NEBRASKA METHODIST COLLEGE

THE JOSIE HARPER CAMPUS

RADIOLOGIC TECHNOLOGY PROGRAM
PROGRAM CLINICAL HANDBOOK

Nebraska Methodist College, 720 North 87th Street, Omaha, NE 68114-2852

Radiologic Technology Program

Introduction

Integration of the clinical and didactic education at Nebraska Methodist College will be an ongoing process throughout the two-year program. The Radiologic Technology Program offers a sufficient and well-balanced variety of radiographic examinations through clinical affiliates associated with the program. These clinical affiliates play an essential role in facilitating student competency in the clinical setting. Students complete a total of 65 weeks of clinical training that include the 2nd-6th semesters of the program *(Exhibit 1, pg 10).* Assigned learning environments will coincide with the student's didactic education.

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

Clinical Rotations

Clinical rotations begin the second semester of the program. Students are scheduled in the clinical setting according to their matriculation status within the program. Students complete a diverse clinical education in a variety of healthcare facilities in Western Iowa, Omaha, and the surrounding counties. Students are responsible for their own transportation to and from these off-campus educational sites.

CLINICAL SITES:
During the two-year program, students will complete a variety of clinical rotations at designated clinical affiliate locations. Each clinical rotation is five-weeks in length to help provide a diversified clinical experience within the program. Clinical rotations will include training in the following general radiology diagnostic modalities:

Orientation	Mobile Radiography
Diagnostic Radiographic Rooms	Fluoroscopic Rooms
Evening and Weekend	Surgery
Emergency/Trauma Radiography	Ancillary areas (as time permits)

Additional experience can be received through Computerized Tomography (CT), Vascular Imaging, Nuclear Medicine, Bone Densitometry, Mammography, Sonography, Radiation Therapy, Cardiovascular Technology, and Magnetic Resonance Imaging (MRI) during a student's second year rotation.

All supplemental rotations of observation must be scheduled in advance so they do not interfere with required program clinical rotations. These additional ancillary rotations must receive prior approval of the program Clinical Coordinator.

SCHEDULING OF CLINICAL ROTATIONS: *(Exhibit 2, page11)*
A clinical rotation is a specific time frame scheduled in advance to provide the student with the necessary clinical experience to receive entry-level experience as a Radiologic Technologist upon graduation. Students will spend five-weeks at a designated clinical affiliate receiving experience in the general diagnostic modalities previously mentioned.

Students will be scheduled in a variety of examination rooms that will allow them to complete their clinical competency examinations that correlate with the didactic positioning class instruction. Clinical schedules will be posted the week prior to the start of the calendar semester by the clinical preceptor of the facility. Students will not be allowed to engage in more than 40 hours of combined clinical and classroom settings per week in accordance with the Standards of Accreditation.

Therefore, it is vital that students inform the Program Director of any additional classes taken off campus that may tailor the student's clinical schedule.

CLINICAL TIME FRAMES:

Clinical Hours: 1st Shift: 8:00a.m. – 4:30p.m. unless other arrangements have been made by the Clinical Coordinator in conjunction with the clinical preceptor of that particular site.

Hospital Hours: 1st Shift: 7:30a.m. – 4:00p.m.
Portable Rotations: 5:00a.m. – 1:30p.m.

Evening Rotations: 4:30p.m.-11:30p.m. unless other arrangements are made by the Clinical Coordinator in conjunction with the clinical preceptor of that particular site.

ATTENDANCE: *(Exhibit 8, page 39)*

Attendance requirements are outlined in each clinical syllabus and in Policy #10 in the Radiologic Technology Program Student Handbook.

MAKE UP TIME:

See Policy #10 in the Radiologic Technology Program Student Handbook.

UNIFORMS:

See Policy #19 in the Radiologic Technology Program Student Handbook.

CLINICAL RADIOGRAPHY

At the beginning of each semester, each student will receive a syllabus for the Clinical Practicum course of instruction. Each clinical syllabus will state the overall clinical grade breakdown (Evaluation Requirements) and grading scale for that particular course.

CLINICAL BOOK:
Each student will be required to keep a clinical notebook. In this notebook, the student will have:

1. Clinical Competency Transcript
2. Verification Forms
3. Clinical Competency Forms
4. Any information deemed necessary by the program clinical coordinator or clinical preceptor
5. Any additional information or notes the student wishes to maintain for the clinical experience.

Note: All forms will be provided prior to the start of the students' clinical rotations.

CLINICAL TRANSCRIPT: (*Exhibit 3, pages 12-14)*
A form is provided to all students that list all required competencies (mandated and elective) needed to graduate and meet A.R.R.T. Competency Requirements for Radiography Certification. Students must also complete the six General Patient Care Requirements as outline on the A.R.R.T. Competency Requirements for Radiography Certification in order to graduate from the program and be eligible to sit for their national certification.

PROFICIENCY REQUIREMENTS:
Before the student can complete a verification or competency exam, the student must complete the following portion of instruction in the classroom.

1. Lecture with objectives for each chapter.
2. Satisfactorily simulate positions in a laboratory setting.
3. Satisfactorily complete the laboratory objectives and simulations.

VERIFICATION: *(Exhibit 4, page15)*
The student must complete the proficiency requirements prior to any verification. Performing a specific examination for verification requires the Radiologic Technologist to be in the room for the entire procedure. The Radiologic Technologist may make minor corrections in positioning and techniques. However, the student should display confidence in performing the examination during the verification. If the Radiologic Technologist does not feel the student is ready to perform an exam for verification, or is not ready to perform without assistance, they may refuse to verify the student. At this time, the Radiologic Technologist should notify the program Clinical Coordinator so further assistance might be given to the student. If the Radiologic Technologist feels the student is ready to demonstrate proficiency, the verification form provided by the student will be completed. Additional comments are encouraged on this form by the student and Radiologic Technologist. No grade is assigned to the verification form. The student will be responsible for keeping this completed form in their clinical notebook.

CLINICAL COMPETENCY: *(Exhibit 5, pages 16-17)*
Students must demonstrate competency in all 31 of the **mandatory** clinical competencies. At least 23 of the 31 **mandatory** procedures must be demonstrated on actual patients. Students must demonstrate competency in at least 15 of the 35 ***elective*** procedures. ***Electives*** may be demonstrated on patients or as simulations.

To perform a clinical competency examination, the student must have satisfactorily completed the examination for verification. Students are encouraged to achieve as much proficiency as needed before requesting to demonstrate a procedure for clinical competency. When the student performs an examination for competency, they must inform the technologist of their intentions prior to beginning the exam. The student must perform all radiographic positioning and set techniques to achieve clinical competency. If the Radiologic Technologist feels a repeat radiograph will result, they may make corrections to prevent unnecessary exposure to the patient. Repeat radiographs must be supervised and documented by the supervising technologist with written comments entailing the reason for the repeat radiograph.

While supervising the competency examination, the Radiologic Technologist will identify the projections on the form and review the evaluation with the student. When the radiographs have been completed, anatomy questions will be asked by the Radiologic Technologist. The Radiologic Technologist and the student will review the radiographs together. At this time, the Radiologic Technologist will complete the evaluation form provided by the student by marking "yes' or "no" for each specific objective. If adjustments were made by the Radiologic Technologist for positioning or technique, they must be documented on the competency form. The "no" category should be marked according to the correction. Technologists are strongly encouraged to comment on a student's competency directly on the form provided.

After the competency evaluation has been completed, the student will give the competency form and all repeat radiographs (if possible), to the program Clinical Coordinator for final evaluation and scoring of a grade. If a discrepancy is found concerning the competency evaluation form and the radiographs, the student and Radiologic Technologist could be asked for assistance to correctly grade the competency examination. The student should give the competency form, NO LATER than (5) days after performance, to the Clinical Coordinator. After (5) days, the competency may be considered invalid.

Each competency exam requires a score of at least 75% or better to pass. Failing a competency will result in the student repeating the competency and the two scores averaged together. The student will be given no more the (2) attempts to pass a competency. After the 1st failed attempt, the following process will occur:

1. Remedial Lab Work
2. Demonstrate proficiency in a laboratory setting
3. Repeat competency with grade averaged <u>with</u> first failed attempt.
4. If averaged grade is failing, student will be terminated from the program.

The required number of competencies as outlined on the clinical syllabus will have a specific date to be completed. This date will be included in the syllabus along with the number of clinical competencies required for that semester. All A.R.R.T. competencies and General Patient

Care Skills must be completed in order to graduate and sit for the American Registry of Radiologic Technologists certification examination.

CLINICAL COMPETENCY GRADING SHEET: *(Exhibit 6, page 18)*
The grading sheet demonstrates the score possible for each area listed on the competency evaluation form. Each projection on the competency form has a maximum score of 55 points. To grade the competency exam, add up the total number of points correct for all the projections and then divide by the total number possible for each projection. This score will reflect the percentage score awarded for each competency exam.

SIMULATIONS: *(Exhibit14, page55)*
Radiographic exams that are not performed frequently yet are essential to the student's clinical training may be simulated for verification or competency. A simulation is defined as: *The radiographic exam is positioned on a phantom or classmate. If the phantom is used, the student will be asked to make radiographic exposures and produce radiographs. When a classmate is utilized for simulation, the student will be asked to set the radiographic exposure without producing a radiograph. The student may be asked questions concerning their radiographic exposure or about the exam in general. Simulated exams earn a maximum score of 90%.*

If any exam needs to be simulated for verification or competency, students will inform the Clinical Coordinator so arrangements can be made to accommodate the student. Students may perform a maximum of eight simulations in the mandatory category and fifteen in the elective category during the entire program matriculation. It is strongly recommended student simulation be reserved until the later clinical rotations to help accommodate for infrequently performed radiographic exams.

