

GREAT PLAINS

Technology Center

RADIOLOGIC TECHNOLOGY

CLINICAL HANDBOOK

2011 - 2012



**RADIOLOGIC TECHNOLOGY
CLINICAL HANDBOOK
TABLE OF CONTENTS**

<i>Notice of Nondiscrimination</i>	2
<i>Nonimmigrant Alien Students</i>	2
<i>Campus Security Act</i>	2
<i>USEPA Requirements</i>	2
<i>Program Mission</i>	3
<i>Program Goals</i>	3
I. Introduction	4
II. Program Policies	8
<i>A. Competency Based Clinical Education Plan</i>	10
<i>B. Mandatory Clinical Competency Requirements</i>	12
<i>C. Elective Clinical Competency Requirements</i>	16
<i>D. Clinical Site / Equipment / Rooms</i>	17
<i>E. Film-Screen Radiographic Equipment Competency</i>	18
<i>F. Digital Radiography Equipment Competency</i>	18
<i>G. Computed Radiography Equipment Competency</i>	20
<i>H. Clinical Competency Evaluation</i>	22
<i>I. Criteria for Clinical Competency Evaluation</i>	23
<i>J. Limited Computed Tomography Performance Evaluation</i>	24
<i>K. Criteria for Limited Computed Tomography Performance Evaluation</i>	24
<i>L. Radiographic Equipment Manipulation Proficiency Evaluation</i>	25
<i>M. Clinical Proficiency Evaluation</i>	26
<i>N. Criteria for Clinical Proficiency Evaluation</i>	27
<i>O. Clinical Performance Evaluation</i>	28
<i>P. Criteria for Clinical Performance Evaluation</i>	29
III. Grading Standards	29
<i>A. Grading Symbols and Scale</i>	30
<i>B. Grading Plan: Didactic</i>	30
<i>C. Grading Plan: Clinical</i>	31
IV. Academic, Clinical Education Setting, and Disciplinary Advisement Policy & Procedures	31
V. Complaint Policy/Due Process	32
VI. JRCERT Non-Compliance Complaint Policy/Due Process	32
VII. Clinical Rotation	33
VIII. Specialty Rotation	34
<i>A. Magnetic Resonance Imaging (MRI)</i>	35
<i>B. Mammography / Bone Densitometry</i>	35
<i>C. Nuclear Medicine</i>	36
<i>D. Radiation Oncology</i>	36
<i>E. Ultrasonography</i>	36
<i>F. Vascular Radiography</i>	37
<i>G. Positron Emission Tomography (PET)</i>	37
<i>H. Student Statement of Understanding</i>	38

NOTICE OF NONDISCRIMINATION

Great Plains Technology Center does not discriminate on the basis of race, color, national origin, sex/gender, age, or disability in admission to its programs, services, or activities, in access to them, in treatment of individuals, or in any aspect of their operations. The Great Plains Technology Center also does not discriminate in its hiring or employment practices.

This notice is provided as required by Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title IX of the Education Amendments of 1972, the Age Discrimination Act of 1975, and the Americans with Disabilities Act of 1990. Questions, complaints, or requests for additional information regarding these laws may be forwarded to the designated compliance coordinator(s) at Great Plains Technology Center, 4500 W. Lee Blvd., Lawton, OK. or Great Plains Technology Center, 2001 E. Gladstone, Frederick, OK.

Title IX Coordinator/Compliance Officers

Lawton campus—Karen Bailey and James Bishop (580) 355-6371

Frederick campus—Nancy Hasley and Gary Tyler (580) 335-5525

El Great Plains Technology Center no discrimina raza, color, nacionalidad, género, edad, o incapacidad de admisión a sus programas, servicios, o actividades, en acceso a ellas, en el tratamiento a individuos, o en ningún aspecto de sus operaciones. El Great Plains Technology Center tampoco discrimina en sus contratos o practicas de empleados.

Esta noticia es provista y requerida por el Título VI del Acto de Derechos Civiles de 1964, Sección 504 del Acto de Rehabilitación de 1973, Título IX de la Enmienda Educativa de 1972, en el Acto de Era de Discriminación de 1975, y el Acto de los Estadounidenses con Habilidades Diferenciadas de 1990. Preguntas, quejas, o para más información con respecto a estas leyes pueden ser recibidas por el coordinador de quejas at Great Plains Technology Center, 4500 W. Lee Blvd., Lawton, OK. or Great Plains Technology Center, 2001 E. Gladstone, Frederick, OK.

Title IX Coordinator/Compliance Officers

Lawton campus—Karen Bailey and James Bishop (580) 355-6371

Frederick campus—Nancy Hasley and Gary Tyler (580) 335-5525

NONIMMIGRANT ALIEN STUDENTS

This school is authorized under Federal law to enroll nonimmigrant alien students.

CAMPUS SECURITY ACT

In order to comply with federal regulation 34 CFR 668.36 Campus Security Act, the Campus Crime Report for Great Plains Technology Center is available on our web site at www.greatplains.edu. The report lists statistics of the crime committed on Great Plains Campuses over a 3-year period and information/policies regarding campus crime.

USEPA REQUIREMENTS

Great Plains Technology Center is in compliance with USEPA requirements for asbestos. Management plan is on file in Building 500.

Visit Our Web Site at www.greatplains.edu

PROGRAM MISSION

The Great Plains Technology Center Radiologic Technology Program's mission is to prepare students to succeed in work and in life by helping them develop competitive workforce knowledge, skills and attitudes necessary for successful employment in the Radiologic sciences.

PROGRAM GOALS

The goals of the Great Plains Technology Center Radiologic Technology Program are:

- 1. The students will demonstrate judgment and communication skills necessary to effectively interact with patients and fellow health care professionals necessary for the practice of Radiologic Technology.*
- 2. The students will be competent in their knowledge and technical skills necessary for the practice of Radiologic Technology.*
- 3. Students will exhibit professional ethics and attitude by demonstrating responsibility, concern, and integrity necessary for the practice of Radiologic Technology.*
- 4. The program will graduate students with entry-level employment skills.*
- 5. The program will provide opportunities to students for professional development and growth necessary for the practice of Radiologic Technology.*

I. INTRODUCTION

During the twenty-two months of training, the student will rotate through the various areas of the radiology department. Upon completion of each rotation, the student will be evaluated for level of performance in that area.

To provide the students the opportunity to gain the clinical experience necessary for them to become a competent, functional radiographer, Great Plains Technology Center has agreements with the following Clinical Education Settings:

CLINICAL EDUCATION SETTINGS

<i>Comanche County Memorial Hospital,</i>	<i>.....Lawton, OK</i>
<i>Duncan Regional Hospital,</i>	<i>.....Duncan, OK</i>
<i>Duncan Imaging Center</i>	<i>.....Duncan, OK</i>
<i>Duncan Regional Orthopaedics Associates, Inc.</i>	<i>.....Duncan, OK</i>
<i>Grady Memorial Hospital,</i>	<i>.....Chickasha, OK</i>
<i>Memorial Hospital,</i>	<i>.....Frederick, OK</i>
<i>Reynolds Army Community Hospital,</i>	<i>.....Fort Sill, OK</i>
<i>Southern Plains Medical Center P.C.,</i>	<i>.....Chickasha, OK</i>
<i>Southwestern Medical Center,</i>	<i>.....Lawton, OK</i>
<i>The Physicians' Hospital in Anadarko,</i>	<i>.....Anadarko, OK</i>
<i>USPHS Indian Hospital,</i>	<i>.....Lawton, OK</i>

*Additions and deletions of Clinical Education Settings to include out-of-town rotations may be subject to change. Students will be required to rotate to any and all additional Clinical Education Settings as they may become available. Clinical times will vary from 7:00 a.m. to 10:00 p.m., with possible weekend rotations. Combined clinical and academic hours will not exceed forty (40) hours per week.

Students are required to maintain current records of vaccinations, annual PPD, Hepatitis B vaccine, CPR, negative drug screening, and background check throughout the 22 months of training. It is the student's responsibility to submit copies of these records to Great Plains Technology Center, to be kept in the student's file. If the student's vaccinations, PPD, Hepatitis B vaccine, and/or CPR are not current during the 22 months of training, the student will not be allowed to go to the Clinical Education Setting. Non-compliance of proper documentation will result in the student being marked as absent for the clinical days missed until the records are brought up to date. (See "absences" Great Plains Technology Center Student Handbook.)

BACKGROUND CHECKS

Background Information

In order to protect patients and the general public, obtaining a background check on each student (18 years of age and older) and instructor participating in clinical rotations is now a provision required by many Clinical Education Settings using the uniform "Clinical Rotation Agreement".

Excerpt From Uniform "Clinical Rotation Agreement"

Section 3 (d)

"a. For each Instructor and Student who will participate in the Clinical Rotations, the School shall provide to the Facility verification of the following immunizations and tests: (i) a complete Hepatitis B vaccination series (series of three or waiver); (ii) negative PPD or chest x-ray; (iii) MMR vaccination(s) or positive titer(s); (iv) a written verification of varicella history, varicella vaccination or a varicella titer by a physician or a physician's designee; and (v) a background check"

This Agreement was finalized in January 2004 as a template for schools and facilities to use, following extensive review and input by health care professionals, educators and legal counsel representing the health care industry and education. The Agreement was created following a request by numerous educators, in an attempt to avoid unnecessary costs, delays, and frustration associated with negotiating a separate contract with each health care facility and educational institution across the state. Although the goal of creating the Agreement was to create uniformity and consistency, the task force recognized that some provisions of the Clinical Rotation Agreement might not fit the specific needs of the parties in all arrangements.

The background check provision was added to the contract due to the fact that the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), which accredits many hospitals in Oklahoma and in the U.S., is now requiring this of its accredited hospitals, effective 2004. The task force was also aware that this provision has been part of the clinical contract Tulsa hospitals and schools have used for the past four years. In addition, Hospital Casualty Company, which provides medical liability insurance to many Oklahoma hospitals, including the majority of small/rural hospitals, recently began including student background checks as one of its guidelines to its insureds.

The background checks, dissemination of self-disclosure information, background check results, and conviction records, whether in or outside the state of Oklahoma as deemed necessary by the School, may be provided to the clinical sites to meet requirements of the academic program.

Conviction/criminal history records are reviewed as they relate to the content and nature of the curriculum and the safety and security of patients and the public. The clinical site (facility) may refuse any student from participating in the clinical experiences with a criminal background check record that relates to a felony.

To be considered for a clinical placement in those sites requiring background checks, the student must comply with the requirement and all findings must be satisfactory according to the guidelines below.

Criminal Background Check and Sex Offender Registry

Criminal history background record searches are acceptable only when:

§ Conducted by the Oklahoma State Bureau of Investigation (OSBI); and/or § Conducted by the authorized agency in the previous state of residence, if the individual has resided in Oklahoma less than one year.

If, prior to the clinical rotation, more than three months have passed since the background check was obtained, the process should be repeated. If the student leaves the program and is later re-admitted, another check should be completed. Schools and facilities reserve the right to review any information that could impact the student’s ability to function safely in the clinical area. If the student has been a resident of Oklahoma for less than one year, he/she is required to obtain a criminal history review and sex offender registry report from his/her last state of residency.

