GLOSSARY OF TERMS

COMPETENCY:	The ability to function within a realm of limited supervision and assume those duties and responsibilities as set forth in course and clinical objectives.
COMPETENCY EVALUATION:	The procedure by which a student's performance and the resulting image is evaluated. The minimum acceptable level of competency is 75%.
RADIOGRAPHIC EXAMS/ PROCEDURES:	A series of radiographic exposures of an anatomical part sufficient to permit diagnostic evaluation of that part.
LAB PROCEDURE EVALUATION:	The student will perform imaging procedure on phantom or person (not a patient).
LABORATORY:	MTC Radiology Lab, Room 143 A.
CLINICAL PARTICIPATION:	Experience the student gains through performing radiographic procedures and related duties.

CLINICAL EXPECTATIONS

1. Report to lead technologist/clinical instructor on time at clinical site.
2. Comply with the student dress code.
3. Wear proper name tags and radiation monitoring device.
4. Refrain from sitting on counter tops, floors, desks, or radiographic equipment.
5. Cell phones are prohibited during class and clinical assignments.
6. Keep voice tone low so patients and visitors will not be disturbed.
7. Use equipment and supplies with concern for patient safety, operator safety, and cost containment.
8. Provide a neat, clean, and orderly work area.
9. Practice Standard Precautions.
10. Maintain a good rapport with students, staff, physicians, supervisors, instructors, patients, and visitors.
11. If there is a question or concern regarding clinical assignments, call the clinical coordinator or program director.
12. Demonstrate confidentiality concerning the patient's right to privacy.
13. Practice proper radiation protection.
14. Students should remain in their assigned area/room during their scheduled clinical hours. Students are to assist with and perform imaging procedures during clinical. This includes, but is not limited to, preparing patients, performing imaging procedures, and reviewing images.
15. Repeat images only in the presence of a qualified radiologic technologist. The student must abide by Marion Technical College School of Radiography and clinical facility policies.
16. Remain current with the semester clinical competency completion schedule.
17. After competency testing, continue to produce quality radiographs.
18. Students are required to have clinical notebook with them during scheduled clinical hours. They must have pertinent information listed and organized in clinical notebook.
19. Clinical notebooks will be randomly checked by faculty.

STUDENT'S ROLE IN THE CLINICAL SETTING

1. Learn with observation and hands-on experiences.
2. Set up the room for each procedure, before the patient is brought into the room.
3. Assist with or perform all images in the assigned room.
4. Position the patient professionally and confidently.
5. Set proper exposure techniques.
6. Assist in dismissing the patients.
7. Review the radiographs with the radiographer and identify pertinent anatomy.
8. Prepare the room for the next patient.
9. Ask for help or information when necessary (not where the patient would overhear).
10. Become familiar with equipment, darkroom, file room, office, and other areas of the hospital.
11. Participate in quality improvement activities.
12. When not doing patients, the following activities are recommended:
    a. Stock the room.
    b. Clean the room and other equipment.
    c. Update clinical notebook.
    d. Practice positioning with another student.
    e. Help in another room.
    f. Assist in the office, lightroom, darkroom, or with other related activities.
    g. Review clinical information.

CLINICAL COMPETENCY OBJECTIVES

GENERAL OBJECTIVE:

1. The student collects pertinent data about the patient and about the procedure (cognitive skills).

Specific Objectives: Upon successful completion, the student will:

1.1 Assess the requisition for correct and necessary information.

1.2 Recognize conflicting written clinical history with the examination ordered.

1.3 Identify type of patient and the procedures to be performed on the patient.

1.4 Verify the patient's pregnancy status when appropriate.

1.5 Correctly demonstrate how to enter patient and procedure information into the computer.

GENERAL OBJECTIVE:

2. The student will demonstrate the proper elements of communication (affective and cognitive skills).

Specific Objectives: Upon successful completion, the student will:

2.1 Select the correct patient for the examination by using patient identifiers such as name and DOB.

2.2 Converse with the patient in an intelligent and professional manner.

2.3 Obtain medical history from the patient, and document on the requisition.

2.4 Recognize conflicting verbal history with exam ordered.

2.5 Explain the procedure to the patient and family in a language the patient understands.

2.6 Provide patient-centered clinically effective service for all patients regardless of age, gender, disability, special needs, ethnicity or culture.

2.7 Demonstrate skills in assessment and evaluation of psychological and physical changes in patient's condition and carry out appropriate actions.

2.8 Provide continuity of care and follow-up care regarding imaging procedures.

GENERAL OBJECTIVE:

3. The student will attend to the patient's safety and comfort (affective and psychomotor skills).

Specific Objectives: Upon successful completion, the student will:

3.1 Determine whether the patient has been appropriately prepared for the procedure, such as dressed in a gown.

3.2 Assist the patient to/from the radiographic room in a safe manner.

3.3 Assist the patient onto radiographic table, etc.

3.4 Employ body mechanics when moving or transporting the patient.

3.5 Assess factors that may contraindicate the procedure, such as medications, insufficient patient preparation, or artifacts.

3.6 Understand contrast media dosage, use, administration, and any potential adverse reactions. Evaluate lab values prior to administering contrast media.

3.7 Apply standard and transmission-based precautions.

3.8 Monitor the patient's condition throughout the procedure.

3.9 Demonstrate empathy towards the patient.

3.10 Insure patient privacy and modesty throughout the procedure.

3.11 Recognize and respond appropriately to patient emergencies.

3.12 Apply the appropriate medical asepsis and sterile technique.

GENERAL OBJECTIVE:

4. The student will demonstrate proper physical facility readiness (psychomotor skills).

Specific Objectives: Upon successful completion, the student will:

4.1 Provide a clean table, chest stand, or other area for the patient.

4.2 Maintain an orderly work area.

4.3 Maintain proper inventory of necessary supplies.

4.4 Dispense articles to the patient as needed (denture cup, etc.).

4.5 Ready the radiographic and fluoroscopic units for exposure.

4.6 Select appropriate cassette size and image receptor for the given examination.

4.7 Locate and prepare syringes, needles, and other medical supplies.

4.8 Prepare any necessary sterile trays and instruments.

4.9 Exercises priorities required in daily clinical practice.

GENERAL OBJECTIVE:

5. The student will demonstrate correct use of image receptor/grid combinations (cognitive and psychomotor skills).

Specific Objectives: Upon successful completion, the student will:

5.1 Select the correct image receptor for a given examination.

5.2 Select the correct cassette size for a given examination.

5.3 Correct placement of cassette (crosswise or lengthwise).

5.4 Employ a grid in the proper manner when applicable.

5.5 Central ray is perpendicular and centered to the film.

5.6 Central ray is angled correctly and centered to the film necessary for specific procedure.

GENERAL OBJECTIVE:

6. The student will manipulate radiographic and other equipment in the correct manner (psychomotor skills).

Specific Objectives: Upon successful completion, the student will:

6.1 Move the radiographic tube in all possible directions.

6.2 Utilize all equipment locks to avoid damage.

6.3 Operate film advance for automatic changers or prepare digital equipment for procedures.

6.4 Operate all controls on the mobile radiographic unit.

6.5 Operate fluoroscopic controls in the proper manner.

6.6 Maintain the correct source to image distance for each projection.

6.7 Report equipment malfunctions to assist with appropriate corrective actions.

6.8 Understand and demonstrate radiographic processing and digital imaging processing.

GENERAL OBJECTIVE:

7. The student will position the patient using the standard methods employed for each examination (psychomotor skills).

Specific Objectives: Upon successful completion, the student will:

7.1 Position the patient in the manner appropriate for projection of the imaging procedure.

7.2 Align the part to be demonstrated to the center of the cassette or other image receptor.

7.3 Demonstrate an orderly and logical sequence in the performance of the examination.

7.4 Perform comparison views when required.

7.5 Demonstrate the use of immobilization devices and positioning aids when necessary.

7.6 Adapt to changes according to the patient condition and cooperation.

GENERAL OBJECTIVE:

8. The student will demonstrate correct technical factor manipulation (cognitive and psychomotor skills).

Specific Objectives: Upon successful completion, the student will:

8.1 Measure the patient correctly using calipers.

8.2 Interpret technique charts for each room.

8.3 Select technical factors which produce diagnostic images with the lowest exposure possible.

8.4 Adapt exposure factors for changes in SID, screen type, and patient differences.

8.5 Select exposure factors to prevent patient motion.

GENERAL OBJECTIVE:

9. The student will employ proper radiation protection measures for the patient and operator (cognitive and psychomotor skills).

Specific Objectives: Upon successful completion, the student will:

9.1 Collimate to the area and part of interest when applicable.

9.2 Apply gonadal shielding when applicable.

9.3 Wear lead apron and gloves in the presence of ionizing radiation.

9.4 Maximize the distance between radiation and self.

9.5 Minimize the time spent in the area of radiation when appropriate.

9.6 Employ correct technical factors to avoid repeat films.

GENERAL OBJECTIVE:

10. The student will identify each image in the correct manner (cognitive skills).

Specific Objectives: Upon successful completion, the student will:

10.1 Identify each image with an "R" or "L" and other appropriate markers in the correct location.

10.2 Identify the image with patient identification in the proper space.

10.3 Place identification of the image in such a way as to avoid interference with diagnostic information.

GENERAL OBJECTIVE:

11. The student will complete each examination in an appropriate timeframe as determined by the student's level of learning (cognitive, psychomotor, and affective skills).

GENERAL OBJECTIVE:

12. The student will assess each finished image for adequacy (cognitive skills).

Specific Objectives: Upon successful completion, the student will:

12.1 Identify evaluation criteria required for imaging procedure.

12.2 Describe the adequacy of technical factors chosen.

12.3 Identify images using correct projection terminology.

12.4 Identify upon request any anatomical part or landmark demonstrated on the image.

12.5 Discuss means of improving images.

12.6 Maintain patient confidentiality.

ATTAINMENT OF CLINICAL COMPETENCY

Marion Technical College School of Radiography offers a well-structured clinical education plan. Didactic and clinical instruction is integrated to allow students to apply their acquired knowledge to the clinical setting. The intent of this plan permits the student to achieve competency in the duties of the occupation upon graduation from the program. The program is patterned after a competency-based model and is founded upon a set of behavior objectives. The objectives, which include cognitive, affective, and psychomotor skills, specify the desired behavior to be completed.