OBJECTIVES: *(Exhibit 7, pages 19-38)*
Objectives are tasks each student should strive to achieve during a rotation. Objectives of all diagnostic rotations are included in this handbook. The student should refer to the appropriate objectives at the beginning of every rotation. Each objective has a particular learning domain that is identified by a letter at the end of each objective; **C** – cognitive, **P** – psychomotor, **A** – affective, **PS** – problem solving. Although objectives are provided by the program, the student should set personal objectives as well. These objectives and how well they are achieved is how the student is evaluated at the end of each rotation on the student progress assessments.

EXAM LOG REPORT: *(Exhibit15, page 56)*
Students will be required to keep an exam log for their entire clinical experience. Students may obtain a notebook from a retail store and create their own personal data flow sheet. An example will be provided to students prior to the start of their clinical rotations. Students will be required to report at the end of each semester how many and what type of exams they participated in, observed, or performed (Exam Log Report). A form will be provided to the student for this purpose and will be included in the clinical practicum syllabus each semester.

PROGRESS ASSESSMENTS: *(Exhibit 9, 10, & 11, pages 40-50)*
Progress Assessments are 10% of the student's overall clinical grade each semester. At the end of each five-week clinical rotation, the clinical preceptor in conjunction with the Radiologic

Technologists at the facility will receive a progress assessment to evaluate the student's overall clinical abilities. This assessment has a due date in which to be completed and given back to the program Clinical Coordinator. The clinical preceptor will need to circle the choice they feel best represents the student's overall clinical skill level. Written documentation on the progress assessment is required when a choice other than "average" has been selected. When the Clinical Coordinator has received the assessment back from the clinical site, it will be reviewed and scored. The Clinical Coordinator as well as the clinical preceptor of the facility is strongly encouraged to give suggestions on ways to enhance the student's next clinical rotation.

AFFECTIVE APPRAISAL ASSESSMENTS: *(Exhibit12, pages 51-52)*
Radiology faculty will complete an Affective Appraisal assessment on each student at the end of each semester. This assessment will be part of the student's clinical grade as outlined in the clinical practicum syllabus and will be used as a counseling tool at the end of each semester. Professional attributes on this assessment include initiative, attitude, dependability, attendance and punctuality, and skill in interpersonal relationships and communication. Technical applications and efficiency for their current level of training will also be discussed. Radiology faculty can support this assessment by the scores from the positioning labs, communication with clinical staff, records of attendance, direct observation, and progress assessments from the clinical component of the program.

SEMESTER CLINICAL FINAL EVALUATION: *(Exhibit13, pages 53-54)*
At the end of each semester, the student will be asked to simulate radiographic positions to demonstrate the skill level they have acquired during their didactic training within the program and during their clinical preceptorship. Course syllabi will identify the final examination guidelines and overall structure for the practicum final. Radiographic positions will be chosen at random from all positions presented in the radiographic positioning didactic courses of instruction and corresponding laboratory. Out of these positions, the student will be asked to complete positions/projections that best demonstrate a particular area of anatomy. All clinical finals will be given based on a time limit. The student must receive a score of at least 75% or better, in order to matriculate to the next semester of study. The radiology faculty will execute the clinical evaluation on the college campus.

CLINICAL GRADE:
Each semester the clinical syllabus will discuss the overall composite of the clinical grade. The Clinical Grading Scale is the same for all programmatic semesters and will adhere to the Nebraska Methodist College academic policies and grading system.

Radiologic Technology Program Grading Scale:

Symbol	Quality Points	Percentages
A+	4.0	96-100%
A	4.0	90-95
B+	3.5	86-89
B	3.0	80-85
C+	2.5	76-79
C	2.0	70-75
D	1.0	60-69
F	0.0	<60

GRADUATION REQUIREMENTS FOR CLINICAL:

- Completion of all competencies and general patient care skills as mandated by the American Registry of Radiologic Technologists (A.R.R.T.) and reflected on the program clinical transcript.
- Completion of the college/program professional portfolio.
- Completion of all make-up time rendered incomplete to date with the program. Students should be reminded this could delay them being able to sit for the American Registry of Radiologic Technologists (A.R.R.T.) certification examination.

Any item not completed in regard to the Graduation Requirements for Clinical will hold grades incomplete and prohibit the student from taking the A.R.R.T. certification examination.

Radiologic Technology Program
Exhibits

Exhibit 1

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM
Assigned Learning Environments

Learning Opportunities
Diagnostic: Abdominal, Upper and Lower Extremities, Spines, Headwork, and Chest
G.U.: Cystography, IVP's, Tomography, Urodynamic Studies
G.I. Studies: Upper and Lower G.I., Small Bowel, Esophagus, Swallowing Functions
Special Procedures: Myelography, Venography, Arthrography, T-tubes, Hysterosalpingography, Sialography, Sinus Tract Injections, Lumbar Punctures, ERCP, Transhepatic Cholangiography
Mobile: Chest, Abdomen, Spines, Extremities, Mobile Intensifier Exams
Surgical: Intensifier cases, Cholangiograms, Chest, Abdomen, Retrograde Urography, Orthopedics, Vascular Studies
Trauma: Diagnostic, Mobile, Chest
Dedicated Equipment: Head Unit (if applicable), Panorex, Tomography, Chest
Specialized Learning Environments
Radiographic Interpretation
Supplemental Learning Environments
CT
Vascular
Mammography
Nuclear Medicine
Radiation Therapy
Ultrasound
Heart Catheterization
MRI
Bone Densitometry

1st Year Rotations – The first year of training consisting of clinical rotations through a variety of clinical affiliates, which provide a broad overview of the day-to-day activities of radiologic technologists. These rotations begin the 2nd semester of the student's first year of training. The Clinical Coordinator working collaboratively with the clinical preceptor will place students in the following types of clinical rotations:

Fluoroscopy: G.I., G.U., and Special Procedures
Mobile/Surgical Radiography
General Diagnostic/Trauma/Weekend and Evening

2nd Year Rotations – The students second year of training is composed of three semesters of training, through different radiologic room modalities. Students in their second year of training will continue to rotate through fluoroscopy, mobile radiography, general diagnostic, trauma, evening and weekend shifts , as well as surgical, and other various learning environments.

Supplemental Learning Rotations – Supplemental rotations are designed to introduce the student to an observatory rotation through a specific area of interest. Supplemental rotations must be scheduled so that they do not interfere with the required rotations. All requested scheduling for supplemental learning rotations must receive the approval of the Clinical Coordinator.

Exhibit 2

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM
CLINICAL ROTATION SCHEDULE

1ST Year Student	Jan. 17 – Feb. 18	Feb. 21 – Mar.-25	Mar. 28 – Apr. 29
Sandy Henning	MPC—Hawthorne	Lakeside	Sports Medicine
James Parton	Methodist Hospital	MPC—Valley	Lakeside
Catherine Price	Shenandoah	MPC—Indian Hills	Methodist Hospital
Elizabeth Warde	MPC—Papillion	Methodist Hospital	MPC—Millard
Danielle Barker	MPC—Valley	Shenandoah	Lakeside

A comprehensive copy of the students' clinical site rotations can be located in the Clinical Coordinator's office on campus. The Clinical Coordinator will provide each student and clinical affiliates with the scheduled clinical rotations as outlined above prior to the initial start of the semester. **Once posted, under no circumstances are the schedules to be altered in any way without approval of the Program Director/Clinical Coordinator.**

NEBRASKA METHODIST COLLEGE
Radiologic Technology Program
Clinical Competency Transcript

Students must demonstrate competency in all 31 of the **mandatory** procedures. At least 23 of the 31 **mandatory** procedures must be demonstrated on actual patients. Students must demonstrate competency in at least 15 of the 35 **elective** procedures. Students must select one elective imaging procedure from the head section and two elective imaging procedures from the fluoroscopy studies section, one of which must either an **Upper GI or a Barium Enema.** ***Electives*** may be demonstrated on patients or as simulations.

Mandatory Competencies

Category	Verification	Competency	Category	Verification	Competency
CHEST and THORAX			**SPINE & PELVIS**		
Chest Routine			Cervical Spine		
Chest AP (WC or stretcher)			Thoracic Spine		
Ribs			Lumbosacral Spine		
Chest (age 6 or younger)			Pelvis		
			Hip		
UPPER EXTREMITY			Cross Table Lateral Hip		
Thumb or Finger					
Hand			**ABDOMEN**		
Wrist			Abdomen Supine (KUB)		
Forearm			Abdomen Upright (Students must perform the entire KUB/Upright or Abdominal Series for this competency)		
Elbow					
Humerus					
Shoulder			**SURGICAL STUDIES**		
Trauma: Shoulder (Scapular Y, transthoracic or axillary)			C-Arm Procedure (Orthopedic)		
Trauma: Upper Extremity (nonshoulder)					
LOWER EXTREMITY			**MOBILE STUDIES**		
Foot			Chest		
Ankle			Abdomen		
Knee			Orthopedic		
Tibia- Fibula					
Femur					
Trauma: Lower Extremity					

NEBRASKA METHODIST COLLEGE
Radiologic Technology Program
Clinical Competency Transcript