The program will conduct a background check, which includes sex offender status, felonies and misdemeanors. This will be done prior to the start of your first year and during your second year.

A conviction/criminal history record does not necessarily disqualify an individual for admission in a program.

DRUG FREE SCHOOL'S POLICY STATEMENT

Using alcohol and other drugs carries risks. Alcohol and drugs impair your judgment, making you more likely to hurt yourself or others, to have trouble with the law, to do poorly at work and school, and to have relationship trouble. Alcohol and drugs also have specific health risks: they can damage major organs, increase your risk of cancers, and even cause death.

There are three alcohol and drug treatment centers serving Comanche, Tillman and Kiowa counties—they are: Reflections, Southwestern Medical Center; Silver Linings, Comanche County Memorial Hospital; and Taliaferro Community Health Center.

All students have a right to attend school in an environment conducive to learning. Since alcohol and other drug use is illegal and interferes with both effective learning and the healthy development of young people, the Great Plains Technology Center has a fundamental legal and ethical obligation to prevent drug use and to maintain a drug-free educational environment.

Because of the extensive abuse of alcohol, tobacco, and drugs and their continuous promotion in our society, the Great Plains Technology Center provides drug education units, which are integrated within the standard curriculum. These units are necessary to prepare students for decision-making against drug and alcohol use.

Drug use, possession (including paraphernalia), and sale on the school grounds and at school functions will not be tolerated. Specific infractions and appropriate disciplinary actions are listed in the Great Plains Technology Center Student Handbook. Some possible actions include parental contact, suspension, or expulsion.

A copy of the Drug-Free Schools Policy and the GPTC Student Handbook will be available to students online at www.greatplains.edu. Continual education will be provided by drug education seminars, teacher in service training, and student instruction. It is indeed our goal to achieve a drug-free educational environment.

Drug Screen Policy – Adult Medical Programs

Students notified of initial acceptance into adult medical program have a conditional admission pending attendance of mandatory meeting, appropriate CPR certification, negative drug screen, clear background check, suitable physical exam, and payment of tuition and fees prior to the start date of the program.

Students in medical programs are required to be screened for substance abuse prior to clinical practicums. The purposes of the drug screen policy are to comply with regulations of area health care agencies, to provide optimal care to patients, and to support the school policy related to illicit use of substances as stated in the Great Plains Technology Center (GPTC) Student Handbook and the Policies and Procedures book. Students must abide by the drug screen policies of each health care agency in which a student is assigned for clinical practicums. Area agencies require that students not be involved in the use, or possession of alcohol or non-prescribed drugs. Also, students may not use prescription drugs illegally.

Students will submit authorization allowing a facility, designated by GPTC, to test body fluids for the presence of illicit drugs. In addition to initial screening that will occur when the student is admitted to a medical program, students may be subject to testing when requested by a specific clinical agency or for cause; such as, slurred speech, impaired physical coordination, inappropriate behavior, or pupillary changes.

Initial Drug Screening. Student failure to submit to a drug screen, attempting to tamper with, contaminate, or switch a sample will result in the student not being admitted into a medical program. A diluted result will require a retest, at the school's expense. An applicant with a positive drug screen will not be admitted into the program.

Drug Screening of Existing Students. Student failure to submit to a drug screen, attempting to tamper with, contaminate, or switch a sample will result in the student not being allowed to meet course objectives for clinical practicums; therefore, progression in the program will not be permitted. A diluted result will require a retest, at the school's expense. Students who test positive for illicit drug use may not continue in clinical practicums and therefore cannot meet objectives for clinical courses. Following school policy, they will be dismissed from the program and may apply for readmission. In order to be considered for readmission, the student must submit a letter from a treatment agency verifying completion of a drug treatment program. Readmission is not guaranteed. If a student is readmitted and tests positive for substance abuse a second time, the student is not eligible for further admission. If a student tests positive for a prescribed drug, the student must submit a valid prescription, providing the drug level is within prescribed limits and that the level does not indicate abuse.

Appeal Procedure. If a urine drug screen indicates positive for the presence of unauthorized (illegal or non-prescribed) drugs, the student may request a hair follicle drug screen to be performed within 24 hours of receiving the results of their drug test. (If results of urine drug screen are received on Friday, the student will have until Monday of the following week to have a hair follicle drug screen performed.) The hair follicle drug screen will be at the student's expense, performed at the agency specified by GPTC. While awaiting results of a hair follicle drug screen, the student will not be allowed to attend practicums. If the hair follicle drug screen is negative, the applicant may enter the program or a student enrolled in the program may remain in the program. If the hair follicle drug screen confirms the results of the urine drug screen, the applicant will not be admitted into the program. An existing student will be dismissed from the program and may reapply for admission.

All test results will be filed in the Health Careers Office and shall remain confidential.

Radiologic Technology students will have an additional drug screen conducted during the second academic year, and prior to submitting the ARRT National Certification application. The prior drug screen policy will be in effect for this additional drug screen.

II. PROGRAM POLICIES

The need for extensive clinical experience creates a dilemma. Students need to learn how to function well within the clinical environment. Initially, close supervision is essential; however, the quicker you learn to function under limited supervision, the easier it will be for you to make the transition from student to technologist upon graduation. Our affiliated hospitals use a clinical environment that has resulted in highly qualified graduates who can function well in any radiology department. Their staffing is such that the patient load could be handled without students, but the availability of students improves their patient-flow and the quality of patient care.

A one-to-one ratio of technologist-to-student is maintained at all Clinical Education Settings.

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

Direct Supervision Policy

To assure that all medical imaging procedures are being performed under the direct supervision of a qualified practitioner until the radiography student achieves competency and until a student achieves and documents competency in any given procedure, all clinical assignments shall be carried out under the direct supervision of an ARRT registered radiographers.

Direct Supervision Includes:

1. An ARRT registered radiographer reviews the request for examination in relation to the student's achievement.
2. An ARRT registered radiographer evaluates the condition of the patient in relation to the student's knowledge.
3. An ARRT registered radiographer is present during the conduct of the examination.
4. An ARRT registered radiographer reviews and approves the radiographs.
5. **An ARRT registered radiographer is present in the examination room when a student repeats a radiograph, regardless of the students' skill level or prior achieved competency.

To assure adherence of the direct supervision policy all medical imaging procedures are documented and verified on the student clinical experience log sheets by the supervising qualified practitioner's initials.

After demonstrating competency, students may perform procedures with indirect supervision.

Indirect Supervision Policy

To assure that all medical imaging procedures are performed under the *indirect supervision of a qualified practitioner after a radiography student achieves competency, a student may perform imaging procedures with an ARRT registered radiographer *immediately available within hearing distance of imaging procedure being performed.

For radiography the JRCERT defines ***indirect supervision** as that supervision provided by a qualified practitioner immediately available to assist students, regardless of the level of student achievement. ***Immediately available** is interpreted as the physical presence of a qualified practitioner 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 may perform radiographic imaging procedures to gain and enhance their clinical skills under *indirect supervision only under the following criteria:

1. The student has demonstrated competency of imaging equipment.
2. The student has demonstrated competency of ordered imaging procedure.
3. An ARRT registered radiographer is *immediately available, adjacent to the room or location where a radiographic imaging procedure being performed.
4. An ARRT registered radiographer performs quality control of finished radiographs prior to the release of the films and patient.
5. An ARRT registered radiographer is present in the examination room when a student repeats a radiograph, regardless of the students' skill level or prior achieved competency.

For radiography the JRCERT defines ***indirect supervision** as that supervision provided by a qualified practitioner immediately available to assist students, regardless of the level of student achievement. ***Immediately available** is interpreted as the physical presence of a qualified practitioner 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.

To assure adherence of the direct supervision policy all medical imaging procedures are documented and verified on the student clinical experience log sheets by the supervising qualified practitioner's initials.

Repeat Supervision Policy

To assure that radiography students repeating unsatisfactory radiographs are under the direct supervision of a qualified practitioner an ARRT registered radiographer is present in the examination room when a student repeats a radiograph, regardless of the students' skill level or prior achieved competency.

After completion of the examination that included repeat radiographic images, the Registered Radiographer must document and verify their presence of the repeat radiographs by placing their initials on the clinical experience log.

Various procedures performed in the radiology department require injection of contrast media. Students must adhere to institutional policies regarding the injection of contrast media. Student must be competent in phlebotomy prior to being permitted to administer contrast media requiring injection.

Failure to abide by the direct, indirect, and / or repeat supervision policies may result in dismissal from the program. Great Plains Technology Center provides and maintains general comprehensive liability insurance and professional liability insurance for students. Such coverage shall be in an amount no less than one million per occurrence and three million annual aggregate, which shall be considered primary insurance for students.

Clinical Experience Log sheets must be maintained accurately on a daily basis. Students will record the type of procedure, date and time the procedure was performed, and if he/she assisted or performed the examination. Students must obtain initials of the ARRT registered radiographer overseeing the exam for repeat films and exam verification.

Failure to maintain an accurate and up-to-date Clinical Experience Log sheets on a daily basis may result in dismissal from the program.

A. COMPETENCY BASED CLINICAL EDUCATION PLAN

During the 22 months of training, students will be evaluated through documentation for the following:

1. Film-Screen Radiographic Equipment Competency Evaluation
2. Digital Radiographic Equipment Competency Evaluation
3. Computed Radiographic Equipment Competency Evaluation
4. Clinical Competency Evaluation
5. Limited Computed Tomography Performance Evaluation
6. Radiographic Equipment Manipulation Proficiency Evaluation
7. Clinical Proficiency Evaluation
8. Clinical Performance Evaluation
9. Limited Specialty Achievement
10. Clinical Experience Log

Clinical records will be maintained to ensure students confidentiality. All correspondence from clinical affiliates will be placed in secured drop boxes. Correspondence from Clinical Education Settings includes the 9 forms previously listed, but is not exclusive to only those forms. Upon completion of clinical competencies, students will submit competency documentation in the secured drop boxes. Drop boxes are located in the radiology department at each Clinical Education Setting. Drop boxes are maintained solely by GPTC faculty. Hand delivered documentation will not be accepted.

All clinical forms are color-coded. Forms submitted that are not of the specified color in accordance to GPTC Radiologic Technology Program will not be accepted.

Students are **not** allowed to perform examinations for competency during part-time employment. Clocking out to perform clinical competencies will not be allowed.

Radiographic Equipment Manipulation Competency Evaluation & Radiographic Computer Applications Competency Evaluation

During each clinical rotation to varying rooms, students are evaluated on their knowledge of each control on all radiographic consoles, equipment, and computer applications utilized in the clinical setting. Before attempting clinical competency on radiographic examinations, the student must prove competency in equipment manipulation and computer applications. When the student feels competent in the knowledge of the room and equipment, the clinical instructor or supervising technologist can be asked to observe him/her while demonstrating their knowledge of the radiographic consoles, equipment, and computer applications. The evaluation will be made using the criteria listed in the Radiographic Equipment Manipulation Competency and the Radiographic Computer Applications Competency forms. After successfully demonstrating their knowledge, the student will be given a Radiographic Equipment Manipulation Competency or Radiographic Computer Applications Competency form, completed and signed by the clinical instructor or supervising technologist, which signifies that the student is capable of working with the consoles, equipment, and computer applications in the specified room. The student may then proceed to attempt competency on clinical examinations using the Clinical Competency Evaluation.