The student will receive instruction and demonstration on how to perform radiographic procedures in the classroom. After classroom demonstration, the student will perform a clinical lab procedure evaluation under simulated conditions. Clinical lab procedure evaluations will be assigned on scheduled days and times. Attendance to lab simulations is mandatory. If a student is unable to attend a lab simulation, he/she may switch labs with another student with approval of the clinical coordinator. It is also necessary for each student to arrive to lab simulations with their clinical notebook, iPad, and lead markers.

Points will be deducted from the clinical grade if the student does not have the clinical notebook in lab and/or dismissed from lab.

Lab simulations will be run accordingly: The student will arrive at the radiography lab, and it will be announced at that time what lab procedures will be assessed at that session. The student will then have a few minutes to prepare for the evaluation. Students will be required to perform the procedure on a mock patient. The evaluation will be conducted as if it were being performed on a real patient. Student will also be required to identify projections, anatomy, evaluation criteria, and corrections for each procedure. Labs are graded pass/fail. If it is necessary to tally the grade, students must obtain a minimum score of 75% on each evaluation to successfully pass the lab procedure evaluation. A student must pass all starred items on the lab evaluation form. The lab instructor or clinical coordinator will notify the student of any lab failures. All failed lab procedure simulations must be repeated before the student can perform a clinical competency evaluation.

The lab simulation provides the student the opportunity to refine his or her skills before attempting to do the exam on a patient. It also provides feedback for the instructor's performance in the classroom.

Some lab simulations may also be conducted at the clinical site by the clinical instructor or member of the Competency Evaluation Team. Students will be provided information on what lab simulations may be conducted at the clinical sites.

DIRECT SUPERVISION

Direct supervision is defined as the student performing a radiographic procedure in the presence of a registered technologist. The registered technologist must review the requisition to evaluate the condition of the patient. Upon completion of the exam, the technologist also reviews and approves the images. During this time, the student continues to develop and refine his or her skills. Students must follow the direct supervision policy until they have successfully completed the competency evaluation. One fundamental aspect of this plan is that students can progress at their own individual paces. However, it is equally important that students demonstrate a degree of minimum progress clinically throughout the program. This is accomplished by successful completion of competencies.

INDIRECT SUPERVISION

Upon successful completion of a competency examination, a student is permitted to perform that procedure under indirect supervision. Indirect supervision is defined as the presence of a qualified radiographer adjacent to the room or location where a radiographic procedure is being performed and immediate assistance is available.

CLINICAL COMPETENCIES EVALUATIONS

PASS: Upon completion of the competency examination (a minimum of 75%), the student will be allowed to perform that examination under indirect supervision. Attainment of a competency does not excuse the student from performing that examination in the future. The student is expected to remain proficient by repetition of performance.

NONPASS: If a student does not pass the first attempt of a procedure, the student must review the procedure with the clinical coordinator or member of the Competency team before retesting.

During the second attempt of a procedure, if a student does not pass, the student must review the procedure with the clinical coordinator or member of the Competency team before retesting again.

If a student does not pass the third attempt of a procedure, the clinical coordinator will inform the program director. The student may be dismissed upon the discretion of the program director.

In the EVENT that a student fails to complete the required number of competencies for semester, the student will receive a **two-point deduction for each competency not completed** in his or her semester clinical grade. All required competencies must be completed in order for the student to graduate.

INSTRUCTION FOR COMPETENCY EVALUATIONS

A student must complete all thirty-nine mandatory competencies in order to graduate. In addition, fifteen of the thirty electives competencies must be completed to graduate. Students may attempt competency testing after they have had class instruction, successfully passed the lab simulation, and they have completed a minimum of THREE exams under direct supervision, if possible. Since chest and abdomen procedures are done so frequently, we recommend that the student performs 10 chests and 10 abdomen procedures before attempting competency.

The student will be notified of a competency failure by the clinical instructor or clinical coordinator. The clinical instructor or clinical coordinator must review the procedure with the student before another attempt at competency is made.

A student is required to maintain competency in doing required procedures for the program. **The Program Director and/or the Clinical Coordinator reserve the right to retest students on previously tested procedures.**

SIMULATION POLICY

1. Clinical competency simulation may be allowed in situations when there are few imaging procedures available of that type.
2. The sequence of events for a simulation will be as follows:
    a. Approval to do the simulations is to be approved by the Program Director/Clinical Coordinator.
    b. Time and place is to be arranged.
    c. A sample requisition will be used.
    d. The simulation will follow the same format as a competency evaluation.
    e. It may also be required for the student to complete competency evaluation on a patient. This will be graded as a pass/fail.

MANDATORY COMPETENCIES

Fall Semester – Junior Year

1. Blood pressure
2. Pulse/Respirations
3. Temperature
4. Sterile technique
5. Gloving
6. Drawing up medication/contrast media
7. Handwashing
8. 4 Competencies Required

Spring Semester – Junior Year

1. 12 Competencies Required

Summer Semester – Senior Year

1. 12 Competencies Required

Fall Semester – Senior Year

1. 12 Competencies Required

Spring Semester – Senior Year

1. 12 Competencies Required

Mandatory Competency List

Chest	Ribs
Abdomen	Air Contrast Enema/Barium Enema or UGI
Upright Abdomen	Skull or Sinuses
Finger/Thumb	Portable Chest
Hand	Portable Abdomen
Wrist	Pediatric Chest (6 years or under)
Forearm	Cart Chest
Elbow	Trauma Upper Extremity (non-shoulder)
Humerus	Knee
Shoulder	Portable Orthopedic
Clavicle	Trauma Lower Extremity
Foot	Trauma Shoulder
Ankle	Trauma Hip
Tibia/Fibula	C-Arm in surgery with sterile field
Femur	C-Arm in Surgery 2 projections
Hip	Geriatric Chest
Pelvis	Geriatric Upper Extremity
Cervical Spine with oblique	Geriatric Lower Extremity
Thoracic Spine	CT Brain
Lumbar Spine with oblique	CT Abdomen
X-fire lateral spine	Enema Tip
Nursery Mobile	Venipuncture
Transfer of Patient	Care of Medical Equipment

ELECTIVE COMPETENCIES

AC Joints	Nasal bones	Arthrogram
Abdomen Decubitus	Pediatric Abdomen	SI Joints
Chest Decubitus	Pediatric Lower Extremity	Small Bowel
Cystography	Pediatric Mobile	Soft Tissue Neck
Esophagram	Pediatric Upper Extremity	Sternum
Facial Bones	Sacrum/Coccyx	Toes
Mandible	Scapula	VCUG
Os Calcis (Calcaneus)	Scoliosis	Myelogram
Patella	IVU	Zygomatic arch
Orbits	ERCP	HSG
Skull or Sinus	UGI or BE	TMJ joints

Radiography faculty will announce any changes to the clinical competency process. It is possible that a lab simulation may not be required on all of the above procedures prior to clinical competency.

Student may contact the Clinical Coordinator if they wish to request lab or competency testing on procedures not listed in the clinical handbook.

Clinical instructors or designee will demonstrate and/or evaluate students on the following items:

Junior students

Clinical orientation at site
Equipment manipulation
Enema tipping

Senior students

Clinical orientation
Nursery portable chest
Venipuncture

CLINICAL ROTATION DESCRIPTIONS

MANDATORY CLINICAL ROTATIONS

OFFICE/PACS: The student is introduced to the appropriate methods of telephone and reception desk activities. The activities include maintaining proper patient records, answering phones, answering questions, assisting patients and families, and other various activities. The student will observe the PACS technologist and observe the different aspects of working/administrating a PACS system.

TRANSPORTING: The student will be training with the transportation team to bring patients to the various imaging departments and returning patients back to their rooms. The student will become better acquainted with the patient's needs. Students will also receive instruction on how to care for medical equipment (e.g., oxygen tank and IV tubing).

RADIOLOGIST FILM REVIEW: Student will be given the opportunity to observe and listen to the radiologist's interpret images. The purpose of this experience is to help the student correlate the imaging interpretation and diagnosis with imaging in terms of correct anatomy visualized, radiographic technique, proper patient positioning, and interesting or unusual cases. A form is provided to each student so that he/she can document his/her experiences. This assignment is designed to compliment the student's didactic and clinical instruction.

LIGHTROOM/QA : The student will be learning how continuous patient flow is maintained in an imaging department. Students will assist the supervisor with management activities such as quality assurance and call reports.

RADIOGRAPHY/FLUOROSCOPY: Students will be scheduled in radiographic and fluoroscopic rooms throughout the seven clinical quarters of the program. Students will learn about all aspects of the job of the radiographer. The goal is for the student to become proficient, knowledgeable and organized in their approach to doing imaging procedures.

PORTABLE: The student will be scheduled on portable/mobile clinical rotations in their junior and senior year. The goal is for the student to become proficient in performing portable/mobile radiography.

SURGERY: Students will have the opportunity to train in surgery and become proficient in performing imaging procedures and the operation of the surgery equipment in the operating suite.

INTERVENTIONAL: Students will be given the opportunity to learn and assist with the various procedures done in the interventional suite. Students should become familiar with interventional rooms, tray prep, patient instruction/informed consent, computers, equipment, and other job duties. Students will have the opportunity to observe cardiologists as well as the radiologists performing interventional procedures.

CT SCANNING: This modality is rapidly replacing some standard radiographic procedures. Rotation in this area will provide the students with knowledge in the operation of the computer, patient positioning, sectional anatomy, and other various aspects of CT. Students will have to perform competency testing on CT brain and CT abdomen procedures.

NON-ROUTINE HOURS—EVENING/WEEKEND: The general intent of scheduling a student for a non-routine evening/weekend rotation is to provide learning experiences and opportunities not readily available during the regularly scheduled clinical hours. The student is more likely to play an involved role in the radiography and care of a trauma patient during an evening or weekend rotation. The goal is for the student's sense of responsibility and self-confidence to increase with this clinical rotation. The student must begin to demonstrate his/her ability to work more autonomously. Such non-routine clinical rotations greatly enhance and compliment clinical instruction and serve as an important component of the curriculum.

ELECTIVE CLINICAL ROTATIONS

ULTRASOUND: Students are provided the opportunity to observe the sonographer in the scanning modality of ultrasound. They will learn the anatomy being demonstrated in sectional planes.