Elective Competencies

Category	Verification	Competency	Category	Verification	Competency
CHEST and THORAX			**SPINE AND PELVIS**		
Chest Lateral Decubitus			Trauma: Cervical Spine (Cross Table Lateral)		
Sternum			Sacrum and/or Coccyx		
Upper Airway (Soft- Tissue Neck)			Scoliosis Series		
			Sacroiliac Joints		
UPPER EXTREMITY					
Clavicle			**ABDOMEN**		
Scapula			Abdomen Decubitus		
A-C Joints			Intravenous Urography		
Upper Extremity (age 6 or younger)			Abdomen (age 6 or younger)		
LOWER EXTREMITY			**FLUOROSCOPY STUDIES** ****Students must select either Upper GI or Barium Enema plus one other elective procedure from this section.***		
Toes					
Patella			Upper GI Series (Single or Double Contrast)		
Calcaneus (Os Calcis)			Barium Enema (Single or Double Contrast)		
Lower Extremity (age 6 or younger)			Small Bowel Series		
			Esophagus		
HEAD ****Students must select at least one elective procedure from this section***			Cystography/Cystourethrography		
			ERCP		
Skull			Myelography		
Paranasal Sinuses			Arthrography		
Facial Bones					
Orbits			**SURGICAL STUDIES**		
Zygomatic Arches			C-Arm Procedure (Non-Orthopedic)		
Nasal Bones					
Mandible			**MOBILE STUDIES**		
			Mobile study age 6 or below		

NEBRASKA METHODIST COLLEGE
Radiologic Technology Program

GENERAL PATIENT CARE

General Patient Care	Date Completed	Verified By:
CPR CERTIFICATION		
Vital Signs (Blood Pressure, Pulse, Respirations, Temperature)		
Sterile and aseptic technique		
Venipuncture		
Transfer of patient		
Care of patient medical equipment (e.g., oxygen tank, IV tubing, etc.)		

The applicant has demonstrated competency requirements as identified in the *Radiography Clinical Competency Requirements* document.

_____ **_____**
Program Director Signature **Date**

Exhibit 4

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

VERIFICATION FORM

All students will perform satisfactorily in the laboratory setting before performing a specific examination for verification. The verification form serves as a preliminary audit of the student's competency. When observing the verification exam, the technologist should evaluate and comment on the student's proficiency in the following areas: *radiation protection, positioning, technique, and equipment utilization.* Professional *patient rapport and confidence* should also be demonstrated on the verification exam. When performing the examination for verification the Registered Radiologic Technologist must be in the room at all times. The Radiologic Technologist may make minor corrections to eliminate repeat radiographs. If the Radiologic Technologist does not feel the student is ready to perform the exam with complete competency, the Radiologic Technologist may refuse to verify the student. The Radiologic Technologist should notify the Clinical Coordinator of Nebraska Methodist College so further assistance may be given to the student. Please provide written documentation concerning any adjustments made by the Radiologic Technologist or for repeat radiographs.

This verifies that _____has demonstrated

competency in performing a (an) _____

in an actual clinical setting and is eligible to perform this exam for clinical competency

without assistance from a Radiologic Technologist.

_____	_____	_____
Supervising Technologist	Pt unit number or file number	Date

COMMENTS:

Exhibit 5

Nebraska Methodist College
RADIOLOGIC TECHNOLOGY PROGRAM
Competency Evaluation Form

Student's Name:_____ Date of Exam: _____

Examination: _____Case No. or Unit File No._____

Instructions for completing this form:

This evaluation may be completed only if the student has successfully completed the same exam for verification. The supervising technologist must be in the room at all times while this procedure is being performed. The supervising technologist should mark "Yes" if the student has performed the specific objective, otherwise mark "No". Each category must be marked accordingly. Written comments about the examination and student's ability are encouraged. In the event of a repeat, the technologist **must** provide a signature on the next page, demonstrating compliance that the student was directly supervised during repeat of the radiograph.

Write the name of each projection in the numbered area below

Performance Evaluation	**#1**		**#2**		**#3**		**#4**		**#5**	
	Yes	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**
1. Select appropriate image receptor for projection										
2. Correct image receptor placement Bucky/tabletop/crosswise/lengthwise										
3. Place patient in correct position (Upr./sup./lat./decub./tabletop)										
4. Part placed in correct position (Flex./ext./inv./rotated/obliqued)										
5. Film centered to appropriate landmark with correct tube-film alignment										
6. Equipment manipulated efficiently										
7. Angle central ray appropriately										
8. Correct S.I.D.										
9. Evidence of collimation and radiation protection										
10. Demonstrates radiographic patient I.D. and radiographic markers										
11. Select proper technical factor; accurately set control panel										
12. Provide proper breathing instructions										

General	Yes	No
13. Prepared physical facilities, provided clean orderly work area and necessary equipment.		
14. Identified correct patient and evaluated requisition for procedures and patient information, including patient education of the radiographic procedure.		
15. Student assessed patient's condition and maintains continuity of care.		
16. Student displayed professional patient relations.		
17. Proper radiation protection demonstrated for patient, self, and others.		
18. Student processed image(s) without difficulty.		
19. Performed exam with confidence and skill in a timely manner.		
20. Student critiqued films for errors in positioning and/or technical factors.		
21. Student performed examination in a logical sequence.		
22. Student evaluated image for proper anatomical parts and anatomy selected by technologist.		
23. Student used universal precautions.		

Please identify the number of repeat radiographs that occurred in each category below. Please have the technologist who supervised the repeat(s) provide a signature below, demonstrating compliance that unsatisfactory radiographs are repeated under the direct supervision of a qualified practitioner. No signature is required if exam was completed satisfactorily.

Positioning	*Technique*	*Patient*

Comments: _____

Student Comments:_____

_____ _____

Signature of Technologist Supervising Repeats **(if necessary)** Date

_____ _____

Signature of Technologist Supervising Exam Date

_____ _____

Signature of Student Date

Exhibit 6

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

CLINICAL COMPETENCY GRADING SHEET

Evaluation Criteria for Clinical Competencies – Maximum points are listed beside each statement

EVALUATION and GENERAL CRITERIA SELECTION	MAXIMUM POINTS POSSIBLE
1. Select appropriate image receptor for projection	1
2. Correct image receptor placement (Bucky/table-top/crosswise/lengthwise)	1
3. Place patient in correct position (Upright/supine/lateral/decub/tabletop)	3
4. Place part in correct position (Flex./Ext./Inv./Rot./Oblique)	4
5. Film centered to appropriate landmark with correct tub-film alignment	3
6. Equipment manipulated efficiently	3
7. Angle central ray appropriately	3
8. Correct Subject Image Distance (SID)	2
9. Evidence of collimation and radiation protection	2
10. Demonstrates radiographic patient I.D. and radiographic markers	3
11. Select proper technical factor; accurately set control panel.	4
12. Provide proper breathing instructions	2
13. Prepared physical facilities, provided clean orderly work area and necessary equipment	2
14. Identified correct patient and evaluated requisition for procedures and patient information, including patient education of the radiographic procedure	2
15. Student assessed patient's condition and maintains continuity of care	2
16. Student displayed professional patient relations	2
17. Proper radiation protection demonstrated for patient, self, and others	3
18. Student processed image(s) without difficulty	1
19. Performed exam with confidence and skill in a timely manner	2
20. Student critiqued films for errors in positioning and/or technical factors	3
21. Student performed exam in a logical sequence.	1
22. Student evaluated image for proper anatomical parts and anatomy selected by technologist	3
23. Student used universal precautions	2
TOTAL	**55**

Exhibit 7

NEBRASKA METHODIST COLLEGE
Radiologic Technology Program

Radiographic/Fluoroscopic/ Mobile Objectives

The students shall familiarize themselves and gain competence by utilizing objectives for all radiographic and fluoroscopic room rotations. These clinical room objectives are to be utilized for all South College-Asheville Radiologic Technology Program clinical sites. As per the standards of the JRCERT, proper supervision must be maintained for each student's level of training. Each objective has a particular learning domain that is identified by a letter at the end of each objective; C – cognitive, P – psychomotor, A – Affective, PS – Problem Solving.

Physical Facilities

- Room Objective
    1. Identify, list, and properly manipulate all radiographic equipment. **C & P**
    2. Know the function of the radiographic equipment. **C**
    3. Demonstrate universal precautions when maintaining a clean and safe procedure room. **C & P**
    4. Locate and stock accessory equipment and supplies. **C**

- Mobile Objectives
    1. Identify, list, and properly manipulate all radiographic equipment. **C & P**
    2. Know the function and safety techniques of the radiographic equipment. **C & P**
    3. Demonstrate universal precautions when maintaining a clean and safe environment. **C & P**
    4. Locate and stock accessory equipment and supplies for all mobile radiographic equipment. **C & P**

- Exam Prep
    1. Determine exam requested and obtain patient history and consent. **C & PS**
    2. Locate all equipment and supplies necessary for procedure. **C & PS**
    3. Set-up the room utilizing proper aseptic or sterile technique as needed. **C & PS**
    4. Know proper contrast and administration route needed for procedure. **C, PS & P**

Patient Care

- Universal Precautions
    1. Utilize universal precautions for all patient contact. **C & PS**
    2. Know the medical center's standard procedure for clean up and disposal of body fluids. **C**

- Communication
    1. Identify correct patient before starting procedure. **C**
    2. Introduce yourself and others involved with procedure to the patient. **C & A**
    3. Obtain patient history and consent. **C & A**
    4. Explain and answer questions involving the procedure to the patient. **C, A & P**
    5. Provide clear instructions to the patient for proper breathing and positioning protocols. **C, A & PS**
    6. Know how to advise the necessary personnel of the patient history and procedure. **C & PS**
    7. Establish verbal communication with the supervising technologist. **C & A**

- Observation/Evaluation
    1. Observe and evaluate patient's condition throughout course of exam. **C, A & PS**
    2. Observe patient's accessory equipment such as oxygen, I.V. lines, catheters, etc., to ensure stability of the patient. **C & PS**
    3. Preserve the modesty of the patient. **A**

