history matches requisition history and examination to be performed
10. Appropriate explanation to patient
11. Answers patient questions

Assist Patient & Correct Patient Positioning

1. Proper handling of IV’s, catheters, etc.
2. Attends to patient safety, comfort and modesty
3. Converses with patient
4. Gives proper moving and breathing instructions
5. Follows proper transmission-based precautions
6. Patient properly positioned and knows correct projections
7. Anatomy properly centered
8. Appropriate landmarks utilized
9. Adapts for patient condition

Perform With Confidence in Reasonable Time

1. Instills patient confidence
2. Performs without undo hesitation
3. Reasonable amount of time varies with difficulty of exam/patient

Correct Tube Placement & Central Ray Entry

1. Tube direction correct
2. SID appropriate for conditions
3. CR angled correctly
4. CR centered to IR/part

Correct Image Receptor w/ Proper Placement & Appropriate Collimation

1. Chooses correct size cassette (as applicable)
2. Correct cassette orientation for given situation (as appropriate)
3. Collimates to anatomic part
Control Panel Correct
1. Proper factors selected
2. Adapts for changes in SID, grid, etc.
3. Adapts for patient conditions of size, disease, age, cast, etc.

Radiation Protection
1. Collimates to part
2. Uses shielding as appropriate
3. Utilizes immobilization devices
4. Selects optimum exposure factors
5. Adjusts exposure factors to reduce motion

Image Evaluation
Demonstrated all required anatomical parts

Proper Centering (anatomy/tube) & Correct Positioning
1. Anatomy centered to IR
2. Tube centered to part and IR
3. Part shown in proper prospective
4. Patient obliqued or rotated correctly

Adequate Exposure Factors (FS, mAs, kVp, etc.)
1. Proper brightness, gray scale and resolution
2. Compensation of factors for pathology
3. Correct exposure used to produce image
4. Proper exposure indication range

Correct Identification: R/L w/o annotation, Pt. ID, etc.
1. Correct R & L markers placed on the image before exposure, not annotated
2. R & L markers properly located
3. Other markers utilized as necessary
4. Patient information and date visible and correct

Recognize Acceptable Criteria; Student Submission of mAs, kVp, exposure indicator # and Identify Anatomy
1. Identifies correct position of anatomy
2. Identifies correctness of brightness, gray scale, resolution & distortion
3. Determines if patient identification is complete
4. Determines if radiation safety was provided for patient and operator
5. Recognizes if repeat is necessary
6. Student adds exposure factor data (mAs, kVp & exposure indicator #)
7. Student identifies applicable anatomy per list

Repeat Image
Deduct 5 points for each repeat from the final grade. This deduction will occur after Washburn University facility has reviewed the competency exam and manually deducts the points from the comp form with in the Trajecsys system.
<table>
<thead>
<tr>
<th>Exam Preparation and Completion</th>
<th>Yes</th>
<th>Partial</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portable to OR suite</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Complete records and remove equipment from OR</td>
<td></td>
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<tr>
<td><strong>Projection 1:</strong></td>
<td></td>
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<tr>
<td>If RT makes a correction, then mark “No” in the applicable section</td>
<td></td>
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</tr>
<tr>
<td><strong>Produced Images</strong></td>
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</tr>
<tr>
<td>Perform with Confidence in Reasonable Time</td>
<td></td>
<td></td>
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<tr>
<td>Correct Tube placement</td>
<td></td>
<td></td>
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<tr>
<td>Correct IR w/ Proper Placement and/or Appropriate Collimation</td>
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<tr>
<td><strong>Image Evaluation</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Demonstrated all required anatomical parts</td>
<td></td>
<td></td>
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<tr>
<td>Correct Identification: R/L w/o annotation, Pt. ID, etc.</td>
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<tr>
<td><strong>Recognize Acceptable Criteria:</strong></td>
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<tr>
<td>Student submission of mAs, kVp, exposure indicator # and Identify Anatomy per list</td>
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<td><strong>Projection 2:</strong></td>
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<tr>
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<td><strong>Projection 3:</strong></td>
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<tr>
<td><strong>Produced Images</strong></td>
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</tbody>
</table>
Criteria for Non C-arm Surgery Evaluation

**Examination Preparation and Completion**
Portable to OR Suite
1. Easily maneuvers machine into and within OR suite
2. Communicate with staff in an appropriate manner

Complete Records and Removes Equipment from OR Suite
1. Completes paperwork (computer, etc.)
2. Acquires radiologist readings as appropriate
3. Removes equipment and readies for next case

**Produced Images**
Perform with Confidence in Reasonable Time
1. Instills confidence in physician and staff
2. Performs without undo hesitation

Correct Tube Placement
1. SID correct
2. CR centered to part
3. CR angled correctly
4. Tube centered to IR

Correct Image Receptor w/ Proper Placement & Appropriate Collimation
1. Chooses correct size cassette (as applicable)
2. Correct image receptor orientation for given situation
3. Collimates to anatomic part of interest

**Image Evaluation**
Demonstrated all required anatomical parts

Correct Identification: R/L w/o annotation, Pt. ID, etc.
1. Correct R & L markers placed on the image before exposure, not annotated
2. R & L markers properly located
3. Other markers utilized as necessary
4. Patient information visible and correct; date visible and correct

Recognize Acceptable Criteria; Student Submission of mAs, kVp, exposure indicator # and Identify Anatomy
1. Identifies correct position of anatomy
2. Identifies correctness of brightness, gray scale, resolution & distortion
3. Determines if patient identification is complete
4. Determines if radiation safety was provided for patient and operator
5. Recognizes if repeat is necessary
6. Student adds exposure factor data (mAs, kVp & exposure indicator #)
7. Student identifies applicable anatomy per list

**Repeat Image**
Deduct 5 points for each repeat from the final grade. This deduction will occur after Washburn University facility has reviewed the competency exam and manually deducts the points from the comp form with in the TrajeCSys system.
<table>
<thead>
<tr>
<th>Exam Preparation and Completion</th>
<th>Yes</th>
<th>Partial</th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td>Setup (enter appropriate exam info) and removal of C-ARM</td>
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<tr>
<td>Assist with draping; maintain sterile field and communicate with staff</td>
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<tr>
<td><strong>Projection 1:</strong></td>
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<td>If RT makes a correction, then mark “No” in the applicable section</td>
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<td><strong>Produced Images</strong></td>
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<td>Perform with Confidence in Reasonable Time</td>
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<tr>
<td>Radiation Protection: collimation etc.</td>
<td></td>
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<tr>
<td>Demonstrated all anatomical parts with proper image orientation</td>
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<tr>
<td><strong>Image Evaluation</strong></td>
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<tr>
<td>Assure patient information is correct and markers are correct etc.</td>
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<tr>
<td>Stored and reproduced images appropriately (print or send to PACS)</td>
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<tr>
<td><strong>Recognize Acceptable Criteria:</strong> Student submission of mAs, kVp, exposure indicator # and Identify Anatomy per list</td>
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<td><strong>Projection 3:</strong></td>
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<td></td>
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</tr>
</tbody>
</table>
Criteria for C-arm Surgery Evaluation

Examination Preparation and Completion
Equipment Setup and Removal of C-arm
1. Easily maneuvers machine in and out of OR suite
2. Turn machine on and set correct controls (on/off, kVp, power plug, etc.)
3. Enter appropriate patient and exam information into the monitor
4. Clean machine as necessary

Assist with Draping; Maintain Sterile Field and Communicate with Staff
1. Follows sterile technique without resulting contamination
2. Discuss any pertinent information with staff and physician

Produced Images
Perform with Confidence in a Reasonable Time
1. Instills confidence in physician and staff
2. Performs without undo hesitation

Radiation Protection
1. Maintain radiation safety to OR staff and self
2. All staff has suitable protection apparel, announces when making exposure
3. Proper collimation

Demonstrated all anatomical parts with proper image orientation
1. Properly moved c-arm to desired anatomic area
2. CR centered to part
3. CR angled correctly
4. Able to utilize appropriate locks to produce an image
5. Proper orientation of image on the monitor

Image Evaluation
Assure patient information is accurate and markers are correct, etc.