NUCLEAR MEDICINE: The student will have the opportunity to learn about the differences between diagnostic radiography and nuclear medicine. Students should become familiar with the cameras, different collimators, and the radiopharmaceuticals.

MRI: During this rotation the students should become familiar with the set-up of the computer, equipment employed, patient preparation for examinations, patient imaging, and other various tasks.

Radiation Therapy: Students will have the opportunity to observe radiation therapists at the Marion Area Cancer Center for this rotation. Students will observe how x-ray energy is used in the therapy setting for the diagnosis and treatment of various patient conditions. Students will also observe dosimetrist responsibilities and the care of the patient in this setting.

CLINICAL ROTATION OBJECTIVES

Objectives for each clinical rotation are listed on the following pages. The student should become familiar with the objectives for each rotation prior to starting that rotation. The criteria that student must complete in the each clinical rotations is listed on the following pages. Mandatory and elective clinical rotations are graded on a pass/fail basis. Students must pass all mandatory clinical rotations for graduation.

ADVANCED ELECTIVE CLINICAL ROTATIONS

Senior students are given the opportunity to select an additional clinical rotation for one week. Arrangements will be made for the students to complete required clinical rotations before they choose the advanced elective rotation. The advanced rotations are for students who have a particular interest in an area. Students may select a clinical rotation from the following list:

Interventional
Nuclear Medicine
Ultrasound
CT Scanning
Education/Management
MRI

Students are to follow the same format as published above for criteria completion in an advanced clinical rotation.

CLINICAL ROTATION-JUNIOR STUDENTS

The following is a list of the clinical rotation assignments for the junior year. The Clinical Coordinator, student, and clinical faculty members will work toward the completion of rotations. The Program Director has the authority to make changes as necessary.

The students are scheduled for a 16-32 hour week. A clinical day will be 8-8.5 hrs. Days over 5 hrs include a 30 min lunch and two 15 minute breaks.

SEMESTER OF ASSIGNMENT	AREA	HOURS
Fall Semester	Orientation	22
Tuesday	Radiographic/Fluoroscopic	110 *
	Evening/Trauma	32-64 *
Thursday	Office (Fall or Spring)	16
	Transportation (Fall or Spring)	16
	Light Room (Fall or Spring)	16
	Radiologist (Fall or Spring)	16
	Urgent Care (Fall or Spring)	32*
	Evening/Trauma	16-32*
	Weekend (Sat. & Sun.)	16
		Total **240**
Spring Semester	Radiographic/Fluoroscopic	130 *
	Portable/Mobile	40/20*
Tuesday	Surgery	40/20*
	Light room (Fall or Spring)	16
Thursday	Radiologist (Fall or Spring)	16
	Office (Fall or Spring)	16
	Transportation (Fall or Spring)	16
	Urgent Care (Fall or Spring)	32*
	Evening/Trauma	16-32*
	Weekend (Sat. & Sun.)	16
		Total **240**
TOTAL HOURS JR		**480 Hours**

* The clinical numbers for above rotations are approximate.
The students are in surgery and port about half of the scheduled time. The remainder of the time is scheduled in radiography.

CLINICAL ROTATION-SENIOR STUDENTS

The following is a list of the clinical rotation assignments. The Clinical Coordinator, student, and clinical faculty members will work toward the completion of rotations. The Program Director has the authority to make changes as necessary.

SEMESTER OF ASSIGNMENT	AREA	HOURS
Summer Semester	Radiographic/Fluoroscopic	202*
	Evening/Trauma	32-48*
Monday,Tuesday Wednesday, Thursday	Port/Mobile/Surgery	32-48*
And/or Friday	Weekend (Sat. & Sun.)	16
	Total	**320**
Fall Semester	Radiographic/Fluoroscopic	78*
	Portable/Mobile/Surgery	32-48**
Monday	Surgery	32*
	Radiologist (Fall or Spring	16
Wednesday	CT (Summer, Fall, or Spring)	32
	Interventional (Fall or Spring)	16
And/or Friday	Evening/Trauma	32-48*
	Weekend (Sat. & Sun.)	16
	Total	**240**
Spring Semester	Radiographic/Fluoroscopic	117*
M,W,F	Rotation (elective and adv)	32*
	Port/Surg if needed	16*
	Evening/Trauma	32-48*
	Weekend (Sat. & Sun.)	16
	Total	**240**
TOTAL HOURS SR		**800 Hours**
Total hours program		1280
Total non-routine hours		256 =20% of total

* The clinical numbers for rotations are approximate.

DIRECTIONS FOR EVALUATION FORMS

On the first day of each clinical rotation, the student should review the clinical objectives and evaluation process for each clinical rotation with their mentor/instructor. The student and instructor should discuss how the student can meet the clinical objectives for the area in which they are scheduled.

Students are required to complete all objectives for all required rotations. The student will present the instructor of each area with a check-off list, which needs to be completed within seven days after completing the clinical rotation. If a student fails to complete all objectives for a required clinical rotation, the student will be given additional time to complete the objectives. Arrangements will be made by the Clinical Coordinator/clinical instructor. The student will complete the Student Clinical Rotation Evaluation for each area at the end of the semester.

CLINICAL GRADE EXPLANATION

The following categories will comprise a student's clinical grade for a semester:

1. **Semester Evaluation: 25%**

   Only the rated categories found on the semester evaluation form will be used to calculate a student's total points in the category. The total points for this category are 56 points.

2. **Technologist/Staff Evaluations: 10%**

   There will be 2 evaluations completed each semester. Each evaluation is worth 60 points.

3. **Assignments: 10%**

   The total points for the category are 10. Each late form, will receive a deduction of 1 point for each business day late, from this category. This category starts over each semester. This category includes IPOD downloads, CI evaluations, clinical forms, and clinical assignments. It is possible that other forms, such as medical forms could be counted in this category.

4. **Attendance: 5%**

   The total points for the category are 5. Each absence and tardy will receive a deduction of 1 point from this category. This category starts over each semester. Points will be deducted if student is absent for Image Analysis Class or student meeting.

5. **Professionalism: 15%**

   Dress code, appropriate interactions, good attitude, etc.

   The total points for the category are 20.

   Each infraction of policies and procedures outlined in the School of Radiography Student Handbook or Marion Technical College policies and procedures will receive a deduction points from this category. Appropriate interactions involve all people the student comes into contact with in both clinical and didactic courses. Students are expected to conduct themselves in a professional manner with faculty/ instructors in class and in the clinical setting. Questions and concerns are addressed with appropriate personnel in a constructive manner. Inappropriate comments, statements and gossip will not be tolerated and will have consequences, and points will be deducted from this category.

   For the entire junior year, deductions will be carried over. Then beginning of senior year, total points possible returns to 20. For the entire senior year, deductions are again carried over.

   Example follows:

   Student "A" violates the dress code policy receiving only 18 points for this category fall semester of his junior year. Spring semester of the junior year the highest possible points he can receive is 18 The category is reset for the senior year.

6. **Clinical Notebook: 5%**

   The total points for the category are 10.
   Each time notebook is checked and is not up-to-date, or each time student does not have notebook in lab or in clinical, 1 point will be deducted from this category. This category starts over each semester.

7. **Competencies/Lab: 20%**

   The total points for the category are 20. Start at 20—deductions will be carried over for entire junior year, and then begins at 25 for entire senior year.

   Each competency not completed per semester will receive a deduction of 2 points from this category. The student can earn back the deducted points in following semesters by completed more competencies than required.

   For the entire junior year OR for the entire senior year, a student can fail 3 competencies and receive no deductions. Each failure after 3, 1 point is deducted from this category.

   For the entire junior year OR for the entire senior year, a student can fail 3 labs and receive no deductions. Each failure after three, 1 point is deducted from this category.

8. **Clinical test: 10%**

   Total is approximately 45 points.

CLINICAL ROTATION DESCRIPTIONS

AND

OBJECTIVES

CLINICAL ROTATION DESCRIPTION

TITLE: CT SCANNING

LENGTH OF ROTATION: 6 days – Senior Rotation

INSTRUCTOR: DESIGNATED PERSONNEL

OBJECTIVES:

1. Assess CT requisition for correct and necessary information.
2. Describe the basic operation of a CT scanner.
3. Identify the different contrast agents, their usage, and precautions.
4. Explain a CT procedure to a patient and family in a language they will understand.
5. Explain the use of phantoms for monthly calibration.
6. Participate in positioning patients for CT examinations of brain, abdomen, pelvis, and chest.
7. Assess factors that may contraindicate the procedure, such as medications, insufficient patient preparation and artifacts.
8. Assist with preparation of power injector (cleaning and filling).
9. With the help of a CT technologist, program rate of injection on the power injector.
10. Participate in saving images for brain and abdomen procedures.
11. Define the following terms:
    a. deletion
    b. raw data
    c. phantom
    d. pixel
    e. window/level (center)
12. Identify the following anatomy on CT images:
    a. prostate
    b. vena cava
    c. bladder
    d. azygos vein
    e. heart
    f. adrenal glands
    g. renal artery
    h. renal vein
    i. third ventricle
    j. fourth ventricle
    k. pineal gland
    l. falx cerebri
    m. optic nerve
    n. mastoids
    o. tentorium
    p. all air-filled sinuses
13. Assist in monitoring patient throughout a CT procedure.
14. Follow radiation safety and protection practices during CT procedures.
15. Can identify different image planes correctly.

CONTENT OF ROTATION

Each student will be assigned to a 6-day rotation in CT. At the completion of the CT rotation, the CT technologist will complete an evaluation of the student and return it to the Clinical Coordinator within seven days. The student will gain a basic knowledge of CT exams, including patient care, exam procedures, equipment and image manipulation. The student will observe brain, thorax and abdomen/pelvis CT exams. The student will understand the sectional images of each exam. The student must pass a CT Brain Non-Contrast Exam and a CT Abdomen or CT Renal Stone Study Non-Contrast Exam Competency Form.