- Assistance
  1. Provide assistance to the patient before, during and after the procedure. This will include:
     a. Assisting the patient in changing their clothes and proceeding to the exam room. **P & A**
     b. Assisting the patient in radiographic positions during the procedure. **C, P, A & PS**
     c. Assisting the patient with mobilization and immobilization devices. **C, P, A & PS**
     d. Assisting other medical personnel in the care of the patient. **C, P, A & PS**

- Radiation Protection
  1. Ensure proper radiation protection by utilizing:
     a. Lead shielding. **P & C**
     b. Collimation. **P & C**
     c. Radiation Protective Devices. **P & C**

- Procedures
  1. Positioning
     a. Determine correct sequence of positions. **C & P**
     b. Correctly position the patient for each projection. **C, P & PS**
     c. Utilize correct breathing technique for each projection. **C**
     d. Proper placement of film. **C, P & PS**
     e. Determine correct location of cassette patient identification per projection. **C & P**
     f. Determine proper tube-film alignment. **C**
     g. Collimate per projection. **C & P**
  2. Technical factors
     a. Select correct exposure factors prior to positioning. **C, P & PS**
     b. Determine proper film size. **C**
     c. Determine correct film screen or grid combination. **C & PS**
     d. Recognize patient conditions or circumstances that may alter technical factors. **C & PS**
     e. Determine S.I.D. **C**
  3. Equipment manipulation
     a. Recognize all knobs and buttons on the control panels and in x-ray room. **C**
     b. Recognize all accessory equipment for radiographic rooms (i.e. compression bands, shoulder harness, apertures, sponges, etc.). **C**
     c. Utilize all equipment locks. **C & P**
     d. Proper placement of radiographic marker. **C & P**
     e. Properly utilize transfer equipment (i.e. wheelchairs, carts, etc.). **C & P**
     f. Use equipment properly and with awareness of its care and cost. **C, A, P & PS**
  4. Efficiency
     a. Determine speed and accuracy during exam. **C, P, A & P**S
     b. Eliminate possibility of repeat radiographs. **C, P & PS**
     c. Avoid redundant errors. **C, P & PS**
  5. Documentation
     a. Can interpret information on the medical chart. **C**
     b. Can properly document patient condition, history and radiographic interpretation. **C, A & PS**
     c. Follows a logical procedure in completing documentation. **C & P**
     d. Demonstrates critical thinking of medical legal issues. **C**
     e. Utilize medical abbreviations used in the medical field. **C**
  6. Processing
     a. Is able to turn on, adjust and operate the automatic film processors. **C & P**
     b. Recognizes different film screen combinations and can process film properly. **C & P**
     c. Knows procedures for flashing patient identification on radiographs. **C & P**
     d. Demonstrates manual dexterity in working with cassettes. **P**
     e. Can load film magazines. **C & P**
     f. Participates in quality control tests with supervision. **P & C**
     g. Knows how to properly maintain screens and cassettes. **C**

Exam Evaluation

1. Film critique
    a. Can identify different projections taken for exam. **C & PS**
    b. Evaluates radiographs for adequate density and contrast. **C & PS**
    c. Evaluates radiographs for acceptable positioning. **C & PS**
    d. Recognizes proper collimation, correct usage of radiographic markers and patient identification. **C & PS**
    e. Can recognize unwanted artifacts and motion. **C & PS**
    f. Can identify pertinent anatomy on radiographs. **C & PS**
2. Processing paperwork and exam completion
    a. Knows the proper procedure for completing the paperwork. **C**
    b. Knows the procedures for organizing films to be interpreted. **C**

Professionalism

1. Team participation (dependability)
    a. Ability to work with others. **A & PS**
    b. Cooperation. **A & PS**
    c. Courteous. **A**
    d. Acceptance of supervision. **A**
    e. Consideration for the welfare and interest of co-workers. **A**
    f. Dependable. **A & PS**
    g. Initiative. **A**
2. Receptiveness (adaptability)
    a. Positive attitude towards constructive criticism. **A**
    b. Willingness to accept direction and supervision. **A**
    c. Adapts to daily situations. **A & PS**
    d. Aggressively demonstrates a desire to learn and improve knowledge and skills. **A & PS**
3. Attendance
    a. Readily available for learning opportunities. **A**

Re. 08/10

Exhibit 7

NEBRASKA METHODIST COLLEGE
Radiologic Technology Program

Surgical Rotation Student Objectives

Goal:

To develop knowledge and skills required to efficiently perform radiographic examination in the surgical environment under direct supervision.

Each objective has a particular learning domain that is identified by a letter at the end of each objective; C – cognitive, P – psychomotor, A – affective, PS – problem solving.

The student will:

1. Comply with instructions and guidelines offered by the supervising technologist. **C & A**

2. Understand the mechanics and functions of various mobile radiographic equipment. Demonstrate efficient manipulation of the mobile radiographic equipment. **C & P**

3. Demonstrate proficient skills in setting radiographic techniques for surgical procedures. **C & P**

4. Demonstrate proper assembly and disassembly of the mobile C-arm image intensifier. Produce a fluoroscopic image with the image intensifier. **C & P**

5. Know and practice sterile technique. Beware of sterile equipment and personnel in the surgical room. Avoid contamination of the sterile fields. **C & P**

6. Position the patient for each exam in surgery. Know and obtain correct size and type of cassettes or grids for each procedure. **C & P**

7. Know and correctly assist with procedures for cleaning and draping all equipment for each procedure. **C & P**

8. Assist the technologist in completing all paperwork for each procedure. **P**

9. Identify the contrast media used for the different examinations in surgery. **C**

10. Evaluate the radiographic quality of your films. Identify corrections which must be made and how to correct them. **C & PS**

11. Recognize and assist with the following surgical exams: **C & P**

    a. Pre-operative films
    b. Post-operative films
    c. Open reduction films
    d. Closed reduction films
    e. Image Intensification cases
    f. Contrast studies
    g. Orthopedic Prosthetic studies
    h. Intervention studies

Re. 08/10

Exhibit 7

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

Evening and Weekend Rotational Learning Domains

Goal:

This particular rotation allows the student an opportunity to discover the many different types of patients and procedural characteristics involved with evening and weekend rotations. Through this rotation, students will be able to perform radiographic examinations under direct supervision, unless indirect supervision requirements are met in accordance with program policy and procedures.

Direct Supervision: student supervision is conducted under the following parameters:

- A qualified radiographer reviews the procedure in relation to the student's achievement.
- A qualified radiographer evaluates the condition of the patient in relation to the student's knowledge.
- A qualified radiographer is present during the conduct of the procedure.
- A qualified radiographer reviews and approves the procedure.
- A qualified radiographer is present during the student performance of any repeat of an unsatisfactory radiograph.

Indirect Supervision: for radiography:

- That supervision provided by a qualified radiographer immediately available to assist students regardless of their level of achievement. Immediately available is interpreted as the presence of a qualified radiographer adjacent to the room or location where a radiographic procedure is being performed. This availability applies to all areas where ionizing radiation equipment is in use.
- The supervising technologist must evaluate each patient's condition with the student before proceeding with the examination.

During Surgical Rotations*: *students are to be supervised at all times, regardless of level of clinical achievement!

Each evening and weekend shift objective has a particular learning domain that is identified by a letter at the end of each objective; C – cognitive, P – psychomotor, A – affective, PS – problem solving.

The student will:

1. Follow instructions and recommendations offered by the evening and/or weekend shift technologist. Upon completion of any necessary surgical orientation, students are encouraged to accompany and assist technologists in the surgical setting. Students will have direct supervision in the surgical setting at all times. **P**

2. Communicate effectively working in concert with all parties involved while on these particular shifts. The supervising technologist will provide guidelines and instructions for the student for the entirety of this clinical rotation. Students should be able to identify the appropriate chain-of-command while completing this rotation. **C & A**

3. The student should assist the radiologic technologist with patient positioning, radiographic techniques, patient management, darkroom responsibilities, internet and teleradiology services, and other task deemed necessary while on this rotation. **P**

4. The student will learn departmental protocols for evening and weekend shifts, emergency room radiographic procedures, and trauma protocols while assigned to this clinical rotation. **C**

5. Students will differentiate between patient characteristics on evening and weekend shifts as opposed to day shift rotations with respect to the following patient types: pediatric, geriatric, trauma, intoxicated, ethnicity, and social culture. **A & PS**

6. The student will demonstrate their ability to perform exams with speed, competency, and accuracy. The student will learn to adapt technique, positioning skills and film sequencing for various pathological conditions, emergency and trauma situations, and multiple exams on a single patient. **C, P, & PS**

7. Critique exams with the assistance of the supervising technologist through the rotation. Areas to be considered are: positioning, technique, professionalism, logical thought process of the exam, speed, quality of work and radiation awareness. **C & PS**

8. Demonstrate enthusiasm, initiative, and self-motivation during the entirety of the rotation. Understand the importance of team participation and how it will help the student as a radiographer in his/her future endeavors. **A**

9. Independently perform examinations in which the student is clinically competent. Abide by the current clinical syllabus and program policies for guidance in indirect supervision. **P**

Re: 08/10

Exhibit 7

NEBRASKA METHODIST COLLEGE
Radiologic Technology Program
Weekend and Evening Rotation Objectives--2nd and 3rd Programmatic Semesters

All students are required to complete the following student objectives while on evening and weekend clinical rotations. This form should be turned in along with your evening and weekend progress assessment at the end of the rotation.