Stored and reproduced images appropriately
1. Able to send images to PACS or print

Recognize Acceptable Criteria; Student Submission of mAs, kVp, exposure indicator # and Identify Anatomy
1. Identifies correct position of anatomy
2. Identifies correctness of brightness, gray scale, resolution & distortion
3. Determines if patient identification is complete
4. Determines if radiation safety was provided for patient and operator
5. Recognizes if repeat is necessary
6. Student adds exposure factor data (mAs, kVp & exposure indicator #)
7. Student identifies applicable anatomy per list

Repeat Image
Deduct 5 points for each repeat from the final grade. This deduction will occur after Washburn University facility has reviewed the competency exam and manually deducts the points from the comp form with in the Trajecsys system.
### General Competency Evaluation Example for Hand

<table>
<thead>
<tr>
<th>Exam Preparation and Completion</th>
<th>Yes</th>
<th>Partial</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluate Requisition &amp; Prepare Room</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dismiss Patient, Complete Records &amp; Clean Room</td>
<td>✓</td>
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</tr>
</tbody>
</table>

**Projection 1: PA Hand**

If RT makes a correction, then mark “No” in the applicable section

<table>
<thead>
<tr>
<th>Produce Image</th>
<th>Yes</th>
<th>Partial</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Prep &amp; Assessment; Obtain History &amp; Explain Exam</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assist Patient &amp; Correct Patient Positioning</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perform with Confidence in Reasonable Time</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct IR w/ Proper Placement and/or Appropriate Collimation</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Panel Set Accurately</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct Tube Placement &amp; Central Ray Entry</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiation Protection: gonadal shielding, exposure factors, etc.</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Image Evaluation**

- Demonstrated all required anatomical parts | ✓  |
- Proper Centering (anatomy/tube) & Correct Positioning | ✓  |
- Adequate Exposure Factors (FS, mAs, kVp, etc.) | ✓  |
- Correct Identification: R/L w/o annotation, Pt. ID, etc. | ✓  |

**Recognize Acceptable Criteria;** Student submission of mAs, kVp, exposure indicator # and Identify Anatomy per list | ✓  |

<table>
<thead>
<tr>
<th>Projection 2: Oblique Hand</th>
<th>Produce Image</th>
<th>Yes</th>
<th>Partial</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Prep &amp; Assessment; Obtain History &amp; Explain Exam</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assist Patient &amp; Correct Patient Positioning</td>
<td>✓</td>
<td></td>
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<tr>
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<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct IR w/ Proper Placement and/or Appropriate Collimation</td>
<td>✓</td>
<td></td>
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<tr>
<td>Control Panel Set Accurately</td>
<td>✓</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Correct Tube Placement &amp; Central Ray Entry</td>
<td>✓</td>
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</tr>
<tr>
<td>Radiation Protection: gonadal shielding, exposure factors, etc.</td>
<td>✓</td>
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</tr>
</tbody>
</table>

**Image Evaluation**

- Demonstrated all required anatomical parts | ✓  |
- Proper Centering (anatomy/tube) & Correct Positioning | ✓  |
- Adequate Exposure Factors (FS, mAs, kVp, etc.) | ✓  |
- Correct Identification: R/L w/o annotation, Pt. ID, etc. | ✓  |

**Recognize Acceptable Criteria;** Student submission of mAs, kVp, exposure indicator # and Identify Anatomy per list | ✓  |

<table>
<thead>
<tr>
<th>Projection 3: Lateral Hand</th>
<th>Produce Image</th>
<th>Yes</th>
<th>Partial</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Prep &amp; Assessment; Obtain History &amp; Explain Exam</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
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<tr>
<td>Control Panel Set Accurately</td>
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<td>✓</td>
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</tbody>
</table>
Radiation Protection: gonadal shielding, exposure factors, etc. ✓

Image Evaluation

Demonstrated all required anatomical parts ✓
Proper Centering (anatomy/tube) & Correct Positioning ✓
Adequate Exposure Factors (FS, mAs, kVp, etc.) ✓
Correct Identification: R/L w/o annotation, Pt. ID, etc. ✓

Recognize Acceptable Criteria: Student submission of mAs, kVp, exposure indicator # and Identify Anatomy per list ✓

Comments:
Did not shield
Unable to ID all carpal bones
No marker on PA
No marker on oblique
mAs and kVp listed, but no S#
Lateral: positioning appeared to be okay, but image showed distal portion of 5th digit clipped and rotated. Had to repeat.

Scoring:
76 points possible with 67 points achieved = 88; then minus 5 points for one repeat = 84
**SIMULATION COMPETENCY EVALUATION**  
Radiologic Technology Program

<table>
<thead>
<tr>
<th>Student</th>
<th>Date</th>
<th>Score</th>
</tr>
</thead>
</table>

Pass ≥ 80

| Exam | Clinical | 2 | 3 | 4 | 5 |

**Directions:** Either a Clinical Instructor or WU Faculty will complete a simulation evaluation. Cranium simulations must be performed at Washburn University lab utilizing the phantom.

**Criteria:**  
2 = acceptable  
1 = partially done or needs minor improvement  
0 = needs major improvement or is unacceptable

### Simulation of Patient Preparation & Completing Procedure

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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1. Patient: obtain history, explain examination, assist patient</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2. Equipment: control panel, IR, tube, bucky, SID, OID, etc.</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3. Time: perform with confidence in a reasonable time</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4. Radiation Safety: proper collimation &amp; placement of shielding devices</td>
<td>2</td>
<td>1</td>
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</table>

### Simulation of Positioning (Using peer or phantom)

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1. Proper Patient Position</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2. Correct Tube Placement (angles, etc)</td>
<td>2</td>
<td>1</td>
<td>0</td>
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</tbody>
</table>

### Image Production with Phantom

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<tr>
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<tbody>
<tr>
<td>1. Anatomy Included</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2. Correct Positioning</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>3. Adequate Exposure Factors</td>
<td>2</td>
<td>1</td>
<td>0</td>
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</tbody>
</table>

### Critique of Image by Student (phantom or file)

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1. Identify Anatomy</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2. Recognize acceptable criteria</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

**SCORING:** The highest grade that can be achieved on a simulation is "90", due to the absence of requisition evaluation, the steps of finalizing an exam, patient assessment, and possibly patient communication, and patient care.

If images were **not** produced:

16 points = 90   15 = 85  14 = 80  13 = 75

If images were produced:

22 points = 90   21 = 85  20 = 80  19 = 75
CONTINUED COMPETENCY EVALUATION

Student________________________ Date________ Grade________________________

Pass ≥ 90

Exam_____________________________ Clinical 2 3 4 5

Patient ID_________________________ Patient Age________

Part I: An RT(R) will complete items 1-8 while *directly observing* the student and circle the appropriate level of performance.

Criteria: 2 = acceptable; 1 = partially done or needs minor improvement; 0 = needs major improvement or is unacceptable.

THE STUDENT WILL DEMONSTRATE ABILITY IN THE AREAS OF:

| 1. PREPARATION: evaluate requisition, assess the patient & prepare exam room. | 2 | 1 | 0 |
| 2. THE PATIENT: communication, ethics, attention to comfort & safety | 2 | 1 | 0 |
| 3. RADIATION SAFETY: patient, self & others (collimation, shielding, etc.) | 2 | 1 | 0 |
| 4. POSITIONING: correct positioning in a reasonable time (if the RT makes a correction to prevent a repeat, circle "0") | 2 | 1 | 0 |
| 5. EQUIPMENT: setup & usage during the exam of control panel, cassettes, tube, bucky, etc. (if the RT makes a correction to avoid a repeat, circle "0") | 2 | 1 | 0 |
| 6. IMAGE(S): demonstrate correct anatomy, centering, positioning, exposure, ID & no artifacts (If CR imaging, the exposure index must be in an acceptable range for a "2" rating) | 2 | 1 | 0 |
| 7. IMAGE EVALUATION: identify image anatomy, positioning, and factors of exposure (Evaluation of anatomy must be thorough, utilize required list). | 2 | 1 | 0 |
| 8. FINALIZE: dismiss patient, clean room & complete records | 2 | 1 | 0 |
| 9. RECORD the mAs, kVp & exposure index of each projection on the next page. | 2 | 1 | 0 |

SCORING:

<table>
<thead>
<tr>
<th>Points</th>
<th>Rating</th>
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<tbody>
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Repeat image = minus 5 points per repeat

List repeated projection(s): ________________________________
Part II: The student will further evaluate the examination.

Student Directions: Upon completion of the imaging procedure, mentally review your performance.

A. List any adaptation required for this exam as compared to a "routine." Examples include: IR size, patient size, patient age, patient disease, etc.

B. What change(s) or improvement(s) could you have made in the areas of positioning, image quality and/or patient care? Patient care includes radiation protection, comfort/safety, assessment and communication.

C. Exposure factors:

mAs __________ mAs __________ kVp __________
kVp __________ kVp __________ kVp __________
Exposure ind. ______ Exposure ind. ______ Exposure ind. ______
PERFORMANCE EVALUATIONS

As you participate in your radiography education, you will be expected to demonstrate that you have indeed learned what is required to become a professional radiographer. There are three main component areas, all important, all interrelated, into which your learning may be categorized: cognitive, psychomotor and affective.

When most people think of schooling, they usually refer to the first two of these areas. You learn the facts and theories and then you put them into practice, actually performing the tasks, skill, etc. All too often the development of what the profession considers to be the appropriate attitudes, beliefs, and feelings toward what you are learning, what you are doing, and how you are doing them are assumed to occur automatically. A truly balanced education requires that all three areas be attended to. In view of this, to gain an awareness of your progression, evaluations of how you demonstrate to staff, clinical instructors, and faculty that you are mastering the necessary skills and the behaviors associated with the affective domain. Since no one is capable of directly knowing someone’s thoughts or feelings, we can only assess your affective skills learning by 1) letting you know what we consider to be important in this area, and 2) letting you know what observable behaviors we will be looking for to evaluate your mastery of affective skills. We will be assessing the degree to which your behaviors demonstrate the actions of what the majority of members of the profession, and the majority of the public, consider to be indicative of professionalism.