Clinical Competency Evaluation

Students must successfully complete lecture in classroom and laboratory instruction prior to achieving examinations for clinical competency. The student is expected to observe and assist a registered radiographer in performance of the examination. When the student feels competent, having requisite or adequate ability or qualities to successfully complete a radiographic or computed tomography procedure examination, the student must inform the observing ARRT registered radiographer that the examination is being performed for competency. After successfully completing a radiographic or computed tomography procedure, the student will be given a Clinical Competency Evaluation form for radiographic examinations or a Limited Computed Tomography Performance Evaluation form for computed tomography examinations completed and signed by the observing ARRT registered radiographer which signifies that the student is capable of performing that examination under indirect supervision.

Only GPTC approved ARRT registered radiographers may perform Clinical Competency Evaluations.

All Competency Evaluations

Upon successful completion of any competency evaluation, the student must place the form into the secured drop box. All clinical competency criteria must be completed by the technologist performing the clinical competence evaluation. Students are not permitted to complete clinical competency criteria on clinical competency evaluation forms.

During any competency evaluation, the evaluator will have the option to discontinue the competency evaluation due to lack of competency by the student. This is at the discretion of the evaluator and should be based on the specific competency evaluation criteria.

Should a competency evaluation be discontinued, the student will be made aware of this decision as soon as possible. The student will be corrected and be allowed to proceed under direct supervision. The student may try to gain competency again as his/her skills develop.

All competency evaluations are based on the PASS/FAIL education system. Any student failing to meet competency requirements for any semester will be put on probation for the next semester. Upon failure to meet the competency requirements at the end of the following semester, the student will be dismissed from the program.

Students will be allowed the opportunity to rotate through the following specialty areas: Magnetic Resonance Imaging, Mammography/Bone Densitometry, Nuclear Medicine, Radiation Oncology, Ultrasonography, and Vascular Radiography (Cardiac Cath Lab) during Semester V (five) of their training .

All competency evaluations will be validated by GPTC Radiologic Technology Program faculty at each clinical education setting. Any examination found to be outside of established competency criteria will not be validated and the student will be notified. Upon notification, a faculty member will review the discrepancy(ies) with the student and the student will have to reattempt the exam for competency, until successfully achieving the competency with faculty validation. A valid clinical competency must be of diagnostic quality and meet all of the following criteria upon validation:

1. All clinical competency exams must have the correct left or right marker on each radiograph to be considered as a valid student competency. (Extenuating circumstances may be considered for surgery exams and MUST BE DOCUMENTED on the student competency form on the comments line by the Clinical Instructor, NOT the student.)

2. Exams with someone else's marker other than the student's markers will NOT be considered as a valid student competency.
3. Exams with partial markers that do not demonstrate the student initials or Right or Left within the collimated field will NOT be considered as a valid student competency.
4. Exams that only have 1 or 2 films marked out of 2, 4, or 6 films will NOT be considered as a valid student competency. (This is derived from the standpoint of the medical legal aspect of a radiograph.)
5. Undocumented exams, i.e. no record in hospital log or computer system, no order, no film jacket and no films, will be considered as cheating and the student will be dismissed from the program.
6. Borderline diagnostic exams that are plentiful will NOT be considered as a valid student competency. (Extenuating circumstances, i.e. uncooperative patient or patient pathology may exist on hard to get competencies, but MUST BE DOCUMENTED on the student competency form on the comments line by the Clinical Instructor, NOT the student.) The GPTC instructors will be talking with the CI and student concerning this competency. If the CI fails to document extenuating circumstances, then the competency will NOT be considered as a valid student competency.
7. Students must staple the flash card or a piece of paper with patient information to the competency prior to putting it into the clinical competency boxes at each Clinical Education Setting. (This will allow GPTC instructors to validate student competencies more efficiently as the boxes are emptied, and then destroy patient information at the hospital as to comply with HIPAA regulations.)
8. Students' competencies MUST be placed in the clinical competency boxes at each Clinical Education Setting immediately upon completion of that competency. (Students cannot hold on to competencies in their pockets or notebooks as they would be leaving the hospital and violating HIPAA regulations.)

B. MANDATORY CLINICAL COMPETENCY REQUIREMENTS

Student must successfully complete lecture in classroom and laboratory instruction prior to achieving clinical competency

Clinical Competency Evaluations are counted as 30% of the student's clinical grade, following the guidelines of the Radiologic Technology Student Handbook - Clinical Grading Standards.

The student will be required to complete competency examinations on the following radiographic procedures during the 22 months of training.

**All competencies with an asterisk (*) must be completed by the end of Semester V to compensate for the decline of exams being performed.*

All competencies with double asterisks () may be performed under simulated conditions with GPTC program faculty during Semester V. However, students are highly encouraged to complete all competencies on patients to achieve the highest degree of clinical competency.*

FIRST YEAR - SEMESTER I	
1. RADIOGRAPHIC EQUIPMENT / RADIOGRAPHIC COMPUTER APPLICATIONS	
MINIMUM OF TWO (2) DIAGNOSTIC ROOMS AT CCMH	
CASSETTE READERS AT CCMH	
COMPUTED RADIOGRAPHY WORKSTATION AT CCMH	
2. CHEST	
ROUTINE – STANDING (PA & LEFT LATERAL)	
3. ABDOMEN	
KUB – SUPINE	(AP)

Students must complete Computed Radiographic Equipment Competencies listed above for radiographic rooms at Comanche County Memorial Hospital by the end of Semester I.

Remaining radiographic equipment-related rooms and computer applications competencies must be completed when student rotates to the following Clinical Education Settings:

- Comanche County Memorial Hospital,Lawton, OK*
- Duncan Regional Hospital,Duncan, OK*
- Duncan Imaging CenterDuncan, OK*
- Duncan Regional Orthopaedics Associates, Inc.Duncan, OK*
- Grady Memorial Hospital, Chickasha, OK*
- Memorial Hospital, Frederick, OK*
- Reynolds Army Community Hospital, Fort Sill, OK*
- Southern Plains Medical Center P.C., Chickasha, OK*
- Southwestern Medical Center,Lawton, OK*
- The Physicians' Hospital in Anadarko,Anadarko, OK*
- USPHS Indian Hospital,Lawton, OK*

(Clinical Education Settings are subject to change. (i.e. additions / deletions).

Students are encouraged to complete all chest and abdominal competencies within Semester I.

SEMESTER II

1. STUDENTS ARE REQUIRED TO COMPLETE RADIOGRAPHIC EQUIPMENT / RADIOGRAPHIC COMPUTER APPLICATIONS COMPETENCIES AS THEY ROTATE TO EACH CLINICAL EDUCATION SETTING DURING SEMESTERS II-V.

2. CHEST (RESPIRATORY)

**DECUBITUS – RECUMBENT (AP OR PA)

WHEEL CHAIR – UPRIGHT (AP & LATERAL)

*STRETCHER UPRIGHT OR RECUMBENT IN DIAGNOSTIC ROOM
(AP AND LATERAL)

PEDIATRIC (UNDER 6 YRS OF AGE) UPRIGHT (PA OR AP & LATERAL)

*PEDIATRIC (UNDER 2 YRS OF AGE) PIGG-O-STAT (PA OR AP & LATERAL)

*NEWBORN (0-28 DAYS OR AGE) (PA OR AP)

3. ABDOMEN

ABDOMINAL SERIES (AP)
SUPINE KUB, UPRIGHT KUB, & UPRIGHT ABOVE DIAPHRAGM ABD OR UPRIGHT PA CHEST

*ABDOMINAL SERIES – RECUMBENT (AP OR PA WITH DECUBITUS)

*FEEDING / NG TUBE PLACEMENT (MAY BE ORDERED AS PCXR OR PKUB)

4. UPPER EXTREMITY

FINGERS - (PA, PA OBLIQUE, LATERAL)
(DIGITS 2-5) (PA MA BE DONE AS PART OF HAND)
(PA OBLIQUE AND LATERAL SHOULD BE DONE WITH THE LEAST AMOUNT OF
OID AND COLLIMATED TO THE INDIVIDUAL DIGIT)

*THUMB (AP, PA OBLIQUE, LATERAL)
(PA OBLIQUE MAY BE DONE AS PART OF HAND)
(AP AND LATERAL SHOULD BE DONE WITH THE LEAST AMOUNT OF OID AND
COLLIMATED TO THE INDIVIDUAL DIGIT)

HAND (PA, PA OBLIQUE, FAN LATERAL-LATEROMEDIAL)

WRIST (PA, PA OBLIQUE, LATERAL LATEROMEDIAL
(MAY INCLUDE ULNAR FLEXION)

FOREARM (AP AND LATERAL-LATEROMEDIAL)
(MUST INCLUDE ELBOW AND WRIST JOINT)

ELBOW JOINT (AP, AP OBLIQUE WITH EXTERNAL ROTATION, AND LATERAL LATEROMEDIAL)

*HUMERUS (AP, LATERAL-LATEROMEDIAL)
(UPRIGHT OR RECUMBENT)
INCLUDE ELBOW & SHOULDER JOINTS)
TRANSTHORACIC MAY BE SUBSTITUTED FOR LAT.)

SHOULDER (AP, INTERNAL AND EXTERNAL)
(UPRIGHT OR RECUMBENT)

*CLAVICLE (AP AND AP AXIAL)
(UPRIGHT OR RECUMBENT)

**ACROMIOCLAVICULAR JOINTS (AP-WITH & WITHOUT WEIGHTS)
(UPRIGHT) (BI-LATERAL EXAM)

*TRAUMA UPPER EXTREMITY (ANY EXTREMITY)
(SPECIFIED AS NON-ROUTINE PROCEDURE.) ACCORDING TO ARRT: TRAUMA IS CONSIDERED
A SERIOUS INJURY OR SHOCK TO THE BODY. MODIFICATIONS MAY INCLUDE VARIATIONS IN
POSITIONING WITH MINIMAL MOVEMENT OF THE BODY PART.