CT EVALUATION

Student _____

Evaluator _____

Date _____

YES	NO	
_____	_____	1. Assesses CT requisition for correct and necessary information.
_____	_____	2. Assists in positioning patient for CT procedure.
_____	_____	3. Assesses factors that may contraindicate the procedure, such as medications, insufficient patient preparation, and artifacts.
_____	_____	4. Describes basic CT operation of equipment.
_____	_____	5. Identifies different contrast media, its usage, and precautions.
_____	_____	6. Assists in preparation of the power injector.
_____	_____	7. Assists with programming injection rate of power injector.
_____	_____	8. Participates in positioning patients for CT examinations of brain, abdomen, chest, and pelvis.
_____	_____	9. Explains the terms in Objective 12.
_____	_____	10. Participates in and explains the use of phantoms for monthly calibration.
_____	_____	11. Demonstrates educational responsibility during this rotation.
_____	_____	12. Assists in monitoring patient throughout a CT procedure.
_____	_____	13. Identifies anatomy in CT images.
_____	_____	14. Explains a CT procedure to a patient and family in a language they will understand.
_____	_____	15. Follows radiation safety and protection practices during CT procedures.
_____	_____	16. Can identify different image planes correctly.

_____

Technologist Signature

_____

Date

CLINICAL ROTATION DESCRIPTION

TITLE: ADVANCED EDUCATION IN CT SCANNING

LENGTH OF ROTATION: 3 days

INSTRUCTOR: DESIGNATED PERSONNEL

OBJECTIVES:

1. Identify and explain the use of emergency equipment used in CT procedures.
2. Participate in positioning patient for spine, sinus, neck, and extremity CT procedures.
3. Demonstrate knowledge of how to submit images to the work stations or to hard copy.
4. Assist with changing MOD.
5. Participate and evaluate QC testing process.
6. Demonstrate knowledge of how to identify, call up, and modify a case using work station.
7. Identify the different algorithms used for imaging.
8. Under the directions of a registered technologist, position patients for CTA Chest and/or CT Abd/pelvis procedure.

CONTENT OF ROTATION:

Senior students are given the opportunity to select a specialty area for advanced education. Students selecting CT will complete the above objectives. An evaluation form of the student's performance will be completed by the CT technologist at the conclusion of each student's rotation. The evaluation form will be submitted to the Clinical Coordinator within seven days of the completion of each student rotation.

CT ADVANCED EVALUATION

Student _____

Evaluator _____

Date _____

YES	NO	
_____	_____	1. Assesses CT requisition for correct and necessary information.
_____	_____	2. Assesses factors that may contraindicate the procedure, such as medications, insufficient patient preparation, and artifacts.
_____	_____	3. Participates in positioning patients for CT procedures.
_____	_____	4. Identifies emergency equipment used in CT.
_____	_____	5. Demonstrates transmission of images to the windows work station.
_____	_____	6. Evaluates the monthly QC test.
_____	_____	7. Identifies and uses the different algorithms used in CT imaging.
_____	_____	8. Completes advanced assignment with given time period.
_____	_____	9. Demonstrates educational responsibility during this rotation.
_____	_____	10. Under the direction of a registered technologist, positions patient for CTA Chest and /or CT Abd/pelvis procedure.

_____
Technologist Signature

_____
Date

CLINICAL ROTATION DESCRIPTION

CLINICAL ROTATION DESCRIPTION

TITLE: EDUCATION – ADVANCED

LENGTH OF ROTATION: 2 days

INSTRUCTOR: DESIGNATED PERSONNEL

OBJECTIVES:

1. Discuss the scheduling process for didactic and clinical aspects of the school of radiologic technology.
2. Discuss class preparation and lecture.
3. Discuss exam preparation, monitoring, and grading.
4. Discuss preparation of clinical evaluations and quarter grades.
5. Discuss clinical labs and competency testing.
6. Discuss revision processes within the school curriculum.

CONTENT OF ROTATION:

In his or her senior year, each student will have the opportunity to choose the education rotation as an advanced elective rotation. The rotation consists of a 2-day rotation and will be assigned by the Clinical Coordinator. This rotation will give the student some insight into the educational job aspect within the field of radiologic technology.

It is advisable for the students to review the objectives of this rotation prior to starting the rotation. If there are any questions concerning **any** of the objectives, the student should review the objective with the Clinical Coordinator.

EDUCATION CLINICAL EVALUATION

Student _____

Evaluator _____

Date _____

YES	NO	
_____	_____	1. Can discuss the scheduling for didactic and clinical aspects of the school.
_____	_____	2. Can discuss class preparation and lecture.
_____	_____	3. Can discuss exam preparation, monitoring, and grading.
_____	_____	4. Can discuss preparation of clinical evaluations and quarter grades.
_____	_____	5. Can discuss clinical labs and competency testing.
_____	_____	6. Can discuss revision processes within the school curriculum.
_____	_____	7. Demonstrates educational responsibility for this rotation.

_____
Technologist Signature

_____
Date

CLINICAL ROTATION DESCRIPTION

TITLE: INTERVENTIONAL

LENGTH OF ROTATION: 3 days

INSTRUCTOR; DESIGNATED PERSONNEL

OBJECTIVES:

1. Identify what 3 things the patient needs to be connected to prior to start of procedure and during procedure.

2. Discuss why a patient would need a cardiac cath, a pacemaker or defibrillator, an ep study or a vascular procedure.

3. Discuss the risks involved with the above procedures.

4. Discuss the uses and whys of the defibrillator and IABP.

5. Practice standard precautions and proper sterile technique.

6. Did student have a general idea of the anatomy seen during the procedures they were able to observe?

7. Practice radiation safety and protection during clinical assignment.

8. Demonstrate educational responsibility during this rotation.

9. Did the student have their binder during their rotation all 3 days?

CONTENT OF ROTATION

Each student will be assigned to a 3-day rotation in the interventional department. The student will observe various interventional studies and understand the advanced procedures required to perform these exams. At the completion of the rotation the interventional technologist will complete a performance evaluation on the student and return it to the Clinical Coordinator within seven days.

INTERVENTIONAL CLINICAL EVALUATION

Student _____

Evaluator _____

Date _____

YES	NO		
_____	_____	1.	Identify patient physiological monitors in the interventional suite.-
_____	_____	2.	Identify what 3 things the patient needs to be connected to prior to start of procedure and during procedure.
_____	_____	3.	Discuss why a patient would need a cardiac cath, a pacemaker or defibrillator, an ep study or a vascular procedure.
_____	_____	4.	Identify risks involved in interventional procedures.
_____	_____	5.	Identify different contrast agents and reasons for preferred contrast agents.
_____	_____	6.	Discuss the uses and whys of the defibrillator and IABP.
_____	_____	7.	Identify variations in cardiac cath techniques.
_____	_____	8.	Identify and describe uses of the defibrillator and Intra-Aortic Balloon Pump used in the cath lab.
_____	_____	9.	Practice standard precautions and proper sterile techniques in the cath lab.
_____	_____	10.	Identify patient physiological monitors in the cath lab/angiography suite.
_____	_____	11.	Discuss consent, history and physical forms.
_____	_____	12.	Identify anatomy on images upon request.
_____	_____	13.	Practice radiation safety and protection during clinical assignment.
_____	_____	14.	Did the student have their binder during their rotation all 3 days?

_____

Technologist Signature

_____

Date

CLINICAL ROTATION DESCRIPTION

TITLE: INTERVENTIONAL - ADVANCED

LENGTH OF ROTATION: 3 days

INSTRUCTOR: DESIGNATED PERSONNEL

OBJECTIVES:

1. Review and demonstrate objectives from previous rotation.
2. Explain difference between caring for patients in interventional/cath procedures vs. radiography.
3. Trace the cardiac patients flow pattern from admission to post discharge follow up. Include a brief introduction to related treatment to the following areas:
   a. ER
   b. ICCU
   c. Echo
   d. Cardiovascular Services
   e. Nuclear Medicine
   f. Transition
   g. Rehabilitation
4.
   b. Procedures performed at the clinical site.
5. Differentiate between normal ECG rhythms and abnormal ECG tracings.

CONTENT OF ROTATION:

The student will observe various interventional studies and understand the advanced procedures required to perform these exams. At the completion of the rotation the interventional technologist will complete a performance evaluation on the student and return it to the Clinical Coordinator within seven days.

INTERVENTIONAL CLINICAL EVALUATION
ADVANCED

Student _____

Evaluator _____

Date _____

YES	NO		
_____	_____	1.	Completed and demonstrated objectives from previous rotation.
_____	_____	2.	Can explain differences in caring for patients in interventional/cath procedures vs. radiography.
_____	_____	3.	Observe cardiac flow pattern from admission to post discharge.
_____	_____	4.	Assist with interventional procedures.
_____	_____	5.	Make test exposures.
_____	_____	6.	Identify different contrast agents and reasons for preferred contrast agents.
_____	_____	7.	Explain technique changes and blood flow variations for peripheral run-off examinations and compare with CT angiograms.
_____	_____	9.	Demonstrate educational responsibility during this rotation.
_____	_____	10.	Can differentiate between normal ECG rhythms and abnormal ECG tracings.

_____
Technologist Signature

_____
Date

CLINICAL ROTATION DESCRIPTION

TITLE: LIGHTROOM

LEVEL: Junior Year

LENGTH OF ROTATION: 2 days

INSTRUCTOR: DESIGNATED PERSONNEL

OBJECTIVES:

1. Demonstrates proper telephone etiquette.
2. Identify differences between stat, routine, ER, and call report cases.
3. Check custom work list and sticky notes
4. Demonstrate how to call service repair if the need arises.
5. Understands how patient flow through the x-ray department.
6. Obtain call reports from radiologist and relay information to supervisor.
7. Observe and assist with the delegation of assignments to the imaging staff.
8. The student becomes familiar and understands the Epic System.

CONTENT OF ROTATION:

Each student will be assigned to the light room for a 2 day rotation for students to become more knowledgeable of light room procedures.

The lead person will complete the accompanying evaluation form and submit this form to the Clinical Coordinator within seven days.

LIGHTROOM CLINICAL EVALUATION

Student _____

Evaluator _____

Date _____

YES	NO	
_____	_____	1. Demonstrates proper telephone etiquette.
_____	_____	2. Can differentiate stat, routine and urgent or emergency cases.
_____	_____	3. Checks the work list and sticky notes for imaging procedures.
_____	_____	4. Correctly explains patient flow pattern through x-ray department.
_____	_____	5. Demonstrates how to call service repair when needed.
____	_____	6. Understands the use of the Medhost System.
_____	_____	7. Obtains call reports from radiologist and relays information to supervisor.
_____	_____	8. Does the student demonstrate initiative during this rotation.