The professional development evaluations contain traits faculty has identified as essential elements of the affective area. The evaluation also includes items addressing the cognitive and psychomotor areas.

Evaluations on clinical progress on a day-to-day basis are completed for the following reasons:

1. To provide feedback to the students concerning their affective, cognitive, and psychomotor progress.
2. To maintain quality health care to the patient.
3. To certify continuing competency.
4. To compose a portion of the clinical grade.

An evaluation will be completed on each student in the following areas at each clinical education setting:

1. Fluoroscopy
2. General
3. Chest
4. Surgery
5. Mobile
6. Evening

Staff technologists and faculty will evaluate the students in the diagnostic areas listed above. Professional Development evaluations will begin at the mid-term of AL 134 and continue throughout the educational program. Surgical progress notes will begin with an individual student's second rotation in that area.
WASHBURN UNIVERSITY RADIOGRAPHY PROGRAM
FIRST YEAR STUDENT PERFORMANCE EVALUATION

Student Name: ___________________________ Area: _____________ Date: ______

Radiographer: ___________________________

INSTRUCTIONS: If you agree with the statements in the following areas, and the student has met your expectations during the time you observed them, you may simply check the "as expected" box. **If the student performed beyond, or fell short of your expectations, please comment using specific examples.** Please keep in mind the length of time the student has been in clinical and previous rotations when determining your expectations.

1. **Initiative:** Amount of motivation and/or willingness to perform exams. Uses clinical time constructively & productively. Active & enthusiastic. Is an effective time manager.
   - [ ] Consistently Exceeds Expectations
   - [ ] Consistently Meets Expectations
   - [ ] Room for Improvement Meeting Expectations
   - Explain:

2. **Dependability:** Completes procedures and remains in assigned area. If necessary, informs radiographer as to your whereabouts. Observes hospital, department, & university rules/regulations. Shows up consistently and on time. Follows through on assignments.
   - [ ] Consistently Meets Expectations
   - Explain:
   - [ ] Room for Improvement Meeting Expectations

3. **Attitude:** Demonstrates a positive, cooperative, and courteous attitude. Demonstrates a desire to learn. Seeks constructive feedback in areas that need improvement—clinically or interpersonally—and makes an effort to improve.
   - [ ] Consistently Meets Expectations
   - Explain:
   - [ ] Room for Improvement Meeting Expectations

4. **Patient Care:** Conveys confidence to patient. Displays compassion in response to patient’s needs and concerns. Provides for safety, privacy, & comfort. Listens. Treats all people (including those of different backgrounds, beliefs and gender), with fairness and respect.
   - [ ] Consistently Meets Expectations
   - Explain:
   - [ ] Room for Improvement Meeting Expectations

5. **Equipment:** Assigned room kept clean, applicable supplies, fresh linen, etc. Careful to operate equipment safely and appropriately (radiographic, oxygen, IV, catheters, etc.) Doesn’t abuse equipment. Understands and demonstrates both aseptic and sterile technique.
   - [ ] Consistently Meets Expectations
   - Explain:
Room for Improvement
Meeting Expectations

(over)
6. **Knowledge/Application:** *Degree to which student applies knowledge of **positioning** to produce desirable radiographs and knowledge of **anatomy.** Demonstrates competence performing procedures.*

- [ ] Acceptable with level of learning  
  Explain: 
- [ ] Room for Improvement

7. **Knowledge/Application:** *Degree to which student applies knowledge of **technique** to produce desirable radiographs.*

- [ ] Acceptable with level of learning  
- [ ] Room for Improvement  
  Explain:

8. **Protection:** *Is mindful of patient and operator protection. Utilizes collimation, shielding, proper technical factors, minimal repeats, etc. Pays attention to detail.*

- [ ] Consistently Meets  
  Expectations

- [ ] Room for Improvement  
  Meeting Expectations  
  Explain:

9. **Communication:** *Good rapport & effective communication with patient. Collects appropriate history from patient. Demonstrates the ability to interact with staff & physicians in an effective manner.*

- [ ] Consistently Exceeds  
  Expectations  
  Explain:

- [ ] Consistently Meets  
  Expectations  
  Explain:

- [ ] Room for Improvement  
  Meeting Expectations

10. **Professionalism/Attire:** *Reflects a professional appearance by adhering to the dress code. Demonstrates respect by not gossiping & complaining. Maintains patient confidentiality. Doesn’t make excuses. Actively works through conflicts with co-workers. Seeks help on unfamiliar clinical processes.*

- [ ] Consistently Exceeds  
  Expectations  
  Explain:

- [ ] Consistently Meets  
  Expectations  
  Explain:

- [ ] Room for Improvement  
  Meeting Expectations

11. **Adaptability:** *Receptive to new ideas. Willing to be guided, directed and instructed in making constructive changes in behavior or performance. Accepts hourly or daily changes in assignments.*

- [ ] Consistently Meets  
  Expectations  
  Explain:

- [ ] Room for Improvement  
  Meeting Expectations

---

What specifically about the student's clinical performance this week impressed you the most?

What suggestions could you give this student to help him/her improve clinical performance?
INSTRUCTIONS: If you agree with the statements in the following areas, and the student has met your expectations during the time you observed them, you may simply check the "as expected" box. **If the student performed beyond, or fell short of your expectations, please comment using specific examples.** Please keep in mind the length of time the student has been in clinical and previous rotations when determining your expectations.

1. Initiative: Amount of motivation and/or willingness to perform exams. Uses clinical time constructively & productively. Active & enthusiastic. Effective time manager.
   - ☐ Consistently Exceeds Expectations
   - ☐ Consistently Meets Expectations
   - ☐ Room for Improvement in Meeting Expectations
   
2. Dependability: Completes procedures and remains in assigned area. If necessary, informs radiographer as to your whereabouts. Observes hospital, department, & university rules/regulations. Shows up consistently and on time. Follows through on assignments.
   - ☐ Consistently Exceeds Expectations
   - ☐ Consistently Meets Expectations
   - ☐ Room for Improvement in Meeting Expectations

3. Attitude: Demonstrates a positive, cooperative, and courteous attitude. Demonstrates a desire to learn. Seeks constructive feedback in areas that need improvement—clinically or interpersonally—and makes an effort to improve.
   - ☐ Consistently Meets Expectations
   - ☐ Room for Improvement in Meeting Expectations

4. Patient Care: Conveys confidence to patient. Displays compassion in response to patient’s needs and concerns. Provides for safety, privacy, & comfort. Listens. Treats all people (including those of different backgrounds, beliefs and gender), with fairness and respect.
   - ☐ Consistently Meets Expectations
   - ☐ Room for Improvement in Meeting Expectations

5. Equipment: Assigned room kept clean, applicable supplies, fresh linen, etc. Careful to operate equipment safely and appropriately (radiographic, oxygen, IV, catheters, etc.). Doesn't abuse equipment. Understands and demonstrates both aseptic and sterile technique.
   - ☐ Consistently Meets Expectations

---

**Student Name:**

**Radiographer:**

**Area:**

**Date:**
Room for Improvement
Meeting Expectations
6. **Knowledge/Application:** Degree to which student applies knowledge of **positioning** to produce desirable radiographs and knowledge of **anatomy.** Demonstrates competence performing procedures.

- [ ] Above average with level of learning
- [ ] Acceptable with level of learning
- [ ] Room for Improvement

**Explain:**

7. **Knowledge/Application:** Degree to which student applies knowledge of **technique** to produce desirable radiographs.

- [ ] Above average with level of learning
- [ ] Acceptable with level of learning
- [ ] Room for Improvement

**Explain:**

8. **Protection:** Is mindful of patient and operator protection. Utilizes collimation, shielding, proper technical factors, minimal repeats, etc. Pays attention to detail.

- [ ] Consistently Meets Expectations
- [ ] Consistently Meets Expectations
- [ ] Room for Improvement

**Explain:**

9. **Communication:** Good rapport & effective communication with patient. Collects appropriate history from patient. Demonstrates the ability to interact with staff & physicians in an effective manner.

- [ ] Consistently Exceeds Expectations
- [ ] Consistently Meets Expectations
- [ ] Room for Improvement

**Explain:**


- [ ] Consistently Exceeds Expectations
- [ ] Consistently Meets Expectations
- [ ] Room for Improvement

**Explain:**

11. **Adaptability:** Receptive to new ideas. Willing to be guided, directed and instructed in making constructive changes in behavior or performance. Accepts hourly or daily changes in assignments.

- [ ] Consistently Exceeds Expectations
- [ ] Consistently Meets Expectations
- [ ] Room for Improvement

**Explain:**

---

What specifically about the student's clinical performance this week impressed you the most?