	Completed	
Objectives	**Yes**	**No**
Effectively communicate with all parties on evening and weekend shifts.		
Gain exposure in traditional day shift versus evening rotations.		
Identify chain of command and department protocol for evening and weekend clinical rotations.		
Identify critical thinking and problem solving skills necessary for evening and weekend rotation as opposed to day shift rotations.		
Evaluate and initiate correct imaging protocols.		

Instructions for supervising technologist: Please check the appropriate box outlining requirements for student objectives to be completed while on this rotation. If a response warrants a "no", please include additional comments outlining a specific reason for this response.

Additional Comments:

_____

_____

_____

_____

_____

Student: _____ Date: _____

Clinical Preceptor: _____ Date: _____

Exhibit 7

NEBRASKA METHODIST COLLEGE
Radiologic Technology Program--Weekend and Evening Rotation Objectives
(4th, 5th, and 6th Programmatic Semesters)

Now that you have advanced to a 2nd year student (senior level), the following objectives are now outlined for evening and weekend clinical rotations. All students are required to complete the following student objectives during this rotation. This form should be turned in along with the evening and weekend progress assessment at the end of the clinical rotation.

	Completed	
Objectives	**Yes**	**No**
Perform radiographic examinations on trauma patients independently under the appropriate supervision.		
Perform with minimal rotation, multiple exams on a single patient.		
Adapt to changes and varying clinical situations presented during evening and weekend rotations as opposed to day rotations. Modify positioning techniques when patient condition warrants.		
Perform independently skills necessary for transmission of radiographic images via internet services (Night Hawk) to appropriate radiologist during evening and weekend rotations.		
Perform independently digitizing of radiographic images for appropriate services utilized during evening and weekend rotations.		

Instructions for supervising technologist: Please check the appropriate box outlining requirements for student objectives to be completed while on this rotation. If a response warrants a "no", please include additional comments outlining a specific reason for this response.

Additional Comments:

_____

_____

_____

_____

Student:_____ Date:_____

Clinical Preceptor:_____ Date:_____

Exhibit 7

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

Viewer Rotation Student Objectives

Goal:

To develop an essential understanding of proper patient positioning and in selecting appropriate radiographic techniques to accurately allow radiographic evaluation and diagnosis by the Radiologist.

Each objective has a particular learning domain that is identified by a letter at the end of each objective; C – cognitive, P – psychomotor, A – affective, PS – problem solving.

The student will:

1. Observe the evaluation process of radiographs as performed by the Radiologist. **C**
2. Gain an awareness of the radiographic appearances of specific diseases and pathological conditions. **C**
3. Discuss with the Radiologist different pathological conditions seen during the rotation. **C & A**
4. Understand the importance of proper patient positioning and appropriate radiographic technique. **C**
5. Mentally critique the films in ways by which you could increase the diagnostic value of the examination. **C & P**
6. Understand the importance of having previous radiographs in which to compare the films of interest. **C**
7. Understand the importance of having a brief, yet explicit, patient history for each examination. **C**
8. While viewing cases, the student should keep in mind any interesting films or examinations. These should include surgery or trauma cases which could have additional follow-up radiographs. **PS**

When the student is not auditing radiographs with the Radiologist, time can be permitted to perform exams toward the completion of the clinical competencies.

Re. 08/10

Exhibit 7

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

Bone Densitometry Student Objectives

Goal:
To provide the student an introduction to Bone Densitometry

Each objective has a particular learning domain that is identified by a letter at the end of each objective; C – cognitive, P – psychomotor, A – affective, PS – problem solving.

The student will:

1. Follow instructions and guidelines provided by the supervising technologist. Assist the technologist in their daily routine. **C & P**

2. Identify the power buttons for the x-ray and computer. **C & P**

3. Assist with the daily QA and log results. **C & P**

4. Understand the importance of getting patient medical history and entering height and weight into the computer. **C & P**

5. Be able to properly position the patient for scan selected. **C, P & PS**

6. Be able to properly scan and analyze data. **C, P & PS**

7. Be able to print reports. **P**

8. Observe data base archiving, deleting, obtaining, and restoring scans. **C**

9. Observe how to compare two or more scans and how these comparisons are reported. **C**

10. Become familiar with pathology demonstrated on scans. **C**

11. Assist in accurately doing paperwork required at clinical site. **C, P & PS**

Re. 08/10

Exhibit 7

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

Cardiac Catheterization Lab
Student Objectives

Goal:
This rotation allows the student to become familiar with the procedures and operations performed in the Cardiac Catheterization Lab.

Each objective has a particular learning domain that is identified by a letter at the end of each objective; C – cognitive, P – psychomotor, A – affective, PS – problem solving.

The student will:

1. Follow the instructions and guidelines offered by the Heart Catheterization Lab personnel. **C, A & P**

2. Name and identify major coronary vascular anatomy demonstrated on procedures performed in this rotation. Distinguish between a right and left heart catheterization. **C**

3. Identify the use of different coronary catheters used to visualize the coronary arteries. **C & PS**

4. Explain the Seldinger technique and how it is used to introduce the catheter into the appropriate artery. (femoral or axillary) **C**

5. Differentiate between hand injections and pressure injections for visualization of coronary arteries and heart chambers. **C & PS**

6. Understand why pulses are assessed distal to the puncture site for evaluation of adequate blood flow before and after the exam. **C & P**

7. Locate the crash cart and other emergency supplies. Discuss the usage of common drugs used in Heart Catheterization procedures. **C, A, P & PS**

8. Observe the patient monitors found in the Heart Catheterization lab and understand the importance of monitoring the patient's vital signs during the procedure. Know why the pressures are monitored in each chamber of the hearth and the aorta. **C & PS**

9. Understand the use of cineradiography in coronary angiography and how it is different from filming in Vascular Radiology. **C & P**

10. Describe the procedure of Percutaneous Transluminal Coronary Angioplasty. Know the risks and benefits of this procedure to the patient. **C & P**

11. Be able to define the following terms: **C**

Cardiac Output	Ischemia	Myocardial Infarction
Ejection Fraction	Transducer	Thrombolytic Therapy
LAD	Circumflex	Left Main
Swan Ganz		

12. Read the chapter pertaining to Cardiac Catheterization in *Fundamentals of Special Procedures by Albert Snopek.* This book can be located in the South College-Asheville library.

Re. 08/10

Exhibit 7

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

Computerized Tomography Student Objectives

Goal:

To develop a comprehensive understanding of the equipment, procedures and operations of the Computerized Tomography department.

Each objective has a particular learning domain that is identified by a letter at the end of each objective; C – cognitive, P – psychomotor, A – affective, PS – problem solving.

The student will:

1. Assist in performing Computerized Tomography examinations and daily tasks. Follow instructions and guidelines offered by the C.T. staff. **C, A & P**

2. Be able to identify various anatomy visualized on cross-sectional images. **C**

3. Recognize any pathological conditions present on the computerized tomography image such as: stroke, metastasis to the brain or liver, or mass in the lungs. **C**

4. Understand the purpose and be able to demonstrate the CT scanners short term and long term storage capabilities. This will include collecting, reconstructing and preparing data for displaying images on film. **C**

5. Define the following terms: **C**

Retrieval	Scan	Window
Slice	Gantry	Pixel
Matrix	Archiving	Voxel

6. Be able to set up basic computerized tomography examinations. This will include patient positioning, table increments, and slice thickness. **C**

7. Understand the purpose of a laser printer and what advantages it has for a department. **C**

8. Observe biopsy exams and understand the advantages a biopsy will offer the patient and medical staff in diagnosing a pathological condition. **C**

9. Be familiar with contrast media used in computerized tomography studies. **C**

10. Observe and evaluate the patient's condition throughout the course of the exam. **C, A & PS**

11. Provide assistance to the patient throughout the exam. **P & A**

Re. 08/10

Exhibit 7

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

Mammography Rotation Student Objectives

Goal:

To provide the student an introduction and understanding to the field of Mammography.

Each objective has a particular learning domain that is identified by a letter at the end of each objective; C – cognitive, P – psychomotor, A – affective, PS – problem solving.

The student will:

1. Follow instructions and guidelines provided to you by the supervising mammography technologist. Assist the technologist in their daily routine. **C & A**

2. Know the technical factors that apply to screen-film mammography. **C**

3. Be familiar with the mammography patient questionnaire and the importance of recording accurate family history. **C & PS**

4. Know how to properly load and unload the mammography cassettes. Know the importance of keeping the cassettes clean, dust-free and to handle the film with care. **C & P**

5. Identify all buttons and foot pedals used on the mammographic equipment.

6. Understand the differences in breast tissue and why different tissue varies the exposure factors. **C & PS**

7. Be able to select the correct compression paddles and size film for each patient. **C & P**

8. Simulate different positions used in mammography. Know the specific area of anatomy demonstrated on each projection. **C**

9. Know the importance of correctly marking the radiograph with radiographic markers. **C**

10. Know the importance of correctly marking the radiograph with radiographic markers. **C**

11. Observe and participate in needle localization exams. **C**

12. Become familiar with pathology demonstrated on the radiographs. **C**

Re. 08/10

Exhibit 7

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

Mammography Rotation for MQSA and ACR Criteria

Goal:

To provide the student an introduction to Mammography and meet the standards of *MSQA* and *ACR* Criteria.

Each objective has a particular learning domain that is identified by a letter at the end of each objective; C – cognitive, P – psychomotor, A – affective, PS – problem solving.