_____
Technologist Signature

_____
Date

CLINICAL ROTATION DESCRIPTION

TITLE: MANAGEMENT

LENGTH OF ROTATION: 2 days

INSTRUCTOR: DIRECTOR OF IMAGING SERVICES OR MANAGER

OBJECTIVES:

1. Review policy and procedure development processes.
2. Review procedure for acquisition of capital equipment.
3. Discuss JCAHO and regulatory standards within the radiology department.
4. Discuss the supervision process with managers and supervisors in the radiology department.

CONTENT OF ROTATION:

Each student will have the opportunity to choose an elective rotation in management. The rotation will consist of a 2-day rotation that will be assigned by the clinical instructor. This rotation will allow the student some insight into the position of director of imaging services.

It is advisable for the students to review the objectives of this rotation prior to starting the rotation. Students may want to discuss expectations for this assignment with the director.

CLINICAL EVALUATION MANAGEMENT

Student _____

Evaluator _____

Date _____

YES	NO		
_____	_____	1.	Can discuss policy and procedure development process.
_____	_____	2.	Can discuss procedure for capital equipment acquisition.
_____	_____	3.	Can discuss JCAHO and regulatory standards within the radiology department.
_____	_____	4.	Can discuss the supervision process with managers and supervisors in the radiology department.
_____	_____	5.	Demonstrates educational responsibility during this rotation.

COMMENTS:

_____

Technologist Signature

_____

Date

CLINICAL ROTATION DESCRIPTION

TITLE: MRI

LENGTH OF ROTATION: 3 days Senior Year

INSTRUCTOR: DESIGNATED PERSONNEL

OBJECTIVES:

1. Observe the MRI video shown to all MRI staff.
2. Assist with positioning patients for MRI procedures.
3. Assist with obtaining MRI patient's medical history.
4. Identify axial, sagittal, and coronal MRI images.
5. Review MRI QC tests with technologist.
6. Observe and describe MRI safety measures and procedures.
7. Identify coils used for MRI procedures.
8. Identify anatomy and planes on MRI images.
9. Assist in equipment for MRI procedures.
10. Identify the contrast agent used in MRI.

CONTENT OF ROTATION:

After the introductory class to MRI, each student will be assigned to a 3-day rotation. At the completion of the rotation, designated personnel will complete the accompanying evaluation and submit it to the Clinical Coordinator within seven days. Students may be assigned to MRI after the one week rotation for the student to become more knowledgeable of the MRI procedures.

MRI EVALUATION

Student _____

Evaluator _____

Date _____

YES	NO		
____	____	1.	Assists in patient preparation for MRI procedures.
____	____	2.	Assists with positioning patients for MRI procedures.
____	____	3.	Assist with reviewing MRI patient's medical history.
____	____	4.	Identifies axial, coronal and sagittal images.
____	____	5.	Review MRI QC tests with technologist.
____	____	6.	Observes and describes patient MRI safety measures and procedures.
____	____	7.	Identifies coils used for MRI procedures.
____	____	8.	Identifies anatomy on MRI images.
____	____	9.	Assists with operating MRI equipment during clinical assignment.
_____	_____	10.	Identifies the MRI contrast agent(s).
____	____	11.	Demonstrates educational responsibilities during this rotation.

COMMENTS:

_____
Technologist Signature

_____
Date

CLINICAL ROTATION DESCRIPTION

TITLE: ADVANCED TRAINING – MRI

LENGTH OF ROTATION: 3 days Senior Year

INSTRUCTOR: DESIGNATED PERSONNEL

OBJECTIVES:

1. Obtain MRI patient medical history.
2. Prepare patient for MRI procedure.
3. Under direction of a registered technologist position a patient for an MRI procedure.
4. Identify specialized MRI imaging parameters.
5. Identify the contrast agent used in MRI, its usage and contraindications.
6. Assists the technologist in the set-up of a procedure.
7. Identify proper coil for MRI procedures.
8. Transmit images to the window works station.
9. Practices MRI safety measures and procedures.

COURSE CONTENT:

Students may have the option of completing an advanced MRI clinical assignment. Students are required to read objectives prior to being assigned. At the completion of the assignment, a designated person will complete an evaluation on the student and submit to the Clinical Coordinator within seven days of the completion of the assignment.

MRI – ADVANCED – EVALUATION

Student _____

Evaluator _____

Date _____

YES	NO		
_____	_____	1.	Obtains MRI patient medical history.
_____	_____	2.	Prepares patient for MRI procedure.
_____	_____	3.	Under direction of a registered technologist positions a patient for an MRI procedure.
_____	_____	4.	Identifies specialized MRI imaging parameters.
_____	_____	5.	Identifies contrast agents used in MRI and contraindication to its usage.
_____	_____	6.	Assists the technologist in the set-up of a procedure.
_____	_____	7.	Identifies proper coil for MRI procedures.
_____	_____	8.	Demonstrates transmission of images to the windows work station.
_____	_____	9.	Practices MRI safety measures and procedures.
_____	_____	10.	Demonstrates educational responsibilities during this rotation.

COMMENTS:

_____

Technologist Signature

_____

Date

CLINICAL ROTATION DESCRIPTION

TITLE: NON-ROUTINE CLINICAL HOURS – Junior Year

LENGTH OF ROTATION: 6 -12 days (evenings/trauma)
4 days (2 weekends)

INSTRUCTOR: DESIGNATED PERSONNEL

OBJECTIVES:

1. The student will effectively participate in the team concept that occurs during non-routine hours.
2. The student will identify and participate in changes in the workflow pattern during non-routine hours.
3. The student develops interdepartmental cooperation necessary to care for patients.
4. The student understands the difference between emergency versus non-emergency patients.
5. The student becomes more acquainted with the care, handling, and radiography of traumatized or other non-routine patients.
6. The student responds appropriately to patient emergencies.

CONTENT OF ROTATION:

Each student will be assigned to an evening/trauma rotation and two weekend rotations in the junior year. At the completion of each rotation, designated personnel will complete the accompanying evaluation and submit this form to the Clinical Coordinator within seven days. Students may be assigned to the non-routine rotation after the mandatory rotation for the student to become more knowledgeable of non-routine procedures. The general intent of scheduling a student for a non-routine rotation is to provide learning experiences and opportunities not readily available during regularly scheduled clinical hours. The student is more likely to play an involved role in the radiography of traumatized patient during non-routine rotations. Such experiences serve to increase the student's sense of responsibility and self-confidence. The program believes that such non-routine clinical rotations greatly enhance and complement clinical instruction and serve as an important component of the curriculum.

It is advisable for the students to review the objectives of this rotation with the designated person prior to starting the rotation. If there are questions concerning **any** of the objectives, the student may contact the Clinical Coordinator.

Due to scheduling constraints, students may not be scheduled on evening rotation in the junior year. In that case, students will be scheduled the combined junior and senior number of evenings in the senior year.

CLINICAL ROTATION DESCRIPTION

TITLE: NON-ROUTINE CLINICAL HOURS – Senior Year

LENGTH OF ROTATION: 9-12 (evenings/trauma)
6 days (3 weekends)

INSTRUCTOR: DESIGNATED PERSONNEL

OBJECTIVES:

1. The student will effectively participate in the team concept that occurs during non-routine hours.
2. The student will identify and participate in changes in the workflow pattern during non-routine hours.
3. The student develops interdepartmental cooperation necessary to care for patients.
4. The student will demonstrate an orderly and logical sequence in the performance of the examination.
5. The student will understand the difference between emergency and non-emergency patients.
6. The student will become more acquainted with the care, handling, and radiography of traumatized or other non-routine patients.
7. The student will respond appropriately to patient emergencies.
8. The student will adopt "critical thinking skills" (ability to use alternative methods to complete examinations).

CONTENT OF ROTATION:

Each student will be assigned to an evening rotation and three weekend rotations in the senior year. At the completion of each rotation, designated personnel will complete the accompanying evaluation and submit this form to the Clinical Coordinator within seven days. Students may be assigned to the non-routine rotation after the mandatory rotations for the student to become more knowledgeable of the non-routine procedures. The general intent of scheduling a student for non-routine rotations is to provide learning experiences and opportunities not readily available during regularly scheduled clinical hours. The student is more likely to play an involved role with a traumatized patient during a non-routine rotation. Such experiences serve to increase the student's sense of responsibility and self-confidence. The student will also begin to use critical thinking skills in non-routine situations. The program believes that such non-routine clinical rotations greatly enhance and complement clinical instruction and serve as an important component of the curriculum.

Students are required to review the objectives of this rotation prior to starting the rotation.

CLINICAL ROTATION DESCRIPTION

TITLE: NUCLEAR MEDICINE

LENGTH OF ROTATION: 3 days – Senior Year

INSTRUCTOR: DESIGNATED PERSONNEL

OBJECTIVES:

FIRST ROTATION:

1. Obtain nuclear medicine patient medical history.
2. Assist with preparing patient for nuclear medicine procedures.
3. Enter patient data into computer.
4. Assist with positioning patients for nuclear medicine procedures.
5. Identify radiopharmaceuticals used for bone scans and other nuclear medicine procedures.
6. Observe radiation safety measures and regulations.
7. Describe the function of the Geiger-Mueller counter, dose calibrator, and gamma camera.
8. Identify anatomy on nuclear medicine images.
9. Participate in performing nuclear medicine QC tests.

CONTENT OF ROTATION:

Each student will have the opportunity to select a 3-day rotation in Nuclear Medicine. He or she will observe all operations of equipment and the various positions involved with obtaining the routine views. Radiation safety measures are taken into consideration with each case, and observation of basic computer analysis will also be included. Designated personnel will complete the accompanying evaluation form and submit this form to the Clinical Coordinator within seven days from completion of this rotation.

NUCLEAR MEDICINE EVALUATION

Student _____

Evaluator _____

Date _____

YES	NO	
_____	_____	1. Obtains nuclear medicine patient medical history.
_____	_____	2. Assists with preparing patients for nuclear medicine procedures.
_____	_____	3. Enters patient data into computer.
_____	_____	4. Assists with positioning patients for nuclear medicine procedures.
_____	_____	5. Identifies radiopharmaceuticlas used for bone scan and other nuclear medicine procedures.
_____	_____	6. Observes radiation safety measures and regulations.
_____	_____	7. Describes function of the Geiger-Mueller counter, dose calibrator, and gamma camera.
_____	_____	8. Identifies anatomy on nuclear medicine images.
_____	_____	9. Participates in performing nuclear medicine QC tests.
_____	_____	10. Demonstrates educational responsibility during this rotation.