What suggestions could you give this student to help him/her improve clinical performance?
Unsatisfactory Clinical Evaluation Policy

It is recognized by program faculty and clinical instructors that on occasion, an evaluation may be completed which the student is in disagreement with. Due to variations in patient examination and student performance which exist during any evaluation, no set policy has been devised. Each situation will be evaluated on an individual basis. The following guidelines are offered:

1. Performance Evaluations: Students generate an email to a RT requesting completion of a performance evaluation via Trajecsys (T-system). After the RT completes the form, program instructors have up to 7 days to review and verify the submission. If there is a question about scoring or a comment, program instructors will follow-up with the RT and/or clinical instructor. When the evaluation is released to the student, no RT name is visible. If a question concerning the validity of the evaluation is present, the matter should be discussed with the Program Director. The Program Director’s decision to allow or disallow the evaluation is final.

2. Competency evaluations: The evaluator of a competency examination discusses the evaluation with the student upon completion. If the student disagrees with the evaluation result, he/she should contact WU faculty assigned to that clinical education setting within one week of the evaluation date. Faculty will review the evaluation with the student and the evaluator, separately, and make a ruling. In such cases where the clinical coordinator performed the evaluation, the Program Director will fact-find and make a ruling. If the Director performed the evaluation, the Medical Advisor will be consulted for a decision. If the student is still in disagreement with the evaluation result, he/she should speak to the Allied Health Department Chairperson of SAS within two weeks of the evaluation date.
COMPETENCY EVALUATION ANATOMY (Also posted on each clinical course website and T-system)

Students should be able to identify the following anatomy:

**UPPER EXTREMITY & SHOULDER GIRDLE**

**Finger & Thumb**
proximal, middle, & distal phalanges
interphalangeal joints (proximal & distal)
metacarpal
metacarpophalangeal joints

**Hand (finger plus...)**
carpals: scaphoid/navicular, lunate/semilunar, triquetrum/triquetral/triangular, pisiform, trapezium/greater multangular, trapezoid/lesser multangular, capitate/os magnum, & hamate/unciform carpometacarpal joints
sesamoid bones
radius & ulna

**Wrist**
metacarpal
carpometacarpal joints
carpal bones - see hand
radius & ulna

**Forearm**
radius & ulna
styloid processes
radial head, neck, & tuberosity
coronoid process
olecranon process
medial & lateral epicondyles

**Elbow**
medial & lateral epicondyles
trochlea
coronoid process
capitulum/capitellum
radial head, neck, & tuberosity
olecranon process

**Clavicle**
acromial & sternal ends
body
acromioclavicular & sternoclavicular joints

**Humerus**
glenoid cavity
greater & lesser tubercles
head
anatomic & surgical neck
body
medial & lateral epicondyles
trochlea
capitulum/capitellum
radius & ulna

**Shoulder**
clavicle
acromion
acromioclavicular joint
coracoid process
humeral head
glenoid cavity
greater & lesser tubercles
anatomic & surgical neck
Y-view: body of scapula, acromion & coracoid

**Acromioclavicular Joints**
clavicle
acromion
humeral head
acromioclavicular joint
coracoid process

**Scapula**
clavicle
acromion
coracoid process
glenoid cavity
body
lateral/axillary border
medial/vertebral border
inferior angle
humeral head
LOWER EXTREMITY & PELVIS
Students should be able to identify the following anatomy:

**Toes**
proximal, middle & distal phalanges
interphalangeal joints (proximal & distal)
metatarsals
metatarsophalangeal joints

**Foot** (toes plus...)
tarsals: cuneiforms (medial/first, intermediate/second, lateral/third), cuboid, talus/astragulas,
navicular/scaphoid, calcaneus/os calcis
sinus tarsi
sesamoid
tarsometatarsal joints

**Calcaneus**
subtalar joint
sustentaculum tali
trochlear process
tuberosity
talus
navicular

**Ankle**
tibia & fibula
Medial & lateral malleoli
navicular/scaphoid
calcaneus
talus
cuboid

**Leg**
medial & lateral femoral condyles
patella
tibia & fibula
head of fibula
tibial tuberosity
medial & lateral malleoli

**Knee**
intercondylar fossa & tubercles
medial & lateral femoral condyles
medial & lateral femoral epicondyle
medial & lateral tibial condyles
patella: apex & base
head of fibula
tibial tuberosity

**Patella**
base & apex
patellofemoral articulation
medial & lateral condyles

**Femur**
acetabulum
greater & lesser trochanter
head & neck
body
medial & lateral condyles & epicondyle
patella

**Pelvis &/or Hip**
femoral head & neck
greater & lesser trochanter
ilium, ischium, & pubic bones
iliac crest
acetabulum
ASIS
obturator foramen
intertrochanteric crest
symphysis pubis
sacrum & coccyx
sacroiliac joint
VERTEBRAL COLUMN
The student should be able to identify the following anatomy:

**Cervical spine**
- base of skull
- atlas & axis
- dens/odontoid process
- disk spaces
- bodies
- pedicles
- intervertebral foramina & disk spaces
- mandible
- spinous processes
- zygapophyseal joints

**Thoracic spine**
- bodies
- pedicles
- transverse processes
- spinous processes
- intervertebral foramina
- intervertebral disk spaces

**Lumbar spine**
- bodies
- pedicles
- transverse processes
- lamina
- intervertebral disk spaces
- intervertebral foramina
- spinous processes
- zygapophyseal joints
- SIJ
- crest

Scotty Dog: ear = superior articular process, nose=transverse process, eye=pedicle, body=lamina, neck=pars interarticularis, leg=inferior articular process

**Sacroiliac joints**
- sacrum
- ilium
- SI joints
- S-1 & L-5

**Sacroiliac junction**
- sacral foramina
- sacrum & coccyx
- L-5

**Scoliosis Series**
- cervical, thoracic & lumbar regions
- bodies
- lamina
- transverse processes
- pedicles
- spinous processes

**THORAX**
The student should be able to identify the following anatomy:

**Ribs**
- 1-12 (anterior & posterior)
- head
- shaft
- axillary

**Sternum**
- clavicle
- sternoclavicular joints
- manubrium
- jugular notch
- sternal angle
- body
- xiphoid process

**Sternoclavicular joints**
- clavicle
- manubrium
- sternoclavicular articulation

**Chest**
- apices
- diaphragm
- costophrenic angles
- pulmonary markings
- sternum
- clavicle
- trachea
- heart
- hilum
- aortic arch
- spine
- scapula
- ribs
ABDOMEN & DIGESTIVE TRACT
The student should be able to identify the following anatomy:

**Abdomen**
diaphragm  
liver  
kidneys  
bladder  
crest  
psosas muscles  
symphysis pubis  
lumbar vertebrae  
sacrum & coccyx

**Upper GI**
fundus  
body  
greater & lesser curvatures  
pylorus  
duodenum

**Small Bowel**
stomach  
duodenum  
jejenum  
ileum

**Barium Enema**
cecum  
ascending colon  
rt. colic flexure/hepatic  
transverse colon  
lit. colic flexure/splenic  
descending colon  
sigmoid  
rectum

**IVP**
kidneys  
minor & major calyces  
renal pelvis  
ureters  
bladder  
psosas muscles  
vertebrae

CRANIUM
The student should be able to identify the following anatomy:

**Skull**
sella turcica  
TMJ  
mastoid air cells  
frontal, parietal, temporal, occipital bones  
foramen magnum  
petrous ridge

**Facial bones**
sella turcica  
mandibular rami  
maxilla  
nasal bones  
orbit  
mandible

**Mandible**
ramus  
body  
symphysis  
condyle  
coronoid process

**Sinus**
frontal, ethmoid, maxillary, sphenoid  
petrous ridge
# Radiation Dose Reporting Directions

Please review your monthly or quarterly radiation detection device report with the CI at your assigned clinical site. After your review complete the form below.

| In the box to the right please type the name of the clinical site you are currently at. |
| In the box to the right please type the name of the CI or Site Employee that reviewed the radiation detection device report with you. |

| To the right please indicate which radiation monitoring duration this site adheres to. |
| In the box to the right provide your Total Effective Dose Equivalent for the monitoring period being reviewed. |
| In the box to the right provide your Sum of Deep Dose Equivalent to any individual organ other than the Lens of the Eye for the monitoring period being reviewed. |
| In the box to the right provide your Eye Dose Equivalent for the monitoring period being reviewed. |

I agree that I have reviewed my radiation dose report results with my CI or Site Employee.

[ ] Check to complete later, then click “Submit”

[ ] Approve
[ ] Not Approved
The student must complete the required number of exams in each category in order to prove competency. Exams must be performed under DIRECT SUPERVISION.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>DATE</th>
<th>PT ID</th>
<th>mAs, kVp, Index #</th>
<th>TECH INITIAL</th>
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<td>2. KUB (8)</td>
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<td>3. Upper Extremity (10 or 3 of the same exam)</td>
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| 4. Lower Extremity (10 or 3 of the same exam) |      |      |       |                  |              |
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|                                              |      |      |       |                  |              |
After successful completion of lab evaluation in each area, the student can begin completion of this required document. Each student must complete the stated minimum number of exams in each category in order to request competency evaluation. Examinations may be on a patient or simulated.