The student will:

1. Follow instructions and guidelines provided to you by the supervising mammography technologist. Assist the technologist in their daily routine. **C & A**

2. Know technical factors which apply to screen-film mammography. **C**

3. Be familiar with the mammography patient questionnaire and the importance of recording accurate family history. **C & PS**

4. View video tape on breast self-exam, take and pass test with a minimum score of 80%. **C & P**

5. Know how to properly load and unload the mammography cassettes. Know the importance of keeping the cassettes clean, dust-free and to handle the film with care. **C & P**

6. Identify all buttons and foot pedals used on the mammography equipment. **C & P**

7. Understand the differences in breast tissue and why different tissue varies the exposure factors. **C & PS**

8. Be able to select the correct compression paddles and size film for each patient. **C & P**

9. Perform a minimum of twenty-five (25) mammography exams. Know the specific area of anatomy demonstrated on each projection. **C & P**

10. Be prepared to perform the different positions used in mammography. (i.e.: Implants, Male patients, magnification, special views, etc.) **C & P**

11. Know the importance of correctly marking the radiograph with the radiographic markers in the designated areas on the film. **C**

12. Critique each projection for positioning and technical factors. Discriminate between films which are acceptable or unacceptable due to poor positioning or inadequate exposures. **C & PS**

13. Read handout on *Mammographic Quality Standards,* take and pass test with a minimum score of 80%. **C & P**

14. Observe and participate in the quality control of mammography. **C & P**

15. Become familiar with pathology demonstrated on the radiographs. **C**

Re. 08/10

Exhibit 7

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

Magnetic Resonance Imaging

Goal:

To develop a comprehensive understanding of the equipment, procedures, and operations of the Magnetic Resonance Imaging department.

Each objective has a particular learning domain that is identified by a letter at the end of each objective; C – cognitive, P – psychomotor, A – affective, PS – problem solving.

The student will:

1. Assist in performing MRI examinations and daily tasks. Follow instructions and guidelines offered by the MRI technologist. **C, A & P**

2. Become familiar with various anatomy demonstrated on MRI scans. **C**

3. Be able to define the following terms: **C**

T1 & T2 weighted images	Echo Time (ET)
Axial Plane	Flip Angle
Coronal Plane	Isocenter
Sagittal Plane	MR Signal
Repetition Time (TR)	Gradient Echo

4. Understand and know the reasons for screening all patients prior to entering the magnet. **C**

5. Know why an MRA scan would be performed. **C**

6. Name two procedures in which CT is more beneficial than MRI. **C**

7. Be familiar with pathological conditions on MRI radiographs. **C**

8. Provide assistance to the patient throughout the exam. **P & A**

9. Observe and evaluate the patient's condition throughout the course of the exam. **C, A & PS**

Re. 08/10

Exhibit 7

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

Nuclear Medicine Student Objectives

Goal:

To develop a comprehensive understanding of the equipment, procedures and operations of the Nuclear Medicine department.

Each objective has a particular learning domain that is identified by a letter at the end of each objective; C – cognitive, P – psychomotor, A – affective, PS – problem solving.

The student will:

1. Assist in performing Nuclear Medicine examinations and daily tasks. Follow instructions and guidelines offered by the Nuclear Medicine staff. **C, A & PS**

2. Be able to define the following terms: **C**

Half-life	Radiopharmaceutical	Background
Radionuclide	Curie	Collimator
Gamma Camera	Dose Calibration	

3. Identify the different radiopharmaceuticals utilized in the department. **C**

4. Be familiar with the following procedures: **C**

Bone Scan	Thyroid Scan	Lung Scan
Gastric Emptying	Renal Scan	

5. Be familiar with different pathologies visualized in Nuclear Medicine. **C**

6. Know the importance of why imaging is delayed after the injection of radionuclides. **C**

7. Observe and evaluate the patient's condition throughout the course of the exam. **C, A & PS**

8. Provide assistance to the patient throughout the exam. **P & A**

Re. 08/10

Exhibit 7

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

Radiation Therapy Student Objective

Goal:

To develop a comprehensive understanding of the equipment, procedures and operations of the Radiation Therapy department.

Each objective has a particular learning domain that is identified by a letter at the end of each objective; C – cognitive, P – psychomotor, A – affective, PS – problem solving.

The student will:

1. Assist in the performing of Radiation Therapy examinations and daily tasks. Follow instructions and guidelines offered by the Radiation Therapy technologist. **C, A & P**

2. Familiarize yourself with interstitial and intracavitary methods of Radiation Therapy. **C**

3. Become familiar with the procedures involved in the treatment and dose calculation performed by the Radiation Oncologist and Radiation Physicist. **C**

4. Be familiar with the early and late effects of radiation to the human body. **C**

5. Understand the principles involved with high dose radiation. **C**

6. Be familiar with the following terms: **C**

Linear accelerator	Cobalt 60	Dose rate
Fractionation	Metastasis	Differentiation
Tumor Volume	Field	Filter
Collimators		

7. Observe and evaluate the patient's condition throughout the course of the exam. **C, A & PS**

8. Provide assistance to the patient throughout the exam. **P & A**

Re. 08/10

Exhibit 7

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

Ultrasound Student Objectives

Goal:

To develop a comprehensive understanding of the equipment, procedures, and operations of the Ultrasound department.

Each objective has a particular learning domain that is identified by a letter at the end of each objective; C – cognitive, P – psychomotor, A – affective, PS – problem solving.

The student will:

1. Assist in performing Ultrasound examinations and daily tasks. Follow instructions and guidelines offered by the Ultrasound technologists. **C, A & P.**

2. Be familiar with the various anatomy demonstrated on these exams: **C**

Venous Occlusion	Pancreas	Gallbladder
Testicular	Liver	Carotid
Pelvic (male & female)	Abdominal (complete)	Pregnancy
Arterial sonography for lower extremity		

3. Be able to define the following terms: **C**

Reverberation	Transducer	Frequency
Attenuation	Bruit	A-mode
B-mode	M-mode	
Acoustic Enhancement & Shadowing		

4. Understand why a coupling gel is used in sonography. **C**

5. Understand the importance of a patient having a full bladder for a pelvic exam. **C**

6. Understand why Gallbladder exams are performed N.P.O. **C**

7. Know why an O.B. patient can feel faint or nauseated when lying supine during an exam? **C**

8. Know why coloring imaging is performed and what the value is to the technologist and physician. **C**

9. Describe a cystic appearing mass versus a solid mass. **C**

10. Understand why the transducers are different sizes and frequencies. **C**

11. Know some advantages and disadvantages to ultrasound. **C**

12. Observe and evaluate the patient's condition throughout the course of the exam. **C, A & PS**

13. Provide assistance to the patient throughout the exam. **P & A**

Re. 08/10

Exhibit 7

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

Vascular Imaging Student Objective

Goal:

This special procedures rotation allows the student to become familiar with the procedures performed in the Vascular Imaging Department.

Each objective has a particular learning domain that is identified by a letter at the end of each objective; C – cognitive, P – psychomotor, A – affective, PS – problem solving.

The student will:

1. Follow instructions and guidelines provided to you by the vascular staff. Assist in performing vascular exams and daily tasks. **C, A & P**

2. Name and identify major vascular anatomy demonstrated on procedures performed in the rotation. **C**

3. Identify the use of catheters in vascular studies and understand the reasons for utilizing different types of catheters for different procedures. **C & PS**

4. Explain the Seldinger technique and how it is used to introduce the catheter into the appropriate artery. (Femoral or Axillary) **C**

5. Know the purpose of automatic injectors in vascular radiography and be able to load contrast into power injectors. **C & P**

6. Understand and demonstrate the importance of strict asepsis during vascular procedures. Be able to set-up a procedural tray using sterile technique. **C & P**

7. Assess pulses for evaluation of adequate blood flow before and after the exam. (Femoral, Popliteal, Posterior Tibial, Dorsallis Pedis) **C, P, A, & PS**

8. Know where to find the emergency supplies on the crash cart. Discuss the usage of common drugs used in vascular procedures. **C**

9. Differentiate between the role of film changers and digital subtraction imaging. **C & PS**

10. Discuss the concept of Digital Angiography and its advantages as compared to the manual technique of film subtraction. **C**

11. Describe the procedure of Percutaneous Transluminal Angioplasty. Be able to explain the risks and benefits of this procedure to the patient. **C**

12. Understand the differences in imaging techniques for the basic exams performed in the department. **C & PS**

13. Be able to define the following terms: **C**

Angiography	Subtraction	Mask	DSA
Misregistration	Non-ionic contrast	Ionic Contrast	TIA
Pixel shifting	Post processing	Stenosis	CVA
Hemostasis	Embolus	Coagulation (PTT & PT)	Aneurysm

14. Understanding the importance of BUN and Creatinine Levels in regards to the amount and type of contrast media utilized. **C**

Re. 08/10

Exhibit 8

NEBRASKA METHODIST COLLEGE
Radiologic Technology Program

Attendance Verification

Date	Sign-In	Sign-Out	Total Hours Worked	Facility	Authorizing Initials or Signature*

Please submit this form to the Clinical Coordinator after completing the five-week clinical rotation.

Exhibit 9

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM
STUDENT PROGRESS ASSESSMENTS

Assessment Due_____ Student_____

Dates of Rotation _____ Rotation _____

UNIT GOAL: ***Consider the student at their current level of training. After reading statements put one of the following numbers that corresponds with the student's progress.***

1 = Unacceptable progress
2 = Less than adequate progress
3 = Student has demonstrated satisfactory progress
4 = Student has demonstrated proficient progress
5 = Student is competent. Needs no further direction, only repetition of skills

If ranking a student lower than 3, please provide comment.