**TRAUMA SHOULDER (AP AND Y VIEW OR TRANSTHORACIC)

*EXTREMITY, AGE 6 YRS OR YOUNGER (AP OR PA & LAT)

SEMESTER III	
1. LOWER EXTREMITY	
*TOES	(AP FOOT WITH AP OBLIQUE & LATERAL OF TOE)
FOOT	(AP, AP OBLIQUE MEDIAL ROTATION, MEDIOLATERAL)
**OSCALCIS-CALCANEUS	(PA AXIAL, MEDIOLATERAL)
ANKLE JOINT	(AP, AP OBLIQUE MEDIAL ROTATION, MEDIOLATERAL)
TIBIA & FIBULA	(AP & MEDIOLATERAL TO INCLUDE BOTH JOINTS)
KNEE JOINT	(AP, AP OBLIQUE MEDIAL AND LATERAL ROTATION, MEDIOLATERAL WITH CEPHALIC ANGLE)
*PATELLA	(PA OR AP, MEDIOLATERAL, TANGENTIAL)
*FEMUR	(AP & MEDIOLATERAL TO INCLUDE BOTH JOINTS)

SECOND YEAR - SEMESTER IV	
1. LOWER EXTREMITY	
PELVIS	(AP)
HIP JOINT	(AP AND MEDIOLATERAL)
TRAUMA HIP JOINT	(AP HIP OR PELVIS, CROSSTABLE LATERAL)
TRAUMA LOWER EXTREMITY	(ANY EXTREMITY) (SPECIFIED AS NON-ROUTINE PROCEDURE.) ACCORDING TO ARRT: TRAUMA IS CONSIDERED A SERIOUS INJURY OR SHOCK TO THE BODY. MODIFICATIONS MAY INCLUDE VARIATIONS IN POSITIONING WITH MINIMAL MOVEMENT OF THE BODY PART.
2. CONTRAST MEDIA STUDIES *FLUOROSCOPY STUDIES – STUDENT MUST OBTAIN A MINIMUM OF 3 EXAMS, ONE OF THOSE MUST BE AN UPPER GASTROINTESTINAL STUDY & TWO FROM THE FOLLOWING LIST: BARIUM ENEMA (SINGLE OR DOUBLE CONTRAST), SMALL BOWEL SERIES, ESOPHAGUS STUDY, CYSTOGRAM, MYLEOGRAM, ARTHROGRAM, OR ERCP.	
ALL CONTRAST STUDIES SHOULD INCLUDE THE ROOM AND CONTRAST SET UP BY STUDENT	
UPPER GASTROINTESTINAL STUDY	(AP OR PA, RAO, RT. LAT, WITH / WITHOUT LPO)
SMALL BOWEL SERIES	(AP OR PA) (SHOULD INCLUDE GIVING PATIENT CONTRAST) (SHOULD INCLUDE DELAYED FILMING UP TO TWO HOURS) (MAY INCLUDE SETUP OF SPOT FILMING)
BARIUM ENEMA (SINGLE CONTRAST) OR (DOUBLE CONTRAST)	(MUST INCLUDE THE FOLLOWING PROJECTIONS: AP OR PA, AP OBLIQUES-RPO & LPO, LPO, RT. OR LT. LAT., AP OR PA AXIAL, RT. & LT. LATERAL DECUBITUS VIEWS)
ESOPHAGUS STUDY	(MINIMUM OF PA OBLIQUE-RAO AND MAY INCLUDE AP OR PA AND RIGHT LATERAL) (UPRIGHT OR RECUMBENT) (PATIENT SHOULD DRINK CONTRAST MEDIA)
CYSTOGRAM	(AP URINARY BLADDER MAY INCLUDE AP OBLIQUES-LPO & RPO) (IN DEPARTMENT OR SURGERY)
ARTHROGRAM	(INCLUDES SET UP TRAY, EQUIPMENT & PRE AND/OR POST RADIOGRAPHS)
MYELOGRAM	(INCLUDES SET UP TRAY, EQUIPMENT, RUNNING FLUOROSCOPY FOR PHYSICIAN & POST RADIOGRAPHS)
ERCP	(INCLUDES SET UP EQUIPMENT, RUNNING FLUOROSCOPY FOR PHYSICIAN & MAY INCLUDE POST RADIOGRAPHS)
MODIFIED BARIUM SWALLOW	(INCLUDES SET UP OF VCR OR DIGITAL EQUIPMENT & SET UP OF FOOD & FEEDING PATIENT)
INTRAVENOUS UROGRAM (IVU)	(AP KUB, TOMO CUTS FOR KIDNEYS, AND/OR OBLIQUES LPO & RPO, AND POST VOID)

SEMESTER IV, CONTINUED		
3. MOBILE AND SURGICAL		
PORTABLE ORTHOPEDICS MINIMUM OF AP AND LAT	(DONE IN ER, OR, & HOSPITAL ROOMS)	
PORTABLE CHEST		
PORTABLE KUB		
C-ARM PROCEDURE	(ORTHOPEDIC)	(IN SURGERY)
C-ARM PROCEDURE	(NON-ORTHOPEDIC)	(IN SURGERY)
4. VERTEBRAE		
CERVICAL (5 VIEWS)	(AP, ODONTOID, AP OBLIQUES-LPO & RPO, & LATERAL)	
TRAUMA CERVICAL (PORT. OR DEPART.)	(AP, CROSSTABLE LAT.)	
THORACIC (3 VIEWS)	(AP, LATERAL, CERVICOTHORACIC LATERAL)	
LUMBAR (5 VIEWS)	(AP, AP OBLIQUES-LPO & RPO, LATERAL, L-5/S-1 SPOT)	
**SACRUM (2 VIEWS)	(AP AXIAL, LATERAL)	
**COCCYX (2 VIEWS)	(AP AXIAL, LATERAL)	
TRAUMA CERVICAL	(PORT. OR DEPART.)	(AP, CROSSTABLE LAT.)

SEMESTER V		
1. BONY THORAX		
RIBS (UNILATERAL)	(AP ABOVE & BELOW DIAPHRAGM, AP OBLIQUE ABOVE DIAPHRAGM)	
2. SKULL – STUDENT MUST OBTAIN A MINIMUM OF 3 OF THE 7 EXAMS LISTED.		
SKULL SERIES	(AP OR PA-O DEGREE OR AP AXIAL-CALDWELL, AP AXIAL TOWNE, RT. & LT. LATERAL)	
**FACIAL SERIES	(PA OR AP, PARIETOACANTHIAL, RT. OR LT. LATERAL) (MAY INCLUDE SMV)	
**NASAL BONES	(PARIETOACANTHIAL AND LT. & RT. LATERAL)	
PARANASAL SINUSES	(UPRIGHT-PA AXIAL PARIETOACANTHIAL, RT. OR LT. LATERAL)	
**ZYGOMATIC ARCHES	(SMV)	
MANDIBLE	(PA OR AP, RT. & LT. AXIOLATERAL OBLIQUE)	
ORBITS	MODIFIED PARIETOACANTHIAL, BILATERAL (RHESE) PARTIELORBITAL OR ORBITOPARIETAL OBLIQUE	
3. COMPUTED TOMOGRAPHY		
HEAD	(WITH OR WITHOUT INTRAVENOUS CONTRAST)	
ABDOMEN	(WITH OR WITHOUT INTRAVENOUS CONTRAST)	
PELVIS	(WITH OR WITHOUT INTRAVENOUS CONTRAST)	
CHEST	(WITH OR WITHOUT INTRAVENOUS CONTRAST)	

C. ELECTIVE CLINICAL COMPETENCY REQUIREMENTS

Student must successfully complete lecture in classroom and laboratory instruction prior to achieving clinical competency. Students are encouraged to obtain competency of elective examinations. These examinations have reduced in quantity, but are still performed in the clinical setting.

Students who obtain clinical competency in elective examinations will receive extra credit. The extra credit will be applied toward the student's clinical grade under the Clinical Applications-Mandatory Clinical Competencies category.

RETROGRADE UROGRAM	(INCLUDES SET UP OF EQUIPMENT & AP KUB)
SACROILIAC JOINTS (2 VIEWS)	(AP AXIAL, AP OR PA OBLIQUES, RPO, LPO, OR RAO & LAO)
SCOLIOSIS SERIES	(AP- MAY INCLUDE MULTIPLE VIEWS)
STERNUM	(PA OBLIQUE RAO, LATERAL)
SOFT TISSUE NECK	(AP & LATERAL)
SCAPULA	(AP & LATERAL) (UPRIGHT OR RECUMBENT)

D. CLINICAL SITE / EQUIPMENT / ROOMS

CCMH	GE ADVANTX	ROOM 1
	SIEMENS XONICS	ROOM 2
	SIREMOBIL ISO-C	ROOM 3
	SIEMENS MELINIA	ER
	GE PROTEUS OPC	ROOM 1, ORTHO 1 & 2
	SIEMENS AXIOM LUMINOS TF OPC	ROOM 3
	SIEMENS POLYDOROS 50S OPC	ROOM 4
	SIEMENS MOBILETT PORTABLE	
	GE AMX 4 PORTABLE	
	OEC-9900 C-ARM	OR
	ARCADIS AVANTIC C-ARM	OR
	KONICA CR WORK STATION	
	KONICA CASSETTE READER	
DRH	KODAK CR WORK STATION	
	KODAK CASSETTE READER	
DRH IMAGING	T-RAD	
DUNCAN ORTHO	DEL MEDICAL GX525	
GMH	SIEMENS AXIOM ARTIS	ROOM 3
	SIEMENS TOSRAD	ER
	TOSHIBA DST	ROOM 1
	AGFA CR WORK STATION	
	AGFA CASSETTE READER	
LIH	CARESTREAM DRX	EVOLUTION ROOM
	SHIMADZU DART PORTABLE	
RACH	GE MPH	ROOM 1-2
	PHILLIPS DIAGNOST ELEVA	ROOM 6
SWMC	GE PERCISION	ROOM 2

E. FILM-SCREEN RADIOGRAPHIC EQUIPMENT COMPETENCY EVALUATION

Primary Objective – The student will demonstrate a working knowledge of each control on all radiographic consoles utilized in the clinical setting. The student must prove competency in equipment manipulation before attempting to complete any clinical procedure competencies.

1. **Radiographic Table** – The student successfully demonstrated location and proper use of:
 - a. Table top movement and bucky tray locks.
 - b. Placing cassette in the bucky tray.
 - c. Side rail accessories to include the foot rest, hand grips, compression shoulder rests, lateral cassette holder, and/or patient cradle.
 - d. Horizontal stop.
 - e. Emergency shut off.
 - f. Vertical movement of table.
2. **X-ray Tube**- The student successfully demonstrated location and proper use of:
 - a. Warming up the x-ray tube.
 - b. Movement of x-ray tube in all directions.
 - c. Centered x-ray tube to the table / bucky.
 - d. Collimator light switch, override switch, diaphragm controls, and scales.
 - e. Scales relating to tube position.
 - f. Selection of kVp and mAs.
3. **Vertical Bucky and Chest Stand**- The student successfully demonstrated location and proper use of:
 - a. Upright table / bucky movement in all directions to include rotation, angulation, vertical and horizontal placement.
 - b. All locks and scales associated with movement of upright bucky.
 - c. Adjustment of cassette holder for all cassette sizes.
 - d. Procedure for placing cassettes in the bucky tray.
 - e. Handgrip adjustment.
4. **X-ray Control Panel (generator)**- The student successfully demonstrated location and proper use of:
 - a. kVp, mA, mAs, and / or time selection controls.
 - b. Automatic exposure controls (i.e. ionization chamber/photocell placement and density settings).
 - c. Focal spot selection control.
 - d. Bucky selection (table / wall) controls.
 - e. Exposure switch.
 - f. Off /on switch.