### IVU EXAMINATIONS - minimum of 5

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<tr>
<th>Date</th>
<th>Patient (P) or Simulated (S)</th>
<th>RT Initials</th>
<th>WU Faculty sign-off</th>
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### BARIUM SWALLOW – minimum of 2

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### UPPER GI – minimum of 5

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### BARIUM ENEMA – minimum of 5

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S:\AlliedHealth\Susan’s Files\XR\Manual\Contrast Exams Log
**ROOM ROTATION CHECKLIST**

Note this is done during AL134 Radiology Clinical I

This form is located on the Trajecsys (T-system) website.

Name ___________________________ Date __________ Room __________

Locate the following on the control panel:  Yes  No

1. On/Off  ______  ______
2. kVp controls  ______  ______
3. mA controls  ______  ______
4. time controls  ______  ______
5. sensors/detectors  ______  ______
6. density control  ______  ______

Demonstrate use of the following tube locks:

1. vertical  ______  ______
2. horizontal  ______  ______
3. angulation  ______  ______
4. rotation  ______  ______
5. detent  ______  ______

Demonstrate use of the following bucky locks:

1. bucky  ______  ______
2. IR  ______  ______

Demonstrate use of the following:

1. field light  ______  ______
2. collimator  ______  ______

Demonstrate the following alignments:

1. tube to table center  ______  ______
2. tube to IR  ______  ______
3. source image receptor distance  ______  ______

Demonstrate the following table movements:

1. move table top all directions  ______  ______
2. place in vertical position  ______  ______
SURGERY OBJECTIVES #1
This form is located on the Trajecsys (T-system) website

Completion of these objectives will provide you with a base of knowledge needed to function in surgery/operating room (OR) rotation. The initial rotation is an orientation session. These objectives must be completed prior to competency evaluation.

These objectives should be completed during your 1st two-week surgery rotation (AL134 or AL135).

Student ___________________________ Date _________________________

Radiographer Signature ___________________________

The surgery technologist should circle the appropriate item upon completion.

Yes   No  1. The student followed OR dress requirements.
Yes   No  2. The student was oriented to proper procedure to alert an RT that surgery is ready for their assistance.
Yes   No  3. The student was shown location of the digital processing area.
Yes   No  4. The student was provided information on various entrances into a surgical suite and precautions to be followed.
Yes   No  5. The student demonstrated an ability to identify sterile vs. non-sterile areas after an explanation from the RT.
Yes   No  6. The RT demonstrated basic operation of various locks and movement of the mobile and C-arm.
Yes   No  7. The student observed all possible scheduled procedures involving radiology.
SURGERY OBJECTIVES #2

Completion of these objectives will provide you with a base of knowledge needed to function in surgery/OR rotation. These objectives must be completed prior to competency evaluation.

These objectives should be completed during the 2nd surgery rotation (AL135 or AL236).

Student_________________________________________ Date_________________________

Radiographer Signature_____________________________________________________

The surgery technologist should circle the appropriate item at completion of the rotation.

Yes   No  1. The student followed surgery dress requirements.

Yes   No  2. The student demonstrated ability to check daily schedule for examinations requiring radiology.

Yes   No  3. The student has been oriented to the procedure used to alert a radiographer that surgery is ready for their assistance.

Yes   No  4. The student demonstrated the ability to locate:
   a. Digital processing area
   b. Mobile/Portable machine storage
   c. Surgical suites
   d. Recovery room

Yes   No  5. The student provided information concerning the various entrances into a surgical suite and precautions to be taken.

Yes   No  6. The student maintained sterile fields at all times.

Yes   No  7. The student explained the role of the radiographer and the purpose of:
   a. C&R
   b. Cholangiogram
   c. Orthopedic pinning
   d. Pacemaker or infusaport

Yes   No  8. The student demonstrated the operation, locks, and control panel of each mobile machine, either through direct operation or simulation.

Yes   No  9. The student demonstrated the operation, locks and control panel for a C-arm unit through direct operation or simulation.

Yes   No 10. The student observed all possible scheduled procedures involving radiology.

Yes   No 11. The student assisted with appropriate exams.
SURGERY OBJECTIVES #3

Completion of these objectives will provide you with a base of knowledge needed to function in surgery/OR rotations. These objectives must be completed prior to competency evaluation.

These objectives should be completed during the 3rd surgery rotation (AL236 or AL237).

Student Name__________________________ Date__________________

Radiographer____________________________

Surgery Technologist should circle the appropriate response when completed.

Yes  No  1. The student followed surgery dress requirements.
Yes  No  2. The student maintained sterile fields at all times.
Yes  No  3. The student demonstrated the various locks of mobile and C-arm equipment through direct operation (as appropriate) with direct supervision.
Yes  No  4. The student demonstrated the operation of mobile and C-arm control panels through direct operation with direct supervision.
Yes  No  5. The student observed all possible scheduled procedures involving radiology.
Yes  No  6. The student performed 3 different exams with assistance.

NOTE: Additional time in OR may be assigned in a given semester based on insufficient completion of the objectives.
LABORATORY EVALUATIONS

The purpose of lab evaluations is to establish minimum competency of radiographic examinations. Each projection in an examination is evaluated separately. Example: A hand examination consists of PA, oblique and lateral projections. Evaluations are computed on the following basis:

Procedure Time:
2 rating = 1 minute or less to complete a projection
1 rating = 1 minute to 2 minutes to complete a projection
0 rating = an excess of 2 minutes to complete a projection

Source Image Distance:
2 rating = less than 2” variation
1 rating = between 2” and 4” variation
0 rating = an excess of 4” variation, or cause a repeat

Positioning:
2 rating = acceptable
1 rating = needs minor improvement
0 rating = needs major improvement, would cause a repeat image

Central Ray:
2 rating = correct
1 rating = needs minor improvement
0 rating = needs major improvement, would cause a repeat image

Collimation:
2 rating = correct
1 rating = slightly large
0 rating = does not demonstrate necessary anatomy, would cause repeat

Cassette size, type and position:
2 rating = all segments correct
1 rating = partially correct
0 rating = would cause a repeat image

Markers:
1 rating = correct
0 rating = incorrect

Exposure Factors:
2 rating = correct adjustment
0 rating = incorrect adjustment, would cause a repeat image

Miscellaneous: (accessory equipment, communication, protection, etc.
1 rating = acceptable
0 rating = unacceptable

Any student not demonstrating minimum competency of 80% (13 points) or making an error which would cause a repeat image will be required to have additional practice and retest in order to establish competency for patient contact. Retesting must be completed within 1 week of the initial evaluation.
Each student documents his/her repeat image(s) along with the correction (emphasis on problem-solving). This form will be reviewed periodically and will be turned into WU Faculty at mid-semester and semester's end.

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<tr>
<th>Date</th>
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RADIOLOGIC TECHNOLOGY PROGRAM – PROCEDURES LABORATORY EVALUATION

STUDENT: ________________________________  INSTRUCTOR: ________________________________

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Points Achieved

Pass/Retest

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COMMENTS: (List by projection & number ________________________________

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## RADIOLOGIC TECHNOLOGY PROGRAM – PROCEDURES LABORATORY EVALUATION

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**COMMENTS:** (List by projection & number)

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RADIOLOGIC TECHNOLOGY PROGRAM – PROCEDURES LABORATORY EVALUATION

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Points Achieved

Pass/Retest

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**Pass/Retest**

**COMMENTS:** (List by projection & number)

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### RADIOLOGIC TECHNOLOGY PROGRAM – PROCEDURES LABORATORY EVALUATION

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**COMMENTS:** (List by projection & number ____________________________________________________________________________)

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## RADIOLOGIC TECHNOLOGY PROGRAM – PROCEDURES LABORATORY EVALUATION

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**Points Achieved**

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**Comments:** (List by projection & number)

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**COMMENTS:** (List by projection & number)

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### Comments:

List by projection & number

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### RADIOLOGIC TECHNOLOGY PROGRAM – PROCEDURES LABORATORY EVALUATION

**STUDENT:** ____________________________  **INSTRUCTOR:** ____________________________

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**Points Achieved**

**Pass/Retest**

**Coments:** (List by projection & number ____________________________

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RADIOLOGIC TECHNOLOGY PROGRAM – PROCEDURES LABORATORY EVALUATION

STUDENT:_________________________________________ INSTRUCTOR:_________________________________________
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Points Achieved

Pass/Retest

Pass_______________________ Retest_______________________ Date_______________________ Late_______________________

Pass_______________________ Retest_______________________ Date_______________________ Late_______________________

Points Achieved

Pass/Retest

COMMENTS: (List by projection & number _________________________________________________________________
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### RADIOLOGIC TECHNOLOGY PROGRAM – PROCEDURES LABORATORY EVALUATION

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Points Achieved

Pass/Retest

Comments: (List by projection & number)
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EVENING CLINICAL DOCUMENTATION
RADIOGRAPHER PROGRAM

Name_________________________________________ Clinical Site(s) ____________________________

You must maintain the stated number of clinical shifts weekly as per the Clinical Rotation schedule.