	Ranking
A. **Attendance and Punctuality** – Extent to which the student is present in their clinical rotation without absences and/or tardiness. **Comments**:	
B. **Team Participation & Enthusiasm** – Motivation and enthusiasm are demonstrated by the student's willingness to assist in all technical and non-technical procedures. This includes the students ability to work effectively with others, to include cooperation, courtesy, acceptance of supervision, and consideration for the welfare and interest of co-workers. **Comments:**	
C. **Attitude** – Receptive to suggestions and corrections, exercises self-control and demonstrates interest in assignments. **Comments:**	
D. **Efficiency** – Extent in which the student evaluates the criteria necessary for each technical procedure; demonstrates speed and accuracy in performance and related clinical duties. **Comments:**	
E. **Professional Judgment** – Exhibits logical thought processes in making decisions and recommendations; demonstrates respect for confidential patient information. **Comments:**	

F. **Technical Ability** – The student can satisfactorily critique his/her radiographs and examinations. Can determine area(s) of strengths and weaknesses in his/her work. The student strives to improve these areas. **Comments:**	
G. **Patient Relations** – Responsive to the physical and emotional needs of the patient; courteous; able to establish rapport and adapt to various patient conditions. **Comments:**	
H. **Critical Thinking** – Demonstrates ability to position patients properly and to maintain proper radiographic technique, and film sequencing. The student is able to adapt accordingly to each patient and perform exams competently. The student demonstrates the clinical skills and knowledge to perform adequately with difficult and challenging radiographic exams. **Comments:**	
I. **Dependability** – Student completes all technical procedures they begin and remains in assigned work area when justified by departmental procedures. **Comments:**	
J. **Objectives** – Student successfully completes objectives designed for this rotation. **Comments:**	

ADDITIONAL COMMENTS:

_____

_____

_____

_____ _____

Supervising Technologist ***Date***

_____ _____

Student Signature ***Date***

Exhibit 9

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

STUDENT PROGRESS ASSESSMENT – GRADING KEY

PART 1

Category	1	2	3	4	5
A. Attendance & Punctuality	0	0	1	2	3
B. Team Participation	0	5	6	7	8
C. Attitude	0	0	1	2	3
D. Efficiency	0	0	1	2	3
E. Professional Judgment	0	3	4	5	6
F. Technical Applications	0	5	6	7	8
G. Patient Relations	0	3	4	5	6
H. Critical Thinking	0	5	6	7	8
I. Dependability	0	3	4	5	6
J. Objectives	0	0	4	5	6
	0	24	37	47	57

GRADING SCALE
POINTS = PERCENTAGE

PART II

A	B	C	D	F
57 = 100%	50 = 93%	42 = 86%	34 = 79%	26 = 72%
56 = 99%	49 = 92%	41 = 86%	33 = 79%	25 = 72%
55 = 98%	48 = 91%	40 = 85%	32 = 78%	24 = 71%
54 = 97%	47 = 90%	39 = 84%	31 = 77%	23 = 70%
53 = 96%	46 = 89%	38 = 83%	30 = 76%	
52 = 95%	45 = 88%	37 = 82%	29 = 75%	
51 = 94%	44 = 87%	36 = 81%	28 = 74%	
	43 = 87%	35 = 80%	27 = 73%	

Write the percent score on top of assessment. Always include the date you grade an assessment. Students must initial after assessment has been discussed with the student. Assessment is then kept by the Radiologic Technology Program Clinical Coordinator in the student's clinical file.

Exhibit 10

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

STUDENT PROGRESS ASSESSMENTS – *Evening and Weekend Rotations 2nd & 3rd Programmatic Semesters*

Assessment Due_____ Student_____

Dates of Rotation _____ Rotation _____

UNIT GOAL: ***Consider the student at their current level of training. After reading statements put one of the following numbers that corresponds with the student's progress.***

1 = Unacceptable progress **3** = Student has demonstrated satisfactory progress **5** = Student is competent. Needs no further
2 = Less than adequate progress **4** = Student has demonstrated proficient progress direction, only repetition of skills

If ranking a student lower than 3, please provide comment.

Statement	**Ranking**
A. **Attendance & Punctuality-** Extent to which student is present in their clinical rotation without absence and/or tardiness. By fulfilling this attendance obligation, students acquire exposure in traditional day versus evening rotations. **Comments**:	
B. **Enthusiasm and Team Participation-** Amount of enthusiasm, initiative and self-motivation displayed by willingness to perform examination independently and with co-workers. Student was able to adapt to the smaller staffing situations on evening and weekend rotations. Student integrated well with all members of the health care team. **Comments:**	
C. **Attitude-** Receptive to suggestions and corrections, exercises self-control and demonstrates interest in assignments. **Comments:**	
D. **Personal Goals-** Strives to achieve self goals set for evening and weekend rotation. The student has shown an area of improvement by working on these goals. **Comments:**	

E. **Professional Judgment** – Exhibits logical thought processes in making decisions and recommendations. Student assesses the situation, exercises care, and acts in the best interest of the patient while maintaining respect for patient confidentiality. **Comments:**	
F. **Technical Ability-** The student can satisfactorily critique his/her radiographs and examinations. Can determine area(s) of strengths and weaknesses in his/her work. The student strives to improve these areas. **Comments:**	
G. **Patient Relations** – Responsive to the physical and emotional needs of the patient; courteous, able to establish rapport, adapts to various patient conditions experienced in evening and weekend rotations, keeping in proper context patient's overall condition and the nature of the disease or illness. **Comments:**	
H. **Critical Thinking-** Demonstrate ability to position patients properly and to maintain proper radiographic technique, and film sequencing. The student is able to adapt accordingly to each patient and perform exams competently. The student demonstrates the clinical ability to perform or assist with difficult and challenging radiographic exams. **Comments:**	
I. **Dependability-** Student completes all technical procedures he/she begins, and remains in the work area when the department workload requires his/her presence. **Comments:**	
J. **Evening and Weekend Rotation-** Able to adapt to the evening and weekend shift environment, effectively communicating with all parties. Student is able to identify chain of command and departmental protocols for evening and weekend clinical rotations. Student met all required rotational objectives outlined. **Comments:**	

ADDITIONAL COMMENTS:

_____

_____

_____

_____

_____

_____

By signing this form, the student acknowledges the above mentioned progress report was discussed in detail with the clinical preceptor.

_____ _____

Supervising Technologist ***Date***

_____ _____

Student Signature ***Date***

Exhibit 10

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

Evening and Weekend Clinical Rotations

STUDENT PROGRESS ASSESSMENT – GRADING KEY

PART 1

Category	1	2	3	4	5
A. Attendance & Punctuality	0	0	1	2	3
B. Enthusiasm and Team Participation	0	5	6	7	8
C. Attitude	0	0	1	2	3
D. Personal Goals	0	0	1	2	3
E. Professional Judgment	0	3	4	5	6
F. Technical Ability	0	5	6	7	8
G. Patient Relations	0	3	4	5	6
H. Critical Thinking	0	5	6	7	8
I. Dependability	0	3	4	5	6
J. Evening and Weekend Objectives	0	0	4	5	6
		24	37	47	57

GRADING SCALE
POINTS = PERCENTAGE

PART II

A	B	C	D	F
57 = 100%	50 = 93%	42 = 86%	34 = 79%	26 = 72%
56 = 99%	49 = 92%	41 = 86%	33 = 79%	25 = 72%
55 = 98%	48 = 91%	40 = 85%	32 = 78%	24 = 71%
54 = 97%	47 = 90%	39 = 84%	31 = 77%	23 = 70%
53 = 96%	46 = 89%	38 = 83%	30 = 76%	
52 = 95%	45 = 88%	37 = 82%	29 = 75%	
51 = 94%	44 = 87%	36 = 81%	28 = 74%	
	43 = 87%	35 = 80%	27 = 73%	

Write the percent score on top of assessment. Always include the date you grade an assessment. Students must initial after assessment has been discussed with the student. Assessment is then kept by the Radiologic Technology Program Clinical Coordinator in the student's clinical file.

Exhibit 11

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

STUDENT PROGRESS ASSESSMENTS – *Evening and Weekend Rotations 4th, 5th, and 6th Programmatic Semesters*

Assessment Due_____ Student_____

Dates of Rotation _____ Rotation _____

UNIT GOAL: ***Consider the student at their current level of training. After reading statements put one of the following numbers that corresponds with the student's progress.***

1 = Unacceptable progress
2 = Less than adequate progress
3 = Student has demonstrated satisfactory progress
4 = Student has demonstrated proficient progress
5 = Student is competent. Needs no further direction, only repetition of skills

If ranking a student lower than 3, please provide comment.

Statement	**Ranking**
A. **Attendance & Punctuality-** Extent to which student is present in their clinical rotation without absence and/or tardiness. By fulfilling this attendance obligation, students acquire exposure in traditional day versus evening rotations. **Comments**:	
B. **Enthusiasm and Team Participation-** Amount of enthusiasm, initiative and self-motivation displayed by willingness to perform examination independently and with co-workers. Student was able to adapt to the smaller staffing situations on second shift. Student integrated well with all members of the health care team. **Comments:**	
C. **Attitude-** Receptive to suggestions and corrections, exercises self-control and demonstrates interest in assignments. **Comments:**	
D. **Personal Goals-** Strives to achieve self goals set for the second shift rotation. The student has shown an area of improvement by working on these goals. **Comments:**	

E. **Professional Judgment** – Exhibits logical thought processes in making decisions and recommendations. Student assesses the situation, exercises care, and acts in the best interest of the patient while maintaining respect for patient confidentiality. **Comments:**	
F. **Technical Ability-** The student can satisfactorily critique his/her radiographs and examinations. Can determine area(s) of strengths and weaknesses in his/her work. Student can affectively demonstrates computed and digital radiography skills necessary for delivery of radiographic images across the internet. Student continually strives to improve on areas of weakness. **Comments:**	
G. **Patient Relations** – Responsive to the physical and emotional needs of the patient; courteous, able to establish rapport, adapts to various patient conditions experienced in off-hour rotations, keeping in proper context patient's overall condition and the nature of the disease or illness. **Comments:**	
H. **Critical Thinking-** Demonstrate ability to position patients properly and to maintain proper radiographic technique, and film sequencing. The student is able to adapt accordingly to each patient and perform exams competently. The student is able to adapt to performing multiple exams on a single patient with minimal patient rotation. **Comments:**	
I. **Dependability-** Student completes all technical procedures he/she begins, and remains in the work area when the department workload requires his/her presence. **Comments:**	
J. **Evening and Weekend Rotation-** Able to adapt to the second shift environment. Understands the different routines and procedures required in trauma and emergency room situations. Student met all of the required rotational objectives outlined. **Comments:**	

ADDITIONAL COMMENTS:

_____

_____

_____

_____

_____

_____

By signing this form, the student acknowledges the above mentioned progress report was discussed in detail with the clinical preceptor.