F. DIGITAL RADIOGRAPHIC EQUIPMENT COMPETENCY EVALUATION

Primary Objective: The student will demonstrate a working knowledge of each control on all radiographic consoles utilized in the clinical setting. The student must prove competency in equipment manipulation before attempting to complete any clinical procedure competencies.

1. **Digital Imaging** – The student demonstrated the location and proper use of:
 - A. **Radiographic Table** – The student successfully demonstrated location and proper use of:
 - a. Table top movement and bucky tray locks.
 - b. Placing cassette in the bucky tray.
 - c. Side rail accessories to include the foot rest, hand grips, compression shoulder rests, lateral cassette holder, and/or patient cradle.
 - d. Horizontal stop.
 - e. Emergency shut off.
 - f. Vertical movement of table.

- B. X-ray Tube** – The student successfully demonstrated location and proper use of:
- Warming up the x-ray tube.
 - Movement of x-ray tube in all directions.
 - Centered x-ray tube to the table / bucky.
 - Collimator light switch, override switch, diaphragm controls, and scales.
 - Scales relating to tube position.
 - Selection of kVp and mAs.
 - Calibrate detector.
 - Grid removal.
 - Proper removal and installation of battery image receptor.
 - Proper utilization of tracking device.
- C. Vertical Bucky and Chest Stand** – The student successfully demonstrated location and proper use of:
- Upright table / bucky movement in all directions to include rotation, angulation, vertical and horizontal placement.
 - All locks and scales associated with movement of upright bucky.
 - Adjustment of cassette holder for all cassette sizes.
 - Procedure for placing cassettes in the bucky tray.
 - Handgrip adjustment.
- D. X-ray Control Panel (generator)** – The student successfully demonstrated location and proper use of:
- kVp, mA, mAs, and / or time selection controls.
 - Automatic exposure controls (i.e. ionization chamber/photocell placement and density settings).
 - Focal spot selection control.
 - Bucky selection (table / wall) controls.
 - Exposure switch.
 - On / Off switch.
 - Input of patient data.
- 2. Digital Radiography Workstation** – The student demonstrated location and proper use of:
- Logon to the DR system.
 - Enter patient information – Patient name, MR#, CI#, Gender, DOB, and send destination.
 - Locate patient on patient directory.
 - Scan image receptors (IR) prior to start of examination.
 - Modify Examination Tag – selecting correct procedure protocol for facility.
 - Modify Region Of Interest (ROI) on image.
 - Output Formatting/Processing – collimation/masking.
 - Exam overlays (Exam markers) – R/L, upright, decubitus, prone.
 - Accept/Reject images for diagnostic quality.
 - Query from patient history/pull up radiograph.
- 3. Portable Radiographic Unit**
- Source of power supply.
 - X-ray tube warm up.
 - Collimator light switch, override switch, and diaphragm controls and scales.
 - All locks and scales associated with movement of the x-ray tube.
 - Tube movement in all directions, to include rotation, angulation, vertical, and horizontal placement.
 - All controls / locks necessary to “drive” or maneuver the unit.
 - kVp, mA, mAs, and / or time selection controls.
 - Exposure switch.

G. COMPUTED RADIOGRAPHIC EQUIPMENT COMPETENCY EVALUATION

Primary Objective: The student will demonstrate a working knowledge of each control on all radiographic consoles and equipment utilized in the clinical setting. The student must prove competency in equipment manipulation before attempting to complete any clinical procedure competencies.

- 1. Radiographic Table** – The student successfully demonstrated location and proper use of:
 - a. Table top movement and bucky tray locks.
 - b. Placing cassette in the bucky tray.
 - c. Side rail accessories to include the foot rest, hand grips, compression shoulder rests, lateral cassette holder, and/or patient cradle.
 - d. Horizontal stop.
 - e. Emergency shut off.
 - f. Vertical movement of table.

- 2. X-ray Tube** – The student successfully demonstrated location and proper use of:
 - a. Warming up the x-ray tube.
 - b. Movement of x-ray tube in all directions.
 - c. Centered x-ray tube to the table / bucky.
 - d. Collimator light switch, override switch, diaphragm controls, and scales.
 - e. Scales relating to tube position.
 - f. Selection of kVp and mAs.

- 3. Fluoro Tower / Image Intensifier** – The student successfully demonstrated location and proper use of:
 - a. Cassette program selector.
 - b. Cassette loading control.
 - c. Loading and removing cassette from the cassette holder.
 - d. Collimator controls.
 - e. Automatic Exposure Control (AEC).
 - f. Fluoroscopy exposure switch.
 - g. Table top movement and table tilt controls.
 - h. Compression control.
 - i. Hand grip.
 - j. Centering and parking the spot film diaphragm.
 - k. Fluoroscopic timer controls.
 - l. Myelogram lock.
 - m. Remove/attach lead apron from fluoro tower.

- 4. Vertical Bucky and Chest Stand** – The student successfully demonstrated location and proper use of:
 - a. Upright table/bucky movement in all directions to include rotation, angulation, vertical and horizontal placement.
 - b. All locks and scales associated with movement of upright bucky.
 - c. Adjustment of cassette holder for all cassette sizes.
 - d. Procedure for placing cassettes in the bucky tray.
 - e. Hand grip adjustment.

- 5. X-ray Control Panel (generator)** – The student demonstrated location and proper use of:
- kVp, mA, mAs, and/or time selection controls.
 - Automatic exposure controls (i.e. ionization chamber/photocell placement and density settings).
 - Focal spot selection control.
 - Bucky selection (table/wall) controls.
 - Exposure switch.
 - On/Off switch.

- 6. Tomographic System** – The student demonstrated location and proper use of:
- Exposure angle.
 - Plane/pivot (level of cut) control.
 - Tube movement (linear, circular, etc.) controls.
 - Coupling the link to the tube/bucky tray.

- 7. Mobile Units** – The student demonstrated location and proper use of:

Portable Radiographic Unit

- Source of power supply.
- X-ray tube warm up.
- Collimator light switch, override switch, and diaphragm controls and scales.
- All locks and scales associated with movement of the x-ray tube.
- Tube movement in all directions to include rotation, angulation, vertical, and horizontal placement.
- All controls/locks necessary to “drive” or maneuver the unit.
- kVp, mA, mAs, and/or time selection controls.
- Exposure switch.

Image Intensifier (C-Arm)

- Source of power supply.
- All locks and scales associated with movement of the x-ray tube.
- Tube movement in all directions to include rotation, angulation, vertical, and horizontal placement.
- All controls/locks necessary to “drive” or maneuver the unit.
- kVp, mA, mAs, and/or time selection controls.
- Exposure switch.
- Automatic exposure selection controls (i.e. ionization chamber/photo cell placement and density settings).
- Focal spot selection control.
- Fluoroscopy controls.
- Fluoroscopic timer controls.
- Enter patient information.
- Orientate anatomy/image intensifier.
- Save and print images.

- 8. Cassette Readers** – The student demonstrated the location and proper use of:

- Turn on/off.
- Erase cassettes.
- Remove cassette if stuck.
- Properly insert cassette.

- 9. Computed Radiography Workstation** – The student demonstrated the location and proper use of:
- a. Logon to the CR system.
 - b. Enter patient information-Patient name, MR#, CI#, Gender, DOB, and send destination.
 - c. Locate patient in patient directory.
 - d. Scan Image Receptors (IR) prior to start of examination.
 - e. Modify Examination tag – selecting correct procedure protocol for facility.
 - f. Modify Region Of Interest (ROI) on image.
 - g. Output formatting/processing – collimation/masking.
 - h. Exam overlays – R/L, upright, decubitus, prone.
 - i. Accept/reject images for diagnostic quality.
 - j. Query from patient history/pull up radiograph.

H. CLINICAL COMPETENCY EVALUATION

Objective: Given a patient and the necessary radiographic equipment and supplies, the student will demonstrate having requisite or adequate ability or qualities to successfully complete a radiographic procedure exam from the required ARRT radiographic procedure exam competency list following the Clinical Competency Evaluation form.

To obtain competency and pass the performance test on a radiographic procedure exam, all performances must be marked passed on the Clinical Competency Evaluation Form. These guidelines have been established by the American Registry of Radiologic Technologists (ARRT) criteria for radiography national certification and the Joint Review Commission of Education in Radiography Technology (JRCERT).

*To request a pre-application from ARRT, write to:
American Registry of Radiologic Technologists
1255 Northland Drive
St. Paul, MN 55120-1155*

Or refer calls to Examination Services, 651-687-0048.

*To contact JRCERT, write to:
Joint Review Committee on Education in Radiologic Technology
20 North Wacker Drive, Suite 2850
Chicago, IL 60606-3182
312-704-5300*

Instructions to the Learner: One of the tasks performed by the radiographer is the successful completion of established radiographic procedure exams on a patient in the clinical setting. This task is a combination of multiple performance skills in which you have been practicing, utilizing the radiographic procedure more independently as you complete the course of work and gain confidence under indirect supervision.

Learner must inform ARRT registered radiographer that the examination is being performed for competency prior to starting. The competency evaluation will begin when learner receives requisition for the examination.

Instructions to the Evaluator: Using the **Clinical Competency Evaluation** as a guide, determine the student's ability to complete a clinical radiographic procedure exam. Be sure to check each of the following performance skills and make an overall assessment of the student's ability. Use the following rating scale for the performance test:

Passed - Excellent (Skilled, can perform task with no supervision- no mistakes).

Failed - Needs more assistance (Unable to perform this task).

Rate the student's ability to complete the clinical radiographic procedure exam. Upon completion of the student's performance, complete the overall assessment.

I. CRITERIA FOR CLINICAL COMPETENCY EVALUATION

Part I Evaluation Objective: Given a patient and the necessary radiographic equipment, the student will demonstrate the ability to:

- 1. Evaluate requisition-** for procedure to be performed, patients name and age, and mode of transportation to the clinical area.
- 2. Prepare radiographic room for exam-** provide clean table, exhibit orderly cabinets and storage space, have appropriate size cassette available, have all supplies necessary to perform exam readily available, turn machine "on" and be prepared for exposures, and turn tube in position necessary for the exam.
- 3. Prepare patient for exam-** ensure patient is wearing proper attire for examination, ensure all undesired external artifacts have been removed from the patient (i.e. necklaces, rings, watches, safety pins, etc).
- 4. Obtain routine views-** (All of the following must be performed to mark section as passed)
 - a. Select appropriated cassette size & placement.
 - b. Mark film appropriately.
 - c. Select proper SIRD.
 - d. Proper tube-film alignment.
 - e. Accurately measure anatomic part.
 - f. Direct central ray to anatomic part.
 - g. Apply radiation protection devices.
 - h. Position patient for radiographic projections for exam.
 - i. Apply collimation.
 - j. Select adequate kVp and mAs using technique chart of select appropriate photocells for AEC.
 - k. Instruct patient in breathing technique while observing patient during exposure.
 - l. Demonstrate ability to manipulate radiographic equipment. (i.e. table, x-ray tube, tomo unit, etc)

Part II Evaluation Objective: Given a patient & the necessary radiographic equipment, the student will demonstrate the ability to produce a satisfactory radiograph that demonstrates:

- 1. All anatomic parts included on films-** for each radiographic projection required for the exam.
- 2. No motion or removable artifacts.**
- 3. Evidence of proper collimation.**
- 4. Correct I.D.** (i.e. patient name, date, and R or L marker)
- 5. Adequate radiographic contrast & density.**

Part II Evaluation Objective: Given a patient & the necessary radiographic equipment, the student will demonstrate the ability to produce a satisfactory radiograph that demonstrates:

1. **Respect for patient modesty-** cover the patient with blanket, ensure patient is wearing gown properly.
2. **Proper patient communication-** explaining the examination to the patient, instilling confidence in the patient.
3. **Applying patient comfort procedures-** placing cushion under patient's knees when applicable, ensure patient is not cold, and allow patient to assume comfortable position while waiting for films to develop.
4. **Ability to adapt to new situations-** body habitus, patient condition, equipment failure, and patient having reaction to contrast media.