_____
Technologist Signature

_____
Date

CLINICAL ROTATION DESCRIPTION

TITLE: NUCLEAR MEDICINE – ADVANCED

LENGTH OF ROTATION: 3 days – Senior Year

INSTRUCTOR: DESIGNATED PERSONNEL

OBJECTIVES:

FIRST ROTATION:

1. Describe and assist in preparing patients for nuclear medicine procedures.
2. Demonstrate computer data entry, acquisition, and processing of nuclear medicine scans.
3. Assist in performing QC procedures in nuclear medicine.
4. Assist in preparing nuclear medicine equipment for patient procedures.

CONTENT OF ROTATION:

Students who wish to do advanced nuclear medicine training must complete the above objectives. An evaluation will be completed by designee and submitted to the Clinical Coordinator at the conclusion of the assignment.

NUCLEAR MEDICINE ADVANCED EVALUATION

Student _____

Evaluator _____

Date _____

YES	NO	
_____	_____	1. Describes and assists in preparing patients for nuclear medicine procedures.
_____	_____	2. Enters patient data and acquisition parameters into computer.
_____	_____	3. Assists in performing QC procedures in nuclear medicine.
_____	_____	4. Assists in preparing nuclear medicine equipment for patient procedures.
_____	_____	5. Completes advanced assignment within given time period.
_____	_____	6. Demonstrates educational responsibility during this rotation.

_____
Technologist Signature

_____
Date

CLINICAL ROTATION DESCRIPTION

TITLE: OFFICE

LENGTH OF ROTATION: 2 days Jr. year

INSTRUCTOR: DESIGNATED PERSONNEL

OBJECTIVES:

1. Demonstrate correct interpersonal communication with physicians and others seeking information.
2. Demonstrate knowledge of transferring and holding telephone calls.
3. Demonstrate proper telephone etiquette.
4. Demonstrate proper signing out of radiographs.
5. Demonstrate proper requisition processing.
6. Demonstrate proper filing procedures.
7. Demonstrate proper computer use or recording of patient information.
8. Demonstrate proper direction of prep kits.
9. Demonstrate routine for paging personnel on beepers and overhead.
10. Demonstrate appropriate customer service skills.
11. Demonstrate educational responsibility during this clinical assignment.
12. Demonstrate ascension number and medical record number correction on PACS
13. Differentiate between inpatient, outpatient, emergency room, and stat patient on PACS.
14. Demonstrate the ability to determine if all studies were sent to be read by the radiologist on PACS.

CONTENT OF ROTATION:

Each student will be assigned to the office for 2 days. At the completion of the rotation, designated personnel will complete the accompanying evaluation and submit to the Clinical Coordinator within seven days. Students may be assigned to the office after the one-week mandatory rotation for the student to become more knowledgeable of the office procedures.

Student _____

Evaluator _____

Date _____

YES	NO	
_____	_____	1. Demonstrates knowledge of how to transfer calls correctly.
_____	_____	2. Demonstrates knowledge of how to take messages correctly.
_____	_____	3. Holds calls correctly.
_____	_____	4. Properly prepares requisition.
_____	_____	5. Properly prepares patient information including computer, log entries, labels, special forms or highlighting for call reports.
_____	_____	6. Demonstrates knowledge of how and when to notify specific departments of patient arrival.
_____	_____	7 Demonstrates proper knowledge of films release policy (includes release forms, sign-out log, recording information on the patient film jacket).
_____	_____	8. Demonstrates knowledge of obtaining patient history from institution computer or institution records.
_____	_____	9. Demonstrates knowledge of proper procedure for canceling orders or examinations (notation on film jacket, call physician, and other details).
_____	_____	10. Demonstrates knowledge and understanding of the patient folder and filing system.
_____	_____	11. Demonstrates how to pull and replace films or records from the recent files and other storage areas.
_____	_____	12. Demonstrates knowledge of proper policy for patient scheduling (including exam preparations, how appointment times are assigned).
_____	_____	13. Demonstrates knowledge of what patient information is required and where data is recorded.
_____	_____	14. Demonstrates customer service skills.
_____	_____	15. Demonstrates educational responsibility during this clinical assignment.

_____
Technologist Signature

_____
Date

Clinical Rotation Description

Title: **PET/CT EVALUATION**

Length of Rotation: TBA

Instructor: Designated Personnel

Objectives:

1. Participates in obtaining PET/CT patient medical history.

2. Assists with preparing patients for PET/CT procedures.

3. Participates in entering patient data into computer.

4. Assists with positioning patients for PET/CT procedures

5. Observes radiation safety, protection measures, and radiation regulations.

6. Identifies anatomy on PET/CT images.

7. Participates in performing PET/CT QC tests.

8. Demonstrates educational responsibility during this rotation.

Content of Rotation:
The PET/CT rotation is an elective rotation. Student will learn about the patient preparation, room set up and radiopharmaceuticals used for PET/CT procedures. Students are to present the objectives and checklist to the mentor at the beginning of the rotation. At the completion of the rotation, designated personnel will complete the checklist and submit the completed form to the Clinical Coordinator within 7 days of the student completion of the rotation.

PET/CT EVALUATION

Student _____

Evaluator _____

Date _____

YES	NO	
___	___	1. Participates in obtaining PET/CT patient medical history.
___	___	2. Assists with preparing patients for PET/CT procedures.
___	___	3. Participates in entering patient data into computer.
___	___	4. Assists with positioning patients for PET/CT procedures
___	___	5. Observes radiation safety, protection measures, and radiation regulations.
___	___	6. Identifies anatomy on PET/CT images.
___	___	7. Participates in performing PET/CT QC tests.
___	___	8. Demonstrates educational responsibility during this rotation.

_____
Technologist Signature

_____
Date

CLINICAL ROTATION DESCRIPTION

TITLE: PORTABLE/MOBILE

LENGTH OF ROTATION: 6 days – Junior Year

INSTRUCTOR: DESIGNATED PERSONNEL

OBJECTIVES:

1. Identify and assist in the use of mobile radiographic equipment for portable procedures.
2. Demonstrate proper communication considerations with patients and physicians.
3. Practice radiation safety and protection for portable procedures.
4. Assist in positioning patients for mobile procedures.
5. Observe and assist in the use of proper considerations for different patient conditions.
6. Evaluate radiographs in terms of positioning, technique, and quality.

CONTENT OF ROTATION:

The student will receive orientation, classroom, and lab instruction covering portable/mobile procedures. Each student will be assigned to the portable rotation for 6 days spring quarter in the junior year.

It is advisable for the student to review the objectives of this rotation prior to starting the rotation.

CLINICAL ROTATION DESCRIPTION

TITLE: PORTABLE/MOBILE

LENGTH OF ROTATION: 12 days – Senior Year

INSTRUCTOR: DESIGNATED PERSONNEL

OBJECTIVES:

1. Correctly position a patient for a mobile procedure.
2. Understand and correctly manipulate the mobile radiographic equipment for portable procedures.
2. Demonstrate proper communication considerations with patients and physicians.
3. Practice radiation safety and protection when doing portable procedures.
4. Evaluate radiographs in terms of positioning, technique, and quality.
5. Adapt to changes according to the patient condition and cooperation.

CONTENT OF ROTATION:

Each student will be assigned to the portable rotation for a minimum of 12 days in the senior year. Students may be assigned to additional portable rotations to meet all objectives.

It is advisable for the student to review the objectives of this rotation prior to starting the rotation.

CLINICAL ROTATION DESCRIPTION

TITLE: RADIOLOGISTS FILM REVIEW

LENGTH OF ROTATION: 2 days/Junior Year

INSTRUCTOR: RADIOLOGIST

OBJECTIVES:

1. Correlate radiographic interpretation and diagnosis with radiologic technology in terms of the following:
   a. correct anatomy visualized
   b. radiographic technique
   c. proper patient positioning
   d. interesting or unusual cases

CONTENT OF ROTATION:

Each student will be assigned to a 2-day rotation in the junior year. Students will observe and listen to a radiologist's image interpretation. This rotation does not count as part of the clinical grade but is intended to complement the student's didactic and clinical instruction. Each student is assigned to a radiologist.

It is advisable for the students to review the objectives of this rotation prior to starting the rotation.

CLINICAL ROTATION DESCRIPTION

TITLE: RADIOLOGISTS FILM REVIEW

LENGTH OF ROTATION: 2 days/Senior Year

INSTRUCTOR: RADIOLOGIST

OBJECTIVES:

1. Correlate radiographic interpretation and diagnosis with radiologic technology in terms of the following:
   a. correct anatomy visualized
   b. radiographic technique
   c. proper patient positioning
   d. interesting or unusual cases

CONTENT OF ROTATION:

Each student will be assigned to a two-day rotation in the senior year. Students will observe and listen to a radiologist's image interpretation. This rotation does not count as part of the clinical grade but is intended to complement the student's didactic and clinical instruction. Each student is assigned to a radiologist.

It is advisable for the students to review the objectives of this rotation prior to starting the rotation.

CLINICAL ROTATION DESCRIPTION

TITLE: SURGERY

LENGTH OF ROTATION: 6 days – Junior Year

INSTRUCTOR: DESIGNATED PERSONNEL

OBJECTIVES:

1. Identify and assist in surgical procedures requiring radiography.
2. Identify different radiographic equipment used in the surgical suite.
3. Identify and assist in the use of the C-arms and monitors.
4. Demonstrate proper use of sterile fields and techniques.
5. Identify and assist in the use of mobile radiographic equipment.
6. Demonstrate proper communication considerations with patients and physicians.
7. Review radiation protection policies for surgery and mobile procedures.
8. Observe and assist in the use of proper considerations for different patient conditions.
9. Evaluate radiographs in terms of positioning, technique, and quality.

CONTENT OF ROTATION:

Students will receive an orientation and classroom instruction covering surgical procedures and equipment. Each student will be assigned to the surgical rotation during the junior year.

It is advisable for the student to review the objectives of this rotation prior to starting the rotation.