<table>
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<th>Spring Semester (2 days* or 3 days**)</th>
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<td>Friday PM = Friday (3-day week)**</td>
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Guidelines:
- A minimum of 12 evening shifts are required and maximum of 15 may be completed.
- Minimum of 6 weekend shifts (Friday, Saturday and Sunday).
- Maximum of 3 night shifts (12:15am-8:15am) – optional shift.

S:\AlliedHealth\Susan's Files\XR\Radiology Courses\AL236\Clinical rotations\Evening Clinical Documentation
Washburn University
Oxygen Administration Competency
This is completed during AL237 Clinical Education

Name: ___________________________ Date: ______________________

<table>
<thead>
<tr>
<th>Did the student radiographer:</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
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<tbody>
<tr>
<td>Identify and gain consent from patient for procedure</td>
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<tr>
<td>Explain procedure to patient/answer questions</td>
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<td>Use protective devices, maintain asepsis</td>
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<td>Observe set-up of existing oxygen administration</td>
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<td>Recreate exact administration scheme (from transport tank to wall outlet or vice versa)</td>
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<td>Evaluate positioning of or demonstrate use of nasal cannula</td>
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<tr>
<td>Demonstrate ability to determine PSI on a portable oxygen tank.</td>
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**Simulations**

| Demonstrate setting flow meter at wall outlet |     |    |     |
| Demonstrate setting flow meter for portable oxygen tank |     |    |     |

**Competency Criteria:** Any item marked "no" indicates that competency has not been attained.

Evaluator(s):_________________________________________ Pass: Yes/No

Student Assignment:
Normal values of a pulse oximeter are _______ %. Values of less than _______ % indicate tissues are not receiving enough oxygen.
The main goal of the radiologic technology program is to provide a graduate technologist with demonstrable skill as a radiographer. It is recognized that knowledge of the broad field of radiology is a vital component. AL 220 Radiographic Procedures III is a required course which provides students with an understanding of basic theory and clinical application of the various imaging modalities.

During Fall Semester II and Spring Session II, students will participate in rotations through two imaging modalities plus CT. The modalities available are:

1. Computed Tomography
2. Nuclear Medicine
3. Radiation Therapy
4. Interventional radiography
5. Diagnostic Medical Sonography
6. MRI
7. Venipuncture
8. Mammography

When assigned to any modality, it is expected you will complete a minimum of 7 hours daily in that area. If there are low patient exams or equipment problems, the student must return to diagnostic radiology to complete the scheduled hours for that day.

Each student will indicate the preferred rotations, with one alternate. Rotations have objectives and assignments available for guidance. The assignment sheet, answers and time sheets will be completed and returned to the clinical coordinator within one (1) week of rotation completion.

Modality technologists will complete the imaging modality evaluation and return to program faculty. This evaluation does not account for a percentage of the clinical education grade. It is expected that each student will fulfill all stated objectives in a professional manner. However, if on return of the evaluation form, it is noted that areas of "improvement needed" exist, formal documentation and a grade point deduction will occur.
CT SCANNING CLINICAL ROTATION

Introduction
AL 220 presented concepts and information as related to CT Scanning. This presentation was a prerequisite to the clinical rotation in Computed Tomography. The second year radiographer student may spend one week in CT to observe and assist with technical procedures.

The rotation hours are:
St. Francis Hospital and Medical Center: 7:30-4:00 (295-8004)
Stormont-Vail Regional Medical Center: 7:30-4:00 (354-6185)
VA: 8:00-4:30 (350-3111 X 2688)
Via Christi, Manhattan: 7:00-3:30 (776-2888)
Lawrence Memorial Hospital: 7:00-3:30 (749-6194)
Atchison Hospital: 8:00-4:30 (913-367-6642)
Hiawatha Hospital: 8:00-4:30 (742-2131)
Geary Community Hospital: 8:00-4:30 (238-4139)
Truman: 7:30-4:00pm

When assigned to any modality, it is expected you will complete a minimum of 7 hours daily in that area. If there are low patient exams or equipment problems, the student must return to diagnostic radiology to complete the scheduled hours for that day. A variation of the hours will be at the discretion of the CT supervisor. If at any time a student is allowed to leave early, the supervisor MUST note it on the clinical worksheet.

If a student is unable to be present on the scheduled days, call the CT site as well as Washburn faculty (leave a message) at 670-2173 or 670-1535.

Objectives
1. Identify the types of CT scans that can be performed
2. Identify the advantages and disadvantages of CT
3. Discuss the CT scan procedure
4. Discuss the physical and mental preparation of the patient
5. Outline types of oral and IV contrast media
6. Describe positioning and procedure involved with each exam
7. Discuss equipment and computer application
8. Relate the radiation dosage of diagnostic radiology to the CT dosage

Guidelines
Be certain to wear your radiation monitoring badge to this rotation.

Students will be expected to have a basic knowledge and understanding of the objectives by the end of their clinical rotation. This will be verified by the completion of the assignment. It is the responsibility of each student to have this form completed and returned to faculty within one week after the rotation’s end. No credit will be given if you fail to complete the rotation or return the worksheet.

Record all examinations observed or assisted with and return to faculty. You will also be required to view at least 1 of each of the following examinations with a radiologist: head, chest, abdomen, pelvis, and spine. Have the radiologist initial the worksheet as each exam is read.

Return the time sheet with technologist signature verifying time to Washburn faculty.
CT SCANNING CLINICAL ROTATION

Student ____________________________________________ Date ____________________________

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Assignment

1. Define the following: attenuation, pixel, matrix, voxel.
2. List some advantages of CT over conventional radiography.
3. List some limitations of CT.
4. Discuss the use of contrast media used in procedures observed during your rotation. (Name, concentration, how administered, purpose, etc.)
5. Define pitch.
6. Give advantages of CTA.
7. Position patient for head, lumbar spine, abdomen and chest examinations.
8. Enter patient and exam information
9. Assist with loading and programming the injector.
NUCLEAR MEDICINE CLINICAL ROTATION

Introduction
AL220 provided prerequisite information in Nuclear Medicine prior to the clinical rotation. The second year radiographer student may spend one week in Nuclear Medicine to observe and assist with technical procedures.

The rotation hours are:
- St. Francis Hospital and Medical Center: 8:00-4:30 (295-8340)
- Stormont-Vail Regional Medical Center: 8:00-4:30 (354-6176)
- Atchison Hospital: 8:00-4:30 (913-367-6642)
- Lawrence Memorial Hospital: 7:00-3:30 (749-6194)
- Mercy Health Center: 7:00-3:30 (776-2888)
- Geary Community Hospital: 8:00-4:30 (238-4139)

If a student desires to view pharmacy procedures at St. Francis, arrangements should be made through Brent Wilkins. If pharmacy observation is involved, the hours will be 6:00am to 2:30pm for that day. (If scheduled at Stormont-Vail for the rotation, observe at St. Francis from 6:00am to 8:00am and then return to Stormont-Vail.)

When assigned to any modality, it is expected you will complete a minimum of 7 hours daily in that area. If there are low patient exams or equipment problems, the student must return to diagnostic radiology to complete the scheduled hours for that day. A variation of the hours will be at the discretion of the Nuclear Medicine supervisor. If at any time a student is allowed to leave early, the supervisor MUST note it on the clinical worksheet.

If a student is unable to be present on scheduled days, call the nuclear medicine site as well as Washburn faculty (leave a message) at 670-2173 or 670-1535.

OBJECTIVES
1. Correlate the examination with the radiopharmaceutical
2. Identify the types of scans that can be performed
3. Describe positioning and procedure involved with each exam
4. Discuss equipment and computer application
5. Identify major anatomy on the scans
6. Scan a patient with supervision
7. Relate pathological conditions to the examinations being performed

GUIDELINES
Be certain to wear your radiation monitoring badge to this rotation.

Students will be expected to have a basic knowledge and understanding of the objectives by the end of their clinical rotation. This will be verified by the completion of the assignment. It is the responsibility of each student to have this form completed and returned to faculty within one week after the rotation’s end. No credit will be given if you fail to complete the rotation or return the worksheet.

Record all examinations observed or assisted with and return to faculty. You will also be required to view at least 4 examinations with a radiologist. Have the radiologist initial the worksheet as each exam is read.
Return the time sheet with technologist initials verifying time to Washburn faculty.