_____ _____

Supervising Technologist ***Date***

_____ _____

Student Signature ***Date***

Exhibit 11

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

Evening and Weekend Clinical Rotations

STUDENT PROGRESS ASSESSMENT – GRADING KEY

PART 1

Category	1	2	3	4	5
A. Attendance & Punctuality	0	0	1	2	3
B. Enthusiasm and Team Participation	0	5	6	7	8
C. Attitude	0	0	1	2	3
D. Personal Goals	0	0	1	2	3
E. Professional Judgment	0	3	4	5	6
F. Technical Ability	0	5	6	7	8
G. Patient Relations	0	3	4	5	6
H. Critical Thinking	0	5	6	7	8
I. Dependability	0	3	4	5	6
J. Evening and Weekend Objectives	0	0	4	5	6
		24	37	47	57

GRADING SCALE
POINTS = PERCENTAGE

PART II

A	B	C	D	F
57 = 100%	50 = 93%	42 = 86%	34 = 79%	26 = 72%
56 = 99%	49 = 92%	41 = 86%	33 = 79%	25 = 72%
55 = 98%	48 = 91%	40 = 85%	32 = 78%	24 = 71%
54 = 97%	47 = 90%	39 = 84%	31 = 77%	23 = 70%
53 = 96%	46 = 89%	38 = 83%	30 = 76%	
52 = 95%	45 = 88%	37 = 82%	29 = 75%	
51 = 94%	44 = 87%	36 = 81%	28 = 74%	
	43 = 87%	35 = 80%	27 = 73%	

Write the percent score on top of assessment. Always include the date you grade an assessment. Students must initial after assessment has been discussed with the student. Assessment is then kept by the Radiologic Technology Program Clinical Coordinator in the student's clinical file.

Exhibit 12

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

Student Affective Appraisal Assessment

Student:_____ Date:_____

Semester: _____

Evaluation Method: The Program Director and/or Clinical Coordinator can support this assessment by the scores from the student's progress assessments, clinical labs, communication with clinical staff, records of attendance and direct observation.

1. _____ **Initiative:** Motivation and enthusiasm are demonstrated by the student's willingness to assist in all technical and non-technical procedures. This includes individual participation in labs and other assignments.

2. _____ **Attitude:** Receptive to suggestions and corrections, exercises self-control and temperament; and demonstrates interest in assignments. Demonstrates pride in self and their work.

3. _____ **Dependability:** Extent to which student can be relied on and depended on to follow through with assignments and tasks in the clinical setting.

4. _____ **Attendance and Punctuality:** Student is at their clinical site and in their rotations without excessive absences or tardiness. The student is prompt in regards to their daily clinical assignments and tasks.

5. _____ **Interpersonal Relationships/Communications:** The ability of the student to get along with others, to accept constructive criticism, to relate well with other students, hospital personnel and program officials; to actively participate in the goals and philosophy of the Radiologic Technology Program.

6. _____ **Technical Applications:** Degree to which the student applies knowledge of positioning and technique to the clinical situation; demonstrates knowledge of departmental routine examinations and is able to identify anatomy on radiographs. This will also include the student's ability to effectively operate the different radiographic equipment.

7. _____ **Efficiency:** The student evaluates the criteria necessary for each technical procedure; demonstrates speed and accuracy in performance and related clinical duties; able to employ problem solving techniques to ensure higher efficiency.

8. _____ **Patient Relations:** The student is responsive to the physical and emotional needs of the patient; courteous; able to establish rapport and to interact with various patient conditions.

9. _____ **Professionalism:** Student's pride and dedication to themselves, the Radiologic Technology Program and to their peers. This will be demonstrated through their daily action, appearance, personal, professional and ethical obligations to the art and science of Radiologic Technology. Student is able to keep portfolio up to date on a consistent basis.

10. _____ **Level of Clinical Skill:** This score is an over-all assessment of the student's ability at this level of their training.

_____

Program Director **Date**

_____

Clinical Coordinator **Date**

_____

Student Signature **Date**

Exhibit 13

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

Semester Clinical Evaluation

STUDENT: _____ SEMESTER: _____

DATE:_____ SCORE: _____

Please place a "X" in the box under the projection if the item was not mentioned or completed correctly.

Projections	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Good Patient Relations										
Part Centered to Film										
Tube Centered to Film										
Patient in Correct Position										
Tube Angled/Perpendicular to Film										
Central Ray Enters Correct Anatomy										
Patient Obl'd Properly / No Rotation										
S.I.D. Correct										
Correct Screen/Grid Used										
Correct Film Size Used										
Correct Radiographic Marker										
Collimation Demonstrated										
Radiation Protection Used										
Breathing Instructions Given										
Proper mAs/ Phototiming Used										
Optimum kVp Utilized										

Exhibit 13

Numbered Projections to be performed:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Comments:

_____

_____

_____

_____

_____

_____

Exhibit 14

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

Simulation for Verification_____ Simulation for Competency_____

Unannounced Comp. Assessment_____ Unit File Number _____

Simulated Positioning Lab _____ Date_____

Student Name _____

Please place a "X" in the box under the item that was not mentioned or completed correctly. The positions and/or projections are listed at the bottom of the page.

Projection / Position	1	2	3	4	5	6
Good Patient Relations						
Correct Position of the Patient						
Tube Centered to Film						
Part Centered to Film						
C.R. Enters Correct Anatomy						
Correct Tube Angle or Perpendicular to the Film						
Pt Obliqued Properly / No Rotation						
Correct Film Size Used						
Correct Screen / Grid Used						
S.I.D. Correct						
Correct Radiographic Markers						
Collimation Demonstrated						
Proper mAs / Phototiming Used						
Optimum kVp Utilized						
Breathing Instructions Correct						
Radiation Protection Used						

1. _____ 4. _____

2. _____ 5. _____

3. _____ 6. _____

Exhibit 15

NEBRASKA METHODIST HOSPITAL
RADIOLOGIC TECHNOLOGY PROGRAM

Exam Log Report

Name_____ Semester_____

EXAM	Assisted	Performed	Observed	Pediatrics
Chest / Thorax				
Abdomen				
Upper Extremity				
Lower Extremity				
Pelvis / Hip				
Spine				
Head / Face				
Urinary				
G.I.				
Special Procedures				
Mobile				
Surgery				
Trauma				

Viewer	List number of exams seen with a Radiologist	

Definitions:

Assisted Exams: Exams that the student has helped in some way. (Setting techniques, setting up the room, helped to move the patient, etc.)

Performed Exams: The student has done the exam with little or no assistance from the technologist.

Observed Exams The student just watched the procedure being performed. No assistance was needed and they did not attempt to perform the exam.

Pediatric Exams Those exams performed on patients 6 years of age or younger.

Urinary Exams The following type of exams: IVP's, Cystograms, Voiding Cystograms, and Urodynamics.

G.I.'s These are exams of the stomach, colon, small bowel, and esophagus.

Special Procedures Those exams including myelograms, salpingograms, arthrograms, lumbar punctures, intervertebral studies, swallowing functions, enterocolisis, and ERCP exams.

Surgical Exams Include all exams done in surgery and pre / post-op holding areas.

Evening Shift/Trauma Include all exams completed during evening rotation only.

Please Note: Only one tally should be done per exam. Any questions please ask the Program Director.

Exhibit 16

NEBRASKA METHODIST COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM
Clinical Concern Form

STUDENT'S NAME:
CLINICAL SITE:
DATE:
NATURE OF THE ISSUE:
HAVE YOU TRIED TO RESOLVE THIS ISSUE? **YES** **NO**
IF YES, WHEN AND HOW?
IF NO, WHAT DO YOU THINK WOULD BE A PROPER/APPROPRIATE SOLUTION?
STUDENT SIGNATURE: **DATE:**
PLEASE RETURN FORM TO YOUR CLINICAL COORDINATOR.

FOR ADMINISTRATIVE USE ONLY:
ACTION TAKEN:
SIGNATURE OF CLINICAL COORDINATOR: **DATE:**

RADIOLOGIC TECHNOLOGY PROGRAM
Clinical Handbook Verification Form

I acknowledge that I participated in the Radiologic Technology Program Student Orientation. I received a personal copy of the Nebraska Methodist College Radiologic Technology Program Clinical Handbook and understand my obligations and expectations as a student in the program. The program reserves the right to make changes to the Clinical Handbook as deemed necessary. This student compliance sheet will be kept by the Program Director of Radiologic Technology in the student's personal file.

_____	_____
Student's Signature	Date
_____	_____
Program Director, Radiologic Technology	Date
_____	_____
Clinical Coordinator, Radiologic Technology	Date