CLINICAL ROTATION DESCRIPTION

TITLE: SURGERY

LENGTH OF ROTATION: 12-18 days – Senior Year

INSTRUCTOR: DESIGNATED PERSONNEL

OBJECTIVES:

1. Assist and gain competency in performing surgical procedures requiring radiography.
2. Assist and gain competency in the operation of C-arms and monitors.
3. Demonstrate proper use of sterile technique in surgery suite.
4. Demonstrate radiation safety and protection in surgery.
5. Demonstrate how to operate mobile radiographic equipment for surgical procedures.
6. Adapt to changes according to the patient's condition and cooperation.
7. Evaluate radiographs in terms of positioning, technique, and quality.
8. Complete all competencies assigned for surgical procedures.

REQUIRED SURGICAL COMPETENCIES:

1. C-arm Procedure 2 projections
2. C-arm Procedure with sterile field

CONTENT OF ROTATION:

Each student will be assigned to the surgical rotation during the senior year. Students will be assigned to surgery rotation in the summer, fall and winter quarters. Due to the availability of surgical procedures, not all students will have a surgery rotation in the summer, fall and winter quarters. Additional time may be scheduled spring quarter to make up for the lack of surgical procedures at some clinical sites or if students need additional time to meet clinical competency.

Additional clinical assignments will be given when necessary to meet the objectives and required competencies. It is advisable for the student to review the objectives of this rotation prior to starting the rotation.

CLINICAL ROTATION DESCRIPTION

TITLE: TRANSPORTATION

LENGTH OF ROTATION: 2 days – Junior Year

INSTRUCTOR: DESIGNATED PERSONNEL

OBJECTIVES:

1. Identify patients to be transported.
2. Identify appropriate modes of transportation.
3. Determine additional equipment needed.
4. Locate patient rooms and bed numbers.
5. Demonstrate proper use of patient sign-out sheets.
6. Demonstrate proper transfer of patients from bed to proper modes of transportation and back.
7. Demonstrate safe and timely manners of transportation.
8. Demonstrate proper storage of carts and wheelchairs.
9. Demonstrate proper use of oxygen tanks and tubing.
10. Demonstrate proper use of safety features on carts and wheelchairs.

CONTENT OF ROTATION:

Student will be assigned to a transportation rotation for 2 days. At the completion of the rotation, one of the transportation team members will complete the accompanying evaluation form and submit the form to the Clinical Coordinator within seven days.

TRANSPORT EVALUATION

Student _____

Evaluator _____

Date _____

YES	NO	
_____	_____	1. Identifies patients using two methods of identification.
_____	_____	2. Introduces self to patients properly.
_____	_____	3. Locates patient room and bed number.
_____	_____	4. Properly uses patient sign-out sheet located at nurse's station.
_____	_____	5. Properly signs in/out patient's chart for use in the radiology department.
_____	_____	6. Properly transfers patients to/from bed and cart.
_____	_____	7. Properly transfers patients to/from bed and wheelchair.
_____	_____	8. Transports patient to/from radiology department in a safe and timely manner.
_____	_____	9. Demonstrates proper usage of IV pole and/or IVAC.
_____	_____	10. Properly returns cart and wheelchair to storage area.
_____	_____	11. Demonstrates proper use of safety features on carts and wheelchairs.
_____	_____	12. Determines what additional equipment is needed for transport.
_____	_____	13. Demonstrates educational responsibility during this clinical rotation.
_____	_____	14. Properly reads valve setting for oxygen.
_____	_____	15. Properly sets oxygen rate on portable tank.
_____	_____	16. Properly transfers oxygen from wall to portable tank and back to wall.

_____

Technologist Signature

_____

Date

CLINICAL ROTATION DESCRIPTION

TITLE: ULTRASOUND

LENGTH OF ROTATION: 3 days - Senior

INSTRUCTOR: DESIGNATED PERSONNEL

OBJECTIVES:

1. The student will observe various ultrasound procedures including:

   a. echocardiogram
   b. abdominal
   c. obstetrical
   d. vascular
   e. female pelvis
   f. small parts; thyroid, testes
   g. invasive/special procedures

2. The student will identify the following on ultrasound images:

   a. gallbladder
   b. abdominal aneurysms
   c. fetus
   d. carotid vessels
   e. abdominal organs
   f. female reproductive

3. The student will be familiar with the following terms:

   a. parasternal
   b. subcostal
   c. apical views
   d. solid characteristics
   e. cystic characteristics
   f. sagittal images
   g. transverse images
   h. coronal

4. With supervision, the student may attempt to scan a patient during an ultrasound examination to enhance their knowledge of anatomical parts of the body.

5. The student will describe preparation for an ultrasound examination.

6. With supervision, the student may evaluate patient history and check for correlation of exam ordered.

CONTENT OF ROTATION:

Students will have the opportunity to select a 3-day rotation in ultrasound. During their rotation the student will complete the objectives and have an opportunity at "hands-on" experience. Designated personnel will complete the accompanying evaluation form and submit it to the Clinical Coordinator within seven days. Students may not have the opportunity to see all listed ultrasound procedures listed due to schedule limitations.

ULTRASOUND EVALUATION

Student _____

Evaluator _____

Date _____

YES	NO		
____	____	1.	Describes patient preparation for each examination.
____	____	2.	Observes and assists with patient scanning.
____	____	3.	Demonstrates knowledge of the required terms in objective #3.
____	____	4.	Evaluates patient history and check for correlation of exam ordered.
____	____	5.	Assists in patient preparation for each examination.
____	____	6.	Assists with clerical duties that are exclusive in the Ultrasound Department.
____	____	7.	Demonstrates educational responsibility during this rotation.

COMMENTS:

_____
Technologist Signature

_____
Date

CLINICAL ROTATION DESCRIPTION

TITLE: ULTRASOUND - ADVANCED

LENGTH OF ROTATION: 3 days

INSTRUCTOR: DESIGNATED PERSONNEL

OBJECTIVES:

1. Review and demonstrate objectives from previous rotation.

2. The student will identify the following structures on ultrasound images:

   a. Gallstones
   b. Cardiac valves
   c. Fetal anatomy
   d. Plaque in carotid vessels
   e. Liver vasculature
   f. DVT
   g. uterus, ovaries
   h. testes, thyroid nodules, soft tissue abnomalities

3. The student will be familiar with the following terms:

   a. Hypoechoic
   b. Hyperechoic
   c. Anechoic
   d. Isoechoic

4. Demonstrate scanning patient with direct and indirect supervision.

5. Prepare patient for examination.

6. Demonstrate evaluation of patient history and check for correlation of exam ordered.

7. Have a more in-depth study in the correct usage of transducers.

CONTENT OF ROTATION:

Each student will have the opportunity to select a 3-day advanced rotation in ultrasound. During their rotation the student will complete the objectives and have an opportunity at "hands-on" experience. Designated personnel will complete the accompanying evaluation form and submit it to the Clinical Coordinator within seven days.

ULTRASOUND ADVANCED EVALUATION

Student _____

Evaluator _____

Date _____

YES NO

____ ____ 1. Describes and assists in patient preparation for each examination.

____ ____ 2. Identifies required images as in objective #2.

____ ____ 3. Familiar with given terms in objective #3.

____ ____ 4. Demonstrates scanning patient.

____ ____ 5. Understands correct usage of transducers.

____ ____ 6. Completes advanced assignment within given time period.

____ ____ 7. Demonstrates educational responsibility during this rotation.

COMMENTS:

_____
Technologist Signature

_____
Date

STUDENT EVALUATIONS

The following are examples of evaluation forms that will be completed on students throughout the program. Student evaluations are completed by the Clinical Coordinator, clinical instructors, and/or other designated personnel. Students will complete a Clinical Rotation Evaluation form of all assigned areas at the end of the semester in which the rotation is done. Please see separate form.

Each student will be required to document their clinical experiences electronically on the RT experience log. Information recorded on RT Experience log is used to ensure that students are receiving a variety of educational experiences. Information will be collected by the Clinical Coordinator on a regular basis. It is the responsibility of the student to have their Ipods available for electronic collection.

MTC SCHOOL OF RADIOGRAPHY

EQUIPMENT CHECKLIST

STUDENT _____

DATE _____

EVALUATOR _____

EQUIPMENT OPERATION (IDENTIFY AND OPERATE):

TABLE CONTROLS

1.	Inclinometer	Y	N
2.	Table centering control	Y	N
3.	Longitudinal and transverse table movement	Y	N
4.	Apron skirting	Y	N
5.	Fluoro foot switch	Y	N
6.	Table tilt	Y	N

FLUOROSCOPIC CONTROLS

7.	Carriage release lock	Y	N
8.	Maneuvering handle	Y	N
9.	Compression lock	Y	N
10.	Myelographic stop lock	Y	N
11.	Front cassette loading device	Y	N
12.	Cone	Y	N
13.	Spot size collimator	Y	N
14.	Fluoro exposure prep	Y	N
15.	Shutter control levers	Y	N
16.	Cassette eject lever	Y	N
17.	Longitudinal and transverse table movement	Y	N
18.	Table tilt	Y	N

TV MONITOR

19.	Brightness knob	Y	N
20.	Contrast knob	Y	N
21.	Power switch	Y	N

OVERHEAD TUBE AND COLLIMATOR

22.	Tube centering lock	Y	N
23.	Tube angulation lock	Y	N
24.	Tube longitudinal and transverse lock	Y	N
25.	Field light switch	Y	N
26.	Angulation scale	Y	N
27.	Rotation pivot drag brake	Y	N
28.	SID indicator	Y	N
29.	Shutter control knob	Y	N
30.	Patient field size indicator	Y	N
31.	Collimator swivel	Y	N
32.	Filter tray	Y	N

CONTROL PANEL

33.	Fluoro	Y	N
34.	Table bucky	Y	N
35.	Chest bucky	Y	N
36.	AEC selector	Y	N
37.	Proper mA selection	Y	N
38.	Proper kVp selection	Y	N
39.	Proper density selection	Y	N
40.	Proper focal spot size selection	Y	N
41.	Proper back up times	Y	N

45.	Disengage AEC	Y	N
46.	Proper fluoro kVp	Y	N
47.	Proper fluoro mA	Y	N
48.	Proper spot film kVp	Y	N
49.	Proper spot film mA	Y	N
50.	Set fluoro timer	Y	N
51.	Exposure inhibit light	Y	N
52.	mA meter	Y	N
53.	Correctly start rotors and make exposure	Y	N
54.	Identify equipment noises	Y	N

DIGITAL FLUORO EQUIPMENT CHECKLIST

STUDENT _____

EVALUATOR _____

DATE _____

Y	N	1.	Demonstrate how to enter patient data.
Y	N	2.	Demonstrate how to select patient for acquiring images.
Y	N	3.	Demonstrate how to verify adequate image storage space.
Y	N	4.	Demonstrate how to review patient images.
Y	N	5.	Demonstrate how to save patient images.
Y	N	6.	Demonstrate how to print images.
Y	N	7.	Demonstrate how to delete previous cases.
Y	N	8.	Demonstrate how to recall patient study for additional fluoroscopy.
Y	N	9.	Demonstrate how to change the number of frames per second.
Y	N	10.	Demonstrate how to set control panel for digital fluoroscopy.
Y	N	11.	Demonstrate how to set the image intensifier controls for fluoro.
Y	N	12.	Demonstrate how to set controls for rapid film sequences.
Y	N	13.	Complete set up skills in 10 minutes.
Y	N	14.	Perform skills with confidence and ease.