**NUCLEAR MEDICINE CLINICAL ROTATION**

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**ASSIGNMENT**

1. Define the following: isotope, half-life, scintillation detector, alpha particle, beta particle, gamma rays, Curie, gamma camera, SPECT
2. Discuss radiation protection of the technologist.
3. Discuss disposal of waste products and equipment.
4. Discuss protocol if a "spill" occurs.
5. Discuss the use of PET/CT
RADIATION ONCOLOGY CLINICAL ROTATION

INTRODUCTION

AL220 presented the modality of radiation oncology in preparation for a clinical experience. The second year radiographer student may spend one week in radiation therapy to observe the process of treatment with radiant energy.

The rotation hours are:
- Stormont-Vail Radiation Oncology: 7:30 - 4:00 (354-5300)
- St. Francis Comprehensive Cancer Center: 8:00-4:30 (295-8008)
- Central Kansas Cancer Institute, Manhattan: 7:30-4:00 (539-2500)

When assigned to any modality, it is expected you will complete a minimum of 7 hours daily in that area. If there are low patient exams or equipment problems, the student must return to diagnostic radiology to complete the scheduled hours for that day. A variation of the hours will be at the discretion of the supervising Radiation Therapist. If at any time the student is allowed to leave early, it must be noted on the page below. If a student is unable to be present at on the scheduled days, call the therapist as well as Washburn faculty (leave a message) at 670-2173 or 670-1535.

Objectives

1. Identify the type of equipment being utilized for treatment
2. Observe the "set up" prior to the radiation treatment
3. Understand the operation (controls) of the equipment
4. Associate the treatment plan with the type of tumor
5. Understand dose computation
6. Observe protective measures for therapists and the patients
7. Understand the importance of accurate and complete records
8. Observe:
   a. A consult
   b. A status-check
   c. A follow-up

Guidelines

Be certain to wear your radiation monitoring badge to this rotation.

You will be expected to have a basic knowledge and understanding of the objectives by the end of their clinical rotation. This will be verified by completion of the assignments. It is your responsibility to have this form completed and returned to faculty within one week of the rotation. No credit will be given if you fail to complete the rotation or return the worksheets.

Record all examinations observed or assisted with.

Return the time sheet with therapist initials verifying the time to faculty.
RADIOLOGY ONCOLOGY CLINICAL ROTATION

Student ___________________________ Date ________________

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Assignment

1. Define the following: LET, RBE, dosimetry, brachytherapy, fractionation, metastasis, teletherapy
2. List the general types of patient treated on each machine
3. Discuss the difference in curative intent and palliative intent treatment
4. Describe briefly: simulation, dosimetry, treatment
5. Discuss the use of PET and CT in radiation oncology.
ULTRASOUND CLINICAL ROTATION

Introduction
AL220 presented concepts and information as related to Ultrasound. This presentation was a prerequisite to the clinical rotation in Ultrasound. The second year radiographer student may spend one week in Ultrasound to observe and assist with technical procedures.

The rotation hours are:
- St. Francis Hospital & Medical Center: 7:30-4:00 (295-8352)
- Stormont-Vail Regional Medical Center: 8:00-4:30 (354-6289)
- Radiology & Nuclear Medicine (MPW): 8:00-5:00
- Atchison Hospital: 8:00-4:30 (913-367-6642)
- Lawrence Memorial Hospital: 7:00-3:30 (749-6194)
- Mercy Health Center: 7:00-3:30 (776-2888)
- Hiawatha Hospital: 8:00-4:30 (742-2131)
- Ransom Memorial: 8:00-4:30 (229-8352)
- Geary Community Hospital: 8:00-4:30 (238-4139)

When assigned to any modality, it is expected you will complete a minimum of 7 hours daily in that area. If there are low patient exams or equipment problems, the student must return to diagnostic radiology to complete the scheduled hours for that day. Any variation of the hours will be at the discretion of the Ultrasound technologist. If at any time a student is allowed to leave early, the supervisor MUST note it on the clinical worksheet.

If a student is unable to be present on the scheduled days, call the ultrasound site as well as Washburn faculty (leave a message) at 670-2173 or 670-1535.

Objectives
1. Identify the types of ultrasound scans that can be performed
2. Discuss the preparation of the patient for each scan type
3. Discuss the scanning procedure with each examination
4. Discuss the equipment utilized
5. Identify major anatomy on the scans
6. Define ultrasound terminology

Guidelines
Students will be expected to have a basic knowledge and understanding of the objectives by the end of their clinical rotation. This will be verified by the completion of the assignment. It is the responsibility of each student to have this form completed and returned to faculty within one week after the rotation’s end. No credit will be given if you fail to complete the rotation or return the worksheet.

Record all examinations observed or assisted with and return to faculty. You will also be required to view at least 1 of each of the following examinations with a radiologist: abdomen, pelvis, obstetrical. Have the radiologist initial the worksheet as each exam is read.

Return the time sheet with technologist signature verifying time to Washburn faculty.
ULTRASOUND CLINICAL ROTATION

Student ___________________________________ Date __________________________

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<th>Time sheet</th>
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Structures to be Identified on Scans

A  Organs: Liver, kidneys, pancreas, gallbladder, uterus, ovaries, thyroid, bladder
B  Obstetrical structures: Uterus, placenta, amniotic fluid, baby's abdomen and chest, baby's heart, and baby's head
C  Vessels: aorta, IVC, portal vein

Assignment

1  Define the following: ultrasound, echogenic, transducer, longitudinal, transverse, cystic, hypoechoic, Doppler ultrasound
2  Discuss the preparation of 3 patients examined during your rotation.
3  Discuss the landmarks utilized for 3 examinations observed.
4  List 5 pathological conditions in which ultrasound is the exam of choice.
5  Discuss various transducers and the use of each
MRI Pre-rotation Screening

The Joint Review Committee on Education in Radiologic Technology Standard 4 (Health and Safety) requires radiography programs to establish a safety screening protocol for students having potential access to the MR environment. This assures that students are appropriately screened for magnetic wave or radiofrequency hazards.

Information on the MR environment is presented to second year radiography students in AL220 Radiographic Procedures III. Students are not allowed to rotate through MRI until after this presentation which includes MRI safety. In addition, students must complete the following questionnaire in order to identify possible safety issues since the MR magnet is always on. If the answer to any question below is “yes”, this document will be sent to the MRI department at their proposed rotation site for clearance prior to clinical rotation.

This screening document is due to Jera no later than one week prior to the scheduled rotation.

Name ________________________________

Please indicate if you have any of the following:

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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<tbody>
<tr>
<td>Aneurysm clip(s)</td>
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<tr>
<td>Any injury involving metallic fragment or foreign body (eye, other soft tissue, etc.)</td>
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<tr>
<td>Any type of prosthesis (eye, shoulder, etc.)</td>
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<tr>
<td>Artificial heart valve, coil, filter and/or stent</td>
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<tr>
<td>Cardiac Pacemaker or implanted cardioverter defibrillator</td>
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<td>Ear (cochlear) implant, middle ear implant and/or hearing aids</td>
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<td>Electronic implant or device</td>
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<tr>
<td>External/internal drug pump for Insulin or other medicine</td>
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<tr>
<td>IV access port</td>
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<tr>
<td>Implanted post-surgical hardware (pins, rods, etc.)</td>
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</tr>
<tr>
<td>Medication patch</td>
<td></td>
</tr>
<tr>
<td>Metallic removable dental work, braces, retainers</td>
<td></td>
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<tr>
<td>Neurostimulator or spinal cord simulator</td>
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<tr>
<td>Shunt</td>
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<tr>
<td>Spinal fixation device or spinal fusion</td>
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<tr>
<td>Surgical clips, staples or surgical mesh</td>
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<td>Other</td>
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Explain in further detail if you answered “yes” to any of the above questions.

Approved 1/26/15 Jera Roberts and Ron Horton
MAGNETIC RESONANCE CLINICAL ROTATION

Introduction

AL220 provided prerequisite information in Magnetic Resonance prior to the clinical rotation. The second year radiographer student may spend one week in Magnetic Resonance to observe and assist with technical procedures.

The rotation hours are:

- MRI Center of Kansas: 8am - 5pm (232-2674). One hour for lunch is scheduled. (No, you may not take 1-hour lunch and leave at 4:30).
- Lawrence Memorial Hospital: 7:00-3:30 (749-6194)
- Mercy Health Center: 7:00-3:00 (776-2888)
- Stormont-Vail: 8:00-4:30 (354-6205)
- St. Francis Health Center: 8:00-4:30 (295-8175)

When assigned to any modality, it is expected you will complete a minimum of 7 hours daily in that area. If there are low patient exams or equipment problems, the student must return to diagnostic radiology to complete the scheduled hours for that day. A variation of the hours will be at the discretion of the supervising technologist. If at any time the student is allowed to leave early, it MUST be noted on the clinical worksheet.

If a student is unable to be present on the scheduled days, call the MR site as well as Washburn faculty (leave a message) at 670-2173 or 670-1535.

Objectives

1. Identify major anatomy on the scans.
2. Have a basic understanding of the principle of MR.
3. Gain a basic understanding of the components of the MR system.
4. Understand the risks involved with the procedures.
5. Know which pathological conditions are well demonstrated by MR.