J. LIMITED COMPUTED TOMOGRAPHY PERFORMANCE EVALUATION

Objective: Given a patient and the necessary computed tomography equipment and supplies, the student will demonstrate having requisite or adequate ability or qualities to successfully complete a limited computed tomography exam from the required ARRT radiographic procedure exam competency list following the Limited Computed Tomography Performance Evaluation Form.

To obtain competency and pass the performance test on a computed tomography procedure exam, all performances must be marked passed on the Limited Computed Tomography Performance Evaluation Form.

Instructions to the Learner: One of the tasks performed by the radiographer is the successful completion of established computed tomography procedure exams on a patient in the clinical setting. Passing this task will allow you to work more independently as you complete the course of work and gain confidence under indirect supervision.

Learner must inform ARRT registered radiographer that the examination is being performed for competency prior to starting. The competency evaluation will begin when learner receives requisition for the examination.

Instructions to the Evaluator: Using the **Limited Computed Tomography Performance Evaluation Form** as a guide, determine the student's ability to complete a computed tomography procedure exam. Be sure to check each of the following performance skills and make an overall assessment of the student's ability. Use the following rating scale for the performance test:

- Passed - Excellent (Skilled, can perform task with no supervision- no mistakes).**
- Failed - Needs more assistance (Unable to perform this task).**

Rate the student's ability to complete the radiographic procedure exam listed above. Upon completion of the student's performance, complete the overall assessment.

K. CRITERIA FOR LIMITED COMPUTED TOMOGRAPHY PERFORMANCE EVALUATION

Part I Evaluation Objective: Given a patient and the necessary computed tomography equipment, the student will demonstrate the ability to:

1. **Evaluate requisition-** for procedure to be performed, patients name and age, and mode of transportation to the clinical area.
2. **Prepare computed tomography room for exam-** provide clean couch, exhibit orderly cabinets and storage space, have all supplies necessary to perform exam readily available, set-up injector, and in-put of patient data.

3. **Prepare patient for exam-** ensure patient is wearing proper attire for examination, ensure all undesired external artifacts have been removed from the patient. (i.e. necklaces, rings, watches, safety pins, etc)
4. **Obtain routine views-** (All of the following must be performed to mark section as passed)
 - a. Obtained patient clinical history.
 - b. Positioned patient for exam.
 - c. Set scan parameters.
 - d. Advanced patient into gantry properly.
 - e. Followed scan protocol.
 - f. Send images to correct location (i.e. laser printer or physician).

Part II Evaluation Objective: Given a patient & the necessary radiographic equipment, the student will demonstrate the ability to produce a satisfactory image that demonstrates:

1. All anatomic parts included on images.
2. No motion or removable artifacts.
3. Adequate radiographic contrast & density windows.
4. Able to identify anatomy.

Part III Evaluation Objective: The student will exhibit professional ethics and attitude by:

1. Respect for patient modesty- cover the patient with blanket, ensure patient is wearing gown properly.
2. Proper patient communication- explaining the examination to the patient, instilling confidence in the patient.
3. Applying patient comfort procedures- placing cushion under patient's knees when applicable, ensure patient is comfortable with room temperature.
4. Ability to adapt to new situations- body habitus, patient condition, equipment failure, and patient having reaction to contrast media.

L. RADIOGRAPHIC EQUIPMENT MANIPULATION PROFICIENCY EVALUATION

Objective: Demonstrate ability of having or manifesting the knowledge and experience needed for success in radiologic science profession.

Proficiency evaluations will be obtained from radiographic equipment manipulation competencies that the students have successfully attained.

Standard: The evaluator will rate the student's competency according to the numbered rating scale. Each Performance Objective is worth a total of 5 points.

GRADING SCALE

5 = Excellent (no mistakes)	A	100 - 93
4 = Above Average (ten percent error)	B	92 - 85
3 = Satisfactory (twenty percent error)	C	84 - 77
2 = Below satisfactory (fifty percent error)	D	76 - 70
1 = Needs more assistance	F	69 - 0
0 = Unsatisfactory (needs immediate improvement)		

Primary Objective: The student will demonstrate a working knowledge of each control on all radiographic consoles and equipment utilized in the clinical setting. The student must prove competency in equipment manipulation before attempting to complete any clinical procedure competencies.

SPECIFIC OBJECTIVES: Given the necessary radiographic equipment, the student will demonstrate the ability to properly manipulate radiographic equipment by:

- I. Radiographic Table & Vertical Bucky-** The student successfully demonstrated location and proper use of:
 1. Table top movement and bucky tray locks.
 2. Placing cassette in the bucky tray.
 3. Side rail accessories to include the foot rest, hand grips, compression shoulder rests, lateral cassette holder, and/or patient cradle.
 4. All locks and scales associated with movement of table and upright bucky.
 5. Emergency shut off.

- II. X-ray Tube-** The student successfully demonstrated location and proper use of:
 1. Warming up the x-ray tube.
 2. Movement of x-ray tube in all directions.
 3. Centered x-ray tube to the table/bucky.
 4. Collimator light switch, override switch, diaphragm controls, and scales.
 5. Scales relating to tube position.

- III. Fluoroscopic-** The student successfully demonstrated location and proper use of:
 1. Loading and removing cassette from the cassette holder.
 2. Collimator, Automatic Exposure Control (AEC), fluoroscopy and compression controls.
 3. Centering & parking the spot film diaphragm.
 4. Exposure switch(s).
 5. Locks associated with the fluoro tower. (Vertical, Horizontal, Myleogram.)

- IV. X-ray Control Panel (generator)-** The student demonstrated location and proper use of:
 1. kVp, mA, time selection controls (mAs), and automatic exposure controls.
 2. Focal spot selection control.
 3. Bucky selection (table / wall) controls.
 4. Exposure switch.
 5. On/Off switch.

*In the event a student receives a score below 80%, the student's competency will be pulled until the student is reevaluated on their competency of the radiographic equipment.

M. CLINICAL PROFICIENCY EVALUATION

Great Plains Technology Center faculty members will administer proficiency examinations on students throughout each semester on radiographic examinations the student has demonstrated competency in. Students are required to maintain an 80% for each proficiency evaluation given. A score of less than 80% on a proficiency evaluation is a failing grade. The faculty member has the authority to withdraw any competency in which the student fails proficiency. The student will be reevaluated by a faculty member to regain any competency that has been withdrawn due to a failing grade from a proficiency evaluation. Proficiency evaluations are counted as 30% of the student's clinical grade following the guidelines of the Radiologic Technology Program Handbook – Clinical Grading Standards.

The student will be given proficiency evaluations on the following radiographic procedures during each semester of the 22-months of training. Students will be evaluated for proficiency at least one time during semesters II - V. Clinical Proficiency Evaluations are part of 30% of the clinical grade. The radiographic procedures students are evaluated on are as follows:

PROFICIENCY EVALUATION SCHEDULE

Semester II

Chest
Abdomen/KUB
Abdominal Series
Upper Extremities

Semester III

Upper Extremities
Lower Extremities

Semester IV

Fluoroscopy Exams (Contrast Studies)
Upper Extremities
Lower Extremities
Spine

Semester V

Spine
Skull
Any Radiographic procedure the student has demonstrated competency in.

N. CRITERIA FOR CLINICAL PROFICIENCY EVALUATIONS

Objective: Demonstrate ability of having or manifesting the knowledge and experience needed for success in Radiologic Science profession. Proficiency evaluations will be obtained from clinical competencies that the students have successfully attained.

Standard of Evaluation: The evaluator will rate the student's competencies according to the numbered rating scale. Each Performance Objective is worth a total of 4 points.

GRADING SCALE

4= Excellent (no mistakes)	A 100 - 93
3= Satisfactory (ten percent error)	B 92 - 85
2= Below satisfactory (fifty percent error)	C 84 - 77
1= Needs more assistance	D 76 - 70
0= Unsatisfactory (Needs immediate improvement)	F 69 - 0

Part I Performance Objective: Given a patient and the necessary radiographic equipment, the student will demonstrate the ability to perform and evaluate technical application by:

1. Evaluate requisition and prepare radiographic room for exam.
2. Prepare patient for exam.
3. Select appropriate cassette size & placement.
4. Mark the film appropriately and be able to visualize it on radiograph
5. Select proper SIRD / Tube - film alignment.
6. Accurately measure the anatomic part when applicable.
7. Direct the central ray to the anatomic part.
8. Apply radiation protection devices.
9. Position the patient for the radiographic projection.
10. Select the adequate kVp and mAs using technique chart or appropriate cell for AEC.
11. Instruct the patient in breathing technique while observing the patient during exposure.
12. Demonstrates ability to manipulate radiographic equipment. (Table, x-ray tube, tomo unit,)

Part II Performance Objective: Given a patient and the necessary radiographic equipment, the student will demonstrate the ability to produce a satisfactory radiograph(s) and evaluate radiograph(s) for diagnostic quality that demonstrates:

1. All anatomic parts correctly positioned and included on film.
2. No motion or removable artifacts.
3. Evidence of proper collimation.
4. Proper patient identification.
5. Adequate radiographic contrast & density.

Part III Performance Objective: The student will exhibit professional ethics and attitude by:

1. Respect for patient modesty.
2. Proper patient communication.
3. Applying patient comfort procedures.
4. Ability to adapt to new situations.
5. Instilling confidence in the patient.
6. Explaining the exam to the patient.
7. Exhibiting the self-confidence to perform this examination.
8. Accepting constructive criticism.

O. CLINICAL PERFORMANCE EVALUATION

Objective: At the completion of each clinical rotation, the student will have required adequate abilities or qualities to successfully demonstrate clinical aptitude for their assigned rotation.

Instructions to the Learner: At the completion of each clinical rotation, the student will be evaluated by the ARRT registered radiographer with which he/she has worked with over the course of the rotation period, who can adequately assess the student's performance according to the evaluation criteria. Performance evaluations are counted as 20% of the student's clinical grade following the guidelines of the Radiologic Technology Program Handbook- Clinical Grading Standards.

Instructions to the Evaluator: The evaluator will rate the student's performance for the clinical rotation according to the criteria listed on the clinical performance evaluation. Mark the appropriate box with a check mark (✓). Final score will be tallied by the clinical coordinator. Rating scale for the clinical performance evaluation is listed in Radiologic Technology Clinical Handbook.