DIGITAL RADIOGRAPHY EQUIPMENT CHECKLIST

STUDENT _____

EVALUATOR _____

DATE _____

Y	N	1.	Demonstrate how to enter patient data with bar code.
Y	N	2.	Demonstrate how to enter patient data without bar code (using new patient screens).
Y	N	3.	Demonstrate how to unassign images when given incorrect patient name.
Y	N	4.	Demonstrate how to assign an unassigned image, and correct anatomy label.
Y	N	5.	Demonstrate how to assign correct patient name.
Y	N	6.	Demonstrate how to properly label image with correct body part.
Y	N	7.	Demonstrate how to reprocess the images.
Y	N	8.	Demonstrate how to recall patient data.
Y	N	9.	Demonstrate how to select destination information to print or re-send images to the pacs system.
Y	N	10.	Demonstrate how to correct faulty information for the images.
Y	N	11.	Demonstrate how to manipulate the image side for side or top for bottom.
Y	N	12.	Demonstrate how to process the image. (Remove black surround, annotate with right or left.)
Y	N	13.	Demonstrate how to accept and reject images.
Y	N	14.	Demonstrate how to review previously accepted images.
Y	N	15.	Perform skills within 15 minutes.
Y	N	16.	Complete skills with confidence and ease.

MARION TECHNICAL COLLEGE
RADIOGRAPHY PERFORMANCE CHECKLIST

Student's Name _____

Evaluator _____

Date _____

Instructions: Indicate the student's performance by checking the appropriate box of each activity according to your observation.

Under laboratory conditions using a live model complete **Objective #1**.

The student will evaluate the patient requisition--cognitive skills.

Use the following scale to rate the student's quality of performance:

4 = OUTSTANDING Skill performance is consistent and exceeds satisfactory performance.
3 = SATISFACTORY Skill performance is consistent and meets performance standards.
2 = MARGINAL Skill performance is not consistent and there is evidence of deficiency.
1 = UNSATISFACTORY Skill performance is unacceptable.

1.1 Assess the requisition for correct and necessary information. _____

1.2 Recognize conflicting clinical history with the examination ordered. _____

1.3 Identify type of patient and procedures to be performed on the patient. _____

1.4 Verify patient's pregnancy status when appropriate. _____

1.5 Correctly demonstrate how to enter patient and procedure information into the computer. _____

MARION TECHNICAL COLLEGE
RADIOGRAPHY PERFORMANCE CHECKLIST

Student's Name _____

Evaluator _____

Date _____

Instructions: Indicate the student's performance by checking the appropriate box of each activity according to your observation.

Under laboratory conditions using a live model complete **Objective #2.**

The student will evaluate the patient requisition--cognitive skills.

Use the following scale to rate the student's quality of performance:

4 = OUTSTANDING Skill performance is consistent and exceeds satisfactory performance.
3 = SATISFACTORY Skill performance is consistent and meets performance standards.
2 = MARGINAL Skill performance is not consistent and there is evidence of deficiency.
1 = UNSATISFACTORY Skill performance is unacceptable.

2.1 Select the correct patient for the examination by using identifiers such as name and date of birth. _____

2.2 Converse with the patient in an intelligent, professional manner. _____

2.3 Obtain medical history from the patient and document on the requisition. _____

2.4 Recognize conflicting verbal history with exam ordered. _____

2.5 Explain the procedure to the patient and family in a language they understand. _____

2.6 Provide patient-centered, clinically effective service to **all** patients. _____

2.7 Recognize/Evaluate basic patient condition and carry out appropriate actions (communicate with RT, RN, doctor, etc.). _____

2.8 Provide continuity of care and follow-up care regarding imaging procedures using proper communication procedures with RT, ER staff, doctors' offices, etc. _____

MARION TECHNICAL COLLEGE
RADIOGRAPHY PERFORMANCE CHECKLIST

Student's Name _____

Evaluator _____

Date _____

Instructions: Indicate the student's performance by checking the appropriate box of each activity according to your observation.
Under laboratory conditions using a live model complete **Objective #3.**

The student will evaluate the patient requisition--cognitive skills.

Use the following scale to rate the student's quality of performance:
4 = OUTSTANDING Skill performance is consistent and exceeds satisfactory performance.
3 = SATISFACTORY Skill performance is consistent and meets performance standards.
2 = MARGINAL Skill performance is not consistent and there is evidence of deficiency.
1 = UNSATISFACTORY Skill performance is unacceptable.

3.1 Determine whether the patient has been appropriately prepared for the procedure, such as dressed in a gown. _____

3.2 Assist the patient to/from the radiographic room in a safe manner. _____

3.3 Assist patient onto radiographic table. _____

3.4 Employ body mechanics when moving or transporting the patient. _____

3.5 Assess factors that may contraindicate the procedure such as medications, insufficient patient preparation, or artifacts. _____

3.6 Understand contrast media dosage, use, administration, and any potential adverse reactions. Evaluate lab values prior to administering contrast media. _____

3.7 Apply standard and transmission-based precautions when appropriate. _____

3.8 Monitor the patient's condition throughout the procedure. _____

3.9 Demonstrate empathy toward the patient. _____

3.10 Insure patient privacy and modesty throughout the procedure. _____

3.11 Recognize and respond appropriately to patient emergencies. _____

3.12 Apply the appropriate medical asepsis and sterile technique. _____

MARION TECHNICAL COLLEGE
RADIOGRAPHY PERFORMANCE CHECKLIST

Student's Name _____

Evaluator _____

Date _____

Instructions: Indicate the student's performance by checking the appropriate box of each activity according to your observation.

Under laboratory conditions using a live model complete **Objective #4.**

The student will evaluate the patient requisition--cognitive skills.

Use the following scale to rate the student's quality of performance:

4 = OUTSTANDING Skill performance is consistent and exceeds satisfactory performance.
3 = SATISFACTORY Skill performance is consistent and meets performance standards.
2 = MARGINAL Skill performance is not consistent and there is evidence of deficiency.
1 = UNSATISFACTORY Skill performance is unacceptable.

4.1 Provide a clean table, chest stand or other area for the patient. _____

4.2 Maintain an orderly work area. _____

4.3 Maintain proper inventory of necessary supplies. _____

4.4 Dispense articles to the patient as needed, such as dentures, pillows, sheets, glass and straw, etc. _____

4.5 Ready the radiographic and fluoroscopic unit for exposure. _____

4.6 Select appropriate cassette size and image receptor for the given examination. _____

4.7 Locate and prepare syringes, needles, and other medical supplies. _____

4.8 Prepare any sterile trays and instruments. _____

4.9 Exercise priorities required in daily clinical practice. _____

STUDENT'S CLINICAL ROTATION EVALUATION

Student: _____

Date: _____

Rotation: _____

Clinical Instructor: _____

1. Was there enough time allotted for this rotation?

2. Did the clinical instructor of the area review the objectives with you at the beginning of the rotation?

3. Did you have any difficulty completing the objectives for this rotation?

4. Did the clinical instructor provide adequate time for clinical instruction?

5. Does the clinical instructor provide opportunities for the students to meet the objectives of their area?

6. What did you like best about this rotation?

7. What did you like least about this rotation?

8. Any other comments you would like to make?

Marion Technical College
School of Radiography

Enema Tip Insertion Competency Checklist

This form is to be used to evaluate the progress of the student in performing an enema tip insertion.

Name_____ Name/Initial of Instructor_____

_____

Use the following scale to rate the student's quality of performance:

5 = Outstanding: far exceeds standards
4 = Excellent: above standards
3 = Satisfactory: meets standards
2 = Marginal: needs improvement
1 = Unsatisfactory: unacceptable

The student will be able to correctly insert an enema tip. The student must be supervised in the insertion of an enema tip 3 times before performing independently. Student must receive a 3 or better to become competent.

	Date/Initial/Score	Date/Initial/Score	Date/Initial Score
Wash hands			
Gather supplies			
Prepare Solution: Close clamp; Fill BE bag with 1500-2000 cc warm water Run barium through tubing to remove air; clamp tubing			
Identify patient and bring into room			
Explain the procedure to the patient			
Position IV pole to enema bag will be 18-24" from table to midpoint of bag			
Place the patient in Sim's position			
Apply gloves			
Expose anal area			
Add lubricant to the enema tip – approx. 2-4"			
Ask patient to take a deep breath through mouth			
Separate buttocks to expose anus and gently insert the enema tip into the rectum			
Ask patient to release breath as you insert tip			
Turn patient onto his/her back			
Reinforce instructions to the patient			
After images are completed, remove tip and dispose of equipment			
Assist patient on bedpan or bathroom when images are completed			
Remove gloves			
Wash hands			
Report unusual results including amount, color, odor, consistency			

NURSERY MOBILE CHEST CHECKLIST

Student_____

Evaluator_____

Date_____

The student will:

Yes No 1. correctly utilize mobile unit.

Yes No 2. select correct image receptor.

Yes No 3. select appropriate exposure factors/SID for lowest radiation dose.

Yes No 4. correctly place image receptor under newborn (in tunnel if applicable) to include required anatomy (chest, abdomen).

Yes No 5. properly lift infant, if applicable.

6. use proper radiation protection for:

Yes No - infant (gonadal shielding)

Yes No - nursery personnel (apron)

Yes No - imaging personnel (apron, gloves)

Yes No 7. correctly position infant for the required projections.

Yes No 8. make the exposure during inspiration/expiration.

Yes No 9. interact professionally with Nursery personnel.