Guidelines

Students will be expected to have a basic knowledge and understanding of the objectives by the end of their clinical rotation. This will be verified by the completion of the assignment. It is the responsibility of each student to have this form completed and returned to faculty within one week after the rotation’s end. No credit will be given if you fail to complete the rotation or return the worksheet.

Record all examinations observed or assisted with and return to faculty. You will also be required to view at least 4 examinations with a radiologist. Have the radiologist initial the worksheet as each exam is read.

Return the time sheet with technologist signature verifying time to Washburn faculty.
MAGNETIC RESONANCE CLINICAL ROTATION

Student ___________________________ Date____________________

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**Assignment**

1. Define the following: gauss, Telsa, precession, resonance, relaxation time
2. Discuss the use of contrast media
3. Differentiate between T1 & T2
4. List some pathological conditions well demonstrated by MR
5. Discuss some causes of artifacts
6. Discuss the patient risks involved
7. Discuss the use of coils
MAMMOGRAPHY CLINICAL ROTATION

Introduction
AL220 provided prerequisite information in Mammography prior to the clinical rotation. The second year radiographer student may spend one week in mammography to observe and assist with technical procedures. The rotation hours are per each clinical education setting’s normal hours of operation in this area which is usually 8-430pm.

When assigned to any modality, it is expected you will complete a minimum of 7 hours daily in that area. If there are low patient exams or equipment problems, the student must return to diagnostic radiology to complete the scheduled hours for that day. A variation of the hours will be at the discretion of the supervising technologist. If at any time the student is allowed to leave early, it MUST be noted on the clinical worksheet.

If a student is unable to be present on the scheduled days, call the Mammography site as well as Washburn faculty (leave a message) at 670-2173 or 670-1535.

Accreditation Position Statement on Mammography Clinical Rotations
Certification data shows less than 1% of the technologists registered in mammography by the ARRT are males. With regards to mammography, the program will make every effort to place a male student in a mammography clinical rotation if requested; however, the program cannot override clinical site processes that restrict mammography rotations to female students. Be advised that placement is not guaranteed and may be limited to male patients.

Objectives
1 Have a basic understanding of the principle of mammography imaging.
2 Gain a basic understanding of the equipment components of a dedicated mammography unit.
3 Understand the risks involved with the procedures.
4 Know which pathological conditions are well demonstrated by mammography.

Guidelines
Students will be expected to have a basic knowledge and understanding of the objectives by the end of their clinical rotation. This will be verified by the completion of the assignment. It is the responsibility of each student to have this form completed and returned to faculty within one week after the rotation’s end. No credit will be given if you fail to complete the rotation or return the worksheet.

Record all examinations observed or assisted with and return to faculty. You will also be required to view at least 4 examinations with a radiologist. Have the radiologist initial the worksheet as each exam is read.

Return the time sheet with technologist signature verifying time to Washburn faculty.
MAMMOGRAPHY CLINICAL ROTATION

Student _______________________________ Date __________________

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**Assignment**

1. Define the following per Merrill’s Atlas: CAD, FFDM, MQSA, ACR, breast tissue density and architectural distortions.
2. Explain the difference between screening and diagnostic images.
3. List risk factors that increase the likelihood of breast cancer development.
4. Provide three (3) pathologic conditions that may be identified with mammography imaging.
INTerventional Clinical Rotation

Introduction

AL220 presented concepts and information as related to Special Procedures. This presentation was a prerequisite to the clinical rotation in Special Procedures. The second year radiographer student may spend one week in Special Procedures to observe and assist with technical procedures.

The rotation hours are:
- St. Francis Hospital and Medical Center: 7:30-4:00 (295-8342)
- Stormont-Vail Regional Health Center: 8:00-4:30 (354-6178)
- Lawrence Memorial Hospital: 7:00-3:30 (749-6194)
- Mercy Health Center: 7:00-3:30 (776-2888)

When assigned to any modality, it is expected you will complete a minimum of 7 hours daily in that area. If there are low patient exams or equipment problems, the student must return to diagnostic radiology to complete the scheduled hours for that day. A variation of the hours will be at the discretion of the Interventional supervisor. If at any time a student is allowed to leave early, the supervisor MUST initial the clinical worksheet.

If a student is unable to be present on the scheduled days, call the special procedures site as well as Washburn faculty (leave a message) at 670-2173 or 670-1535.

Objectives

1. Identify major arteries and veins
2. Develop a basic understanding of the equipment utilized.
3. Develop a basic understanding of the procedures performed
4. Understand subtraction technique
5. Observe digital subtraction angiography

Guidelines

Be certain to wear your radiation monitoring badge to this rotation.

Student knowledge and performance requirements for the rotation are listed through objectives on the sheet below. It is the responsibility of each student to have this form completed and returned to faculty within one week after the rotation's end. No credit will be given if you fail to complete the rotation or return the assignment sheet.

Record all examinations observed or assisted with and return to faculty. You should also view at least three (3) examinations with a radiologist. Have the radiologist initial those examinations.

Return the time sheet with technologist signature verifying time to Washburn faculty.
INTERVENTIONAL CLINICAL ROTATION

Student ___________________________ Date __________________

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Assignment

A  Observe one heart catheterization _________

1  Define the following terms: arteriography, venography, aortography, percutaneous transluminal angioplasty, hematoma, and hemostasis.
2  List the contrast media, anti-coagulant and localization media that are utilized in interventional examinations.
3  Discuss diagnoses that may involve heart catheterizations.
4  Discuss diagnoses that may involve arteriograms.
5  Compare digital to conventional arteriograms.
6  Discuss radiation protection of the physician and radiographer.
7  Discuss risks associated with the procedures performed.
Phlebotomy Rotation
Radiologic Technology Program
Washburn University

Introduction

AL220 presented concepts and information as related to Phlebotomy Procedures, as well as passing a simulated procedure. This presentation was a prerequisite to the clinical rotation in Laboratory Services. The second year radiographer student will spend three (3) days (one week assignment) in Laboratory Services to observe, assist and perform procedures.

The rotation hours are 7:00-3:30 at St. Francis Health (295-8060).

A variation of the hours will be at the discretion of the Laboratory supervisor. If at any time a student is allowed to leave early, the supervisor MUST initial the clinical worksheet.

If a student is unable to be present on the scheduled days, call the Laboratory Services at St. Francis Health and Hillary Lolley (670-1535 or hillary.lolley@washburn.edu). Three days are required for completion of this required assignment. Therefore, if a student misses one or more days of the scheduled rotation, the hours must be made-up in phlebotomy. A student cannot simply use attendance hours in place of this rotation. Hillary would schedule the missed day(s) in conjunction with St. Francis Health.

Objectives

1. Identify major arteries and veins in the arm
2. To develop entry level skill with venipuncture
3. To understand the relationship between specific laboratory tests and radiology procedures.

Guidelines

Student knowledge and performance requirements for the rotation are listed through objectives on the sheet below. It is the responsibility of each student to have this form completed and returned to faculty within one week after the rotation's end. No credit will be given if you fail to complete the rotation or return the assignment sheet.

Record all examinations that are observed, assisted, or performed and return to Hillary Lolley.

Return the time sheet with phlebotomist's signature verifying time to Hillary Lolley. You will still clock in and out on the T-system as well.
# PHLEBOTOMY CLINICAL ROTATION

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## Assignment

1. Define and explain the relevance for the test regarding radiology examinations for the following tests: CBC, Chem B, PT with INR and GFR.
2. Discuss risks associated with the procedures performed.
3. Explain vasovagal reaction and how to manage it.
4. State the supplies needed for venipuncture and the process to perform the procedure.
5. Define Extravasation.
RADIOLOGIC TECHNOLOGY PROGRAM  
WASHBURN UNIVERSITY  
St. Francis Health Phlebotomy Evaluation

Student: ________________________________________________

Dates of Rotation:________________________________________

Name of Facility: ________________________________

Individual(s) completing this evaluation:__________________________

Part 1.)
Please complete the evaluation on the student named above by placing an "X" in the area which best describes performance and return to the Program Director at Washburn University.

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<tr>
<th></th>
<th>Above Average</th>
<th>Acceptable or Average</th>
<th>Improvement Needed</th>
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<tr>
<td>Attitude: Works harmoniously with others; is receptive to suggestions.</td>
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<tr>
<td>Dependability: Is reliable; observes or performs all procedures in assigned area.</td>
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Part 2.)
The student exhibits entry skill with phlebotomy. □Yes □No

Phlebotomist Signature _________________________________________________________

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RADIOLOGIC TECHNOLOGY PROGRAM  
WASHBURN UNIVERSITY  
Imaging Modality Evaluation

Student: ___________________________ Dates of Rotation: ___________________________

Name of Facility: ________________________________________________________________

Individual(s) completing this evaluation: __________________________________________

Please complete the evaluation on the student named above by placing an "X" in the area which best describes performance and return to the Program Director at Washburn University.

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