Standard: Each criteria is worth a total of 5 points. Final score for the performance evaluation is compiled by adding the total points in each category from excellent to poor. That sum is then multiplied by a factor of 1.67 resulting in the final score for that clinical rotation.

- | | | |
|-----|---|---------------|
| 5 | = | Excellent |
| 4.5 | = | Above Average |
| 4.0 | = | Average |
| 3.5 | = | Below Average |
| 3 | = | Poor |

P. CRITERIA FOR CLINICAL PERFORMANCE EVALUATION

The evaluator will rate the students' performance for the clinical rotation according to the students' ability to demonstrate:

1. Patient Care - Convey confidence to patient. Demonstrates courtesy and empathy towards patient. Ability to establish and demonstrate concern, integrity, responsibility, and communicate effectively with the patient.
2. Professionalism and Appearance - Exhibits logical thought and good judgment in making decisions and recommendations. Demonstrates respect for patients by not having idle conversation in or around patient care areas, causing any unnecessary noise. Wears clean uniform, pays attention to personal hygiene, and wears student I.D. badge and dosimeter. Students will demonstrate professional behavior in the clinical setting.
3. HIPAA - Demonstrates knowledge of HIPAA requirements by adhering to patients' rights to privacy in clinical practice.
4. Organization - Ability to evaluate needs to the technical situations of examinations. Demonstrates speed and accuracy in performing clinical duties.
5. Quality of work - Evidence of proper radiographic image quality, and absence of repeat radiographs due to inadequate preparation and thought.
6. Ability to work with Peers and Clinical Staff - Demonstrates a cooperative courteous attitude toward clinical staff, fellow students, and hospital personnel. Considers the feelings and interests of co-workers and acceptance of supervision. Communicates effectively with patients and healthcare professionals.
7. Initiative - Amount of motivation and enthusiasm, expressed by willingness to perform or assist technologist with radiographic examinations.
8. Upkeep of room - Keeps assigned room neat, clean, and well stocked.
9. Punctuality and dependability - Students timely arrival in their assigned clinical area at all times including a.m., after breaks, p.m., after lunch, etc. Reliance on student to complete technical procedures started and to remain in assigned work area. Proper communication with supervising technologist in regard to leaving work area for any reason.
10. Attitude - Shows receptivity to constructive criticism by applying new knowledge, exercises self-control, and demonstrates interest in clinical assignments.
11. Technical application - Degree to which the student applies knowledge of positioning and technique to the clinical situation and demonstrates knowledge of department routine examinations. Degree to which student is able to evaluate radiographs for quality and problem solve to achieve solutions.
12. Critical Thinking - Degree to which student is able to evaluate the technical situations of examinations.

III. GRADING STANDARDS

Students are required to maintain an 80% average in each course taught to pass levels in each semester, during their 22-month training period. If at any time during the course, the student's grade falls below 80%, the student will be notified of this and placed on Academic Probation, regardless of prior probationary status. Students will be notified in writing of their GPA prior to taking final exam. **(For probation specifics, refer to Radiologic Technology Program Student Handbook.)**

Clinical competencies must be maintained at 100% to pass levels for each semester. If student does not maintain competencies for the semester, they will be put on Clinical Probation until competencies are reached in the next following semester. **(For probation specifics, refer to Radiologic Technology Program Handbook.)**

Assignments turned in by students 1 day late results in 10 points loss per day, up to 1 week up of that assignment grade. Late assignments in excess of 1 week (7 consecutive days to include the weekend (ex. Thursday to Monday = 4 days) will result in a "0" for that assignment grade. (If student is absent the day that the assignment was made, it is the student's responsibility to contact instructor to review material covered during class or clinical and receive assignments or worksheets given.)

Exams should be made up immediately upon return to campus class, unless advanced arrangements have been made with instructor to take exam within one week of missed examinations. Any student missing an exam must provide justifiable written documentation prior to making the exam or a letter grade (i.e. 7 points) will be deducted from the makeup exam. If student fails to make up the exam during the specified time frame, it will result in a "0" for that exam grade. (It is the student's responsibility to make arrangements with the instructor for makeup examinations.)

Exam items left blank on exams or answers not related to course of study (such as "I don't know", or "Yahoo", or "Boomer Sooner") will result in double penalties, to encourage the student to answer questions intelligently.

A. GRADING SYMBOLS AND SCALE

A	=	93 to 100
B	=	85 to 92
C	=	77 to 84
D	=	70 to 76
F	=	69 and below

B. GRADING PLAN: DIDACTIC

1. Employability Grades: (10%)

- a. Daily points for each class or clinical day attended equals 20 daily points.
- b. Students are graded over 5 categories for 4 points each to equal 20 daily points.
- c. Weekly grades will consist of the total of 5 consecutive class periods per instructor or course in session to equal 100 points
- d. Student absence results in a "0" for that day's employability grade.

i. Categories for daily points

- a. Respectful / Honest
- b. Organized / Alertness
- c. Professional
- d. Punctual / Dedicated
- e. Positive Attitude

ii. Description of categories for daily points

- a. Does not talk back or argue with instructors, campus staff, clinical staff or classmates.
- b. Comes to class and clinical prepared with books, film badge and tools. Does not fall asleep in class or clinical.
- c. Adheres to campus and clinical dress, neat appearance. Does not have body or mouth odor. Team player.
- d. Determined to succeed demonstrating reliability by coming to campus and clinical on time.
- e. Positive working attitude, no whining or complaining and be flexible when asked to adjust assignment, clinical exams or campus policies.

2. Quizzes/Assignments: (15%)

- a. Skill / lab practice.
- b. Workbook assignments.
- c. Clinical assignments.
- d. Class clinical projects.
- e. Short review quizzes.

3. Unit Exams: (55%)

- a. Cognitive exams.
- b. Performance exams (hands-on).
- c. These will be objective exams designed to test the student's knowledge of material presented with critical thinking and problem solving.

4. Final Exam: (20%)

Cognitive exam that covers material presented over the semester.

C. GRADING PLAN: CLINICAL

1. Employability Grades: (40%)

See grading plan: didactic- "Daily/Weekly Grades".

2. Clinical Applications: (20%)

Mandatory Clinical Competencies.

Radiographic Equipment Competency

Semester I - Minimum of 2 diagnostic rooms at CCMH

Semester II-V - All remaining Diagnostic and Mobile Radiographic Equipment as student rotates to each clinical education setting

Computed Radiography Equipment Competency

Semester I - minimum of Computed Radiography Workstation and Cassette Reader

Semester II-V - All remaining Radiographic Computer Applications as student rotates to each clinical education setting

Clinical Experience Log.

3. Clinical Assessments: (40%)

Clinical proficiency evaluations, Semester II, III, IV, and V.

Simulated Exam Semester I.

Clinical Performance Evaluations

Radiographic Equipment Manipulation Proficiency Evaluation Semester V.

IV. Academic , Clinical Education Setting, and Disciplinary Advisement Policy & Procedures

- 1. Program academic advisement is available to students through the program director's office at the request of the students. Grade reports will automatically be given to students periodically at the mid-term and before finals. Academic advisement is required if student's GPA in any given content area falls below 80%. The student is then placed on academic probation and given opportunity to complete remedial work and schedule tutoring from the Academic Center or individual instruction from program faculty.
- 2. Program disciplinary advisement is conducted through the program faculty offices, depending upon where the unacceptable behavior took place. Certain behaviors are considered unacceptable and detrimental to the overall objectives of the Radiologic Technology Program and are listed on pages 25-28 in the Radiologic Technology Program Handbook.
- 3. Program clinical advisement is available to students at their request through the clinical coordinator's office. Grade and progress reports will automatically be given to students at mid-term and prior to the end of the semester. Clinical advisement is required to review Clinical Performance Evaluations, and clinical competencies periodically with each student.

V. Complaint Policy / Due Process

It is essential that the program of Radiologic Technology provide students, faculty, clinical staff or institutional staff with an unbiased avenue to pursue complaints or grievances and the opportunity to be heard in a timely manner. The following outline the steps for formal resolution of a grievance or complaint.

1. Inform the program director of grievance or complaint within 5 days of occurrence by submission of a written letter describing the grievance or complaint.
2. The program director will investigate the grievance or complaint within 5 days and will report the findings to the student/faculty/clinical staff/ institutional staff within 2 weeks, or a time agreed to by both parties with a written memorandum. In the event that the grievance or complaint is substantiated, a plan for improvement will be implemented and will be included in the written memorandum.
3. In the event the student/faculty/clinical staff/institutional staff does not feel that the complaint or grievance has been resolved they should refer to the GPTC Student Handbook under Grievance Procedure and follow the procedures outlined.

VI. JRCERT Non-Compliance Complaint Policy / Due Process

It is essential that the program of Radiologic Technology provide students, faculty, clinical staff, or institutional staff with an unbiased avenue to pursue complaints or grievances regarding allegations of non-compliance of JRCERT standards and the opportunity to be heard in a timely manner. These standards are reviewed in the Radiologic Technology curriculum course: Fundamental of Radiological Sciences and Health Care and are available for review at www.jrcert.org. The following outlines the steps for formal resolution of a grievance or complaint regarding allegations of non-compliance of JRCERT standards.

1. Inform the program director of grievance or complaint regarding allegations of non-compliance of JRCERT standards within 5 days of occurrence by submission of a written letter describing the allegations of non-compliance of JRCERT standards.
2. The program director will investigate the allegations of non-compliance of JRCERT standards within 5 days and will report the findings to the student/faculty/clinical staff/institutional staff within 2 weeks, or a time agreed to by both parties with a written memorandum. In the event that the allegation is substantiated, a plan for improvement will be implemented and will be included in the written memorandum.
3. In the event the student/faculty/clinical staff/institutional staff does not feel that the complaint or grievance regarding allegations of non-compliance of JRCERT standards has been resolved, they should refer to the GPTC Student Handbook under Grievance Procedure and follow the procedures outlined.

Process for JRCERT Submission

1. Before submitting allegations, the individual must first attempt to resolve the complaint directly with program/institution officials by following the due process or grievance procedures provided by the program/ institution. Each program/institution is required to publish its internal complaint procedure in an information document such as a catalog or student handbook. (Standard Two, Objective 2.4)
2. If the individual is unable to resolve the complaint with program/ institution officials or believes that the concerns have not been properly addressed, he or she may submit allegations of non-compliance to the JRCERT:

Chief Executive Officer - Joint Review Committee On Education in Radiologic Technology
20 North Wacker Drive, Suite 2850
Chicago, Illinois 60606-3182
Ph: (312) 704-5300 Fax: (312) 704-5304 e-mail: mail@jrcert.org

3. The Allegations Reporting Form must be completed and sent to the above address with required supporting materials, and is found on the website: www.jrcert.org, under Accreditation Forms and Checklists.
4. Forms submitted without a signature or the required supporting material will not be considered.
5. If a complainant fails to submit appropriate materials as requested, the complaint will be closed.

The Federal Higher Education Act of 1965, as amended, provides that a student, graduate, faculty or any other individual who believes he or she has been aggrieved by an educational program or institution has the right to submit documented allegation(s) to the agency accrediting the institution or program.

The JRCERT, recognized by the United States Department of Education for the accreditation of radiography, radiation therapy, magnetic resonance, and medical dosimetry educational programs investigates allegation(s) submitted, in writing, signed by any individual with reason to believe that an accredited program has acted contrary to the relevant accreditation standards or that conditions at the program appear to jeopardize the quality of instruction or the general welfare of its students.

Great Plains Technology Center's Radiologic Technology will decide the final outcome of any and all allegations/complaints submitted to the program.

VII. CLINICAL ROTATION

Students will rotate through various Clinical Education Settings. Each facility has its own unique Radiology Department. The experience gained at these facilities will essentially result in highly qualified graduates who can function well in any Radiology Department.

In the beginning of Semester I there will be classroom/labs Monday through Friday. October will start clinical rotations. Clinicals will be scheduled from 7:00 a.m. to 10:00 p.m., and will continue every Thursday until the end of December.

Students who are successful in the program need to have a flexible schedule, completed financial arrangements, a supportive family, reliable transportation, and reliable (and backup) childcare.

Semester II will start full time Clinicals: Semester II - IV, on Monday, Wednesday, and Friday 7:00 a.m. to 10:00 p.m., to include students on evening rotations and with possible weekend rotations at the following Clinical Education Settings:

Comanche County Memorial Hospital, Lawton, OK
Duncan Imaging Center..... Duncan, OK
Duncan Regional Hospital, Duncan, OK
Duncan Regional Orthopaedic Associates, Inc Duncan, OK
Grady Memorial Hospital, Chickasha, OK
Memorial Hospital, Frederick, OK
Reynolds Army Community Hospital, Ft Sill, OK
Southern Plains Medical Center, P.C., Chickasha, OK
Southwestern Medical Center, Lawton, OK
The Physicians' Hospital in Anadarko, Anadarko, OK
USPHS Indian Hospital, Lawton, OK

(Subject to change depending upon availability at Clinical Education Settings)

Students will rotate through each Clinical Education Setting and should be prepared to spend approximately 8-16 weeks per year at out-of-town Clinical Education Settings. Cost of transportation is the sole responsibility of the student. Classroom/Lab time didactic portion will be on Tuesdays and Thursdays, 8:15 a.m. to 3:30 p.m.

Clinical: Monday, Wednesday, and Friday,
(with possible weekend rotations)..... 7:00 a.m. – 10:00 p.m.
Class/Lab: Tuesday and Thursday..... 8:15 a.m. – 3:30 p.m.

The clinical schedule will change slightly in Semester V. The first school day in January, the clinical schedule will be as follows:

Clinical: Tuesday and Thursday
(with possible weekend rotations)..... 7:00 a.m. – 10:00 p.m.
Classroom / lab will be scheduled as follows:
Monday, Wednesday, and Friday..... 8:15 a.m. – 3:30 p.m.

Clinical time accountability will be managed through the use of a sign in/out book located at each clinical education setting, with the exception of Duncan Regional Hospital and Duncan Imaging Center. At Duncan Regional Hospital and Duncan Imaging Center, students will utilize the time clock to clock-in and clock-out when assigned to these facilities. If a student forgets to utilize the time clock to account for his/her arrival/departure time, the student may be held accountable for that time and it may reflect his/her attendance record.

Employers want dependable and punctual employees therefore, the program has a strict attendance policy. The policy on attendance will be discussed in more detail at orientation. There are no excused absences.

In addition to rotating through the various diagnostic radiography rooms, students will also spend time in mobile and surgery radiography, and computed tomography (C.T. Scanner). Upon completion of the student's rotation in mobile and surgery radiography, the student will be able to demonstrate his or her knowledge and skill in the examination and care of confined patient undergoing surgical procedures.

VIII. SPECIALTY ROTATION

Students will be allowed to enhance professional development growth in Radiologic Technology by rotating through Computed Tomography and one additional rotation of the student's choice of the following specialty areas: Magnetic Resonance Imaging, Mammography / Bone Densitometry, Nuclear Medicine, Radiation Oncology, Ultrasonography, and Vascular Radiography (Cardiac Cath Lab). All categories will require direct supervision.

The program provides learning opportunities in current and developing imaging and/or technologies. Exposure to specialty areas of Radiologic Science is an opportunity for students to experience first-hand the operation of the equipment used and skills of the professionals within each modality. During rotation through any given specialty area, students are allowed the opportunity to gain limited hands-on training. Upon completion of any rotation through the above listed areas, students will be able to demonstrate their limited knowledge and acquired skill in the area of rotation through the specific criteria listed for each modality.

Primary Objective:

Upon completion of a rotation through any specialty area, a technologist in that given modality will signify achievements of the student by initialing each accomplishment listed for that modality.

Standard of Evaluation

Please give an overall rating of the student based on their performance during this rotation according to the following rating scale.

OVERALL RATING

Grading Scale

- 3 – LIMITED PRACTICE – has practiced job during training program, additional training is required to develop skill.
- 2 – EXPOSURE ONLY – general information provided with minimal practice time, close supervision needed and additional training required.
- 1 – NO EXPOSURE – no information or practice provided during training program, complete training required.

A. MAGNETIC RESONANCE IMAGING – MRI

Upon completion of the student's rotation in MRI, the student will be able to demonstrate his or her understanding and knowledge in MRI procedures. A Limited Specialty Achievement has been attained when student is able to:

1. State examinations benefiting from MRI.
2. State methods in which images are recorded.
3. Describe briefly how the machine operates.
4. Prepare and position the patient for the procedure.
5. Set up the machine.
6. Perform an examination with supervision.
7. Identify cross-sectional anatomy.

B. MAMMOGRAPHY/BONE DENSITOMETRY

Upon completion of the student's rotation in Mammography/Bone Densitometry, the student will be able to demonstrate his or her understanding and knowledge in Mammography/Bone Densitometry procedures. A Limited Specialty Achievement has been attained when the student is able to:

MAMMOGRAPHY

1. Equipment
 - a. Breakers and control panel
 - i. Identify / operate main power switch and circuit breakers for control and machine.
 - ii. Identify / operate mAs, and kVp controls and photo time controls.
 - iii. Identify / operate exposure switch.
2. Radiographic Tube
 - a. Identify and operate all locks.
 - b. Identify and operate
 - i. Field light switches.
 - ii. Compression device.
 - iii. Release switch.
3. Radiographic table
 - a. Identify and operate Bucky tray and adapter.
 - b. Identify and operate compression paddle.
 - c. Identify and operate magnification system.
 - d. Identify and operate needle localization paddle.

4. Accessory equipment
 - a. Identify and demonstrate radiation protection and safety devices (i.e. lead aprons, gloves, gonadal shields, etc.)
 - b. Identify tower indicators.
 - c. Identify and operate foot controls.

Note: If arrangements cannot be made to accommodate both male and female students, then this rotation will not be offered to students. This is to ensure an equitable clinical experience for all students.

BONE DENSITOMETRY

1. Set up equipment for examination.
2. Prepare and position the patient for the procedure.
3. Perform an examination with supervision.

C. NUCLEAR MEDICINE

Upon completion of the student's rotation in nuclear medicine, the student will be able to demonstrate his or her knowledge and understanding of the basic concept of nuclear medicine. A Limited Specialty Achievement has been attained when the student is able to:

1. Prepare patient for exam and obtain medical history.
2. Demonstrate concepts of equipment setup.
3. Aid the technologists in obtaining patient data unique in nuclear medicine.
4. Understand the uses of pharmaceuticals used in nuclear medicine.

D. RADIATION ONCOLOGY

Upon completion of the student's rotation in oncology, the student will be able to demonstrate his or her knowledge and understanding of the basic concept of oncology. A Limited Specialty Achievement has been attained when the student is able to:

1. Describe and understand procedures involved with work up of patient for radiation treatments.
2. Describe Linear Accelerator utilized and setup.
3. Aid doctor, nurse, and technologist in obtaining patient data unique for oncology.
4. State method in which radiation treatment is given.
5. Prepare and position the patient for the procedure.

E. ULTRASONOGRAPHY

Upon completion of the student's rotation in ultrasound, the student will be able to demonstrate his or her knowledge and understanding of ultrasonography and the multiple methods of application. A Limited Specialty Achievement has been attained when the student is able to:

1. Identify basic physics and its relationship to ultrasonography. (Optimizing exam data, transducer selections, etc.)
2. State patient prep requirements for various exams as well as different techniques to optimize diagnostic data.

3. State basic protocol of various U / S application methods of display. (B-mode, M-mode, color flow and Doppler, 3-D imaging, harmonics and contrast agents used, etc.)
4. Discuss technical requirements of interpreting knowledge. Normal vs. pathology documentation indicators of progression for case presentation.
5. Prepare patient for exam. Confirm prep for exam and obtain medical history.
6. Demonstrate concepts of equipment set up as well as basic control manipulation for exam.
7. Perform “hands-on” scan of one U / S examination.

F. VASCULAR RADIOGRAPHY

Upon completion of the rotation in special procedures, the student will be able to demonstrate his or her knowledge and understanding of angiographic studies utilizing special equipment and techniques which demonstrates functioning organs and systems. The student will be able to assist in special procedure examinations. A Limited Specialty Achievement has been attained when the student is able to:

1. Set the x-ray machine controls and position the radiographic tube for angiographic studies.
2. Practice positioning a patient for radiographs.
3. Practice patient handling tasks specific to specific procedures.
4. Practice radiation safety during special procedures.
5. Practice aseptic techniques when handling materials and supplies necessary to the procedure.
6. List accessory equipment and state rationale for its use in special angiographic examinations.
7. Archive examination onto Compact Disc (CD).
8. Transfer archived examination from CD to Cardiologist’s computer.

G. POSITRON EMISSION TOMOGRAPHY (PET)

Upon completion of the rotation in PET Scan, the student will be able to demonstrate his or her knowledge and understanding of the basic concept of PET Scan studies. A Limited Specialty Achievement has been attained when the student is able to:

1. State examinations benefiting from PET.
2. State methods in which images are recorded.
3. Describe briefly how the machine operates.
4. Prepare the patient for the procedure.
5. Set up the machine.
6. Identify cross-sectional anatomy.
7. Understand the uses of pharmaceuticals used in PET.

BLANK PAGE

GREAT PLAINS

Technology Center

Radiologic Technology Student Statement of Understanding

I _____, hereby certify that I have read the *Radiologic Technology Clinical Handbook* and have had the opportunity to ask questions. As a condition of my enrollment in the school, I agree to comply with the high standards and rules set forth therein. Failure to comply with the policies may result in disciplinary action and / or dismissal from the program.

****The Radiologic Technology Clinical Handbook will supersede the Great Plains Technology Student Handbook in areas of conflicting policies.***

Student Signature

Date

Program Director

Date

Clinical Coordinator

Date

Instructor

Date

Instructor

Date

This handbook has been approved by the Great Plains Technology Center Board of Education, June 2011, for the 2011 - 2012 school year.