Practicum Radiologic Technology V-RADR 2367-7A1&7B1

LAMAR INSTITUTE OF TECHNOLOGY

INSTRUCTOR CONTACT INFORMATION

Instructor:	Sheryl A. Nance Multiple instructors assigned to clinical facilities
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Office Location:	Multi-Purpose Center, Office 229
Office Hours:	Tuesday/Thursday 10:15 am- Noon

CREDIT

3 Semester Credit Hours (0 hours lecture, 24 contact hours)

MODE OF INSTRUCTION

Face to Face

PREREQUISITE/CO-REQUISITE:

RADR 2366

COURSE DESCRIPTION

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

COURSE OBJECTIVES/GOALS

Upon completion of the course, the student will be able to:

This course is a continuation of previous clinical experiences. **The student is expected to demonstrate skill and proficiency in the previously learned objectives and continue to practice competencies on typical and atypical patients.** The student will demonstrate the cognitive and psychomotor skill necessary to perform the terminal competencies.

Scheduling will include continuation of specialty rotation observations and off-hour rotations. This course requires 24 hours/week of clinical participation. Self-reliance and independent judgement are stressed. During this semester students will be required to complete rotations through other affiliates as well as off hour rotations. Off hour rotations should not exceed 48 hours for the entire semester.

The students are encouraged to work independently with indirect supervision. Emphasis will be placed on self-reliance, professional judgement, quantity and quality of examinations, initiative and job-related qualities.

1. For each exam the student should use their creative thinking, problem solving, and decision-making skills to properly serve the patient by:
   a. visualizing the exam
   b. selecting all necessary equipment
   c. acquiring a complete history
   d. adjusting technical factors for the specific patient
   e. organizing the exam to minimize steps and patient movement f. using proper radiation protection practices
2. The student will demonstrate positioning skills, knowledge of protocols, exposure factors, body systems, communication skills and radiation protection while performing procedures on atypical patients.
3. The student will competently employ problem-solving skills by selecting and adjusting technical factors while understanding their effects on data acquisition and the exposure index.
4. The student will demonstrate an understanding of exposure index by calculating correct technique when exposure index is out of range.
5. The student will analyze digital images for diagnostic quality.
6. The student will demonstrate proper use of annotations, image flipping and rotation.
7. The student will demonstrate the ability to perform radiographic examinations on trauma, difficult, or uncooperative patients. They will demonstrate creative thinking ability, proper decision making and problem-solving skills by:
   - appropriately evaluating the patient
   - properly using immobilization devices and positioning aids when needed.
   - accurately manipulating the technical factors to eliminate involuntary motion or to compensate for pathological conditions or injury.
   - correctly adjusting the radiographic equipment when employing alternate positioning methods due to restrictions such as movement of patient, anatomical part, or space limitations.
   - properly using safety techniques and radiation principles despite the difficulties encountered with such patients.
8. The student will perform portable and surgical radiography. They will demonstrate creative thinking ability, proper decision making and problem-solving skills by
   a. appropriate patient evaluation
   b. demonstration of knowledge and expertise in adapting positioning skills for bedside and surgical radiography.
   c. adjustment of technical factors within the limitations of the mobile equipment for body habitus, pathology, presence of a wet or dry cast, etc.
   d. demonstration of knowledge in radiation protection by using proper

collimation, distance, and protective shielding for both patient and technologist

e. demonstrating proper aseptic technique when preparing mobile equipment for a sterile surgical procedure or performing an examination on an isolation patient.

9. The student will rotate through special assignments. While assigned to the specialty areas the students will be able to:
    a. Show punctuality and availability for patient examinations
    b. Present a professional appearance
    c. Demonstrate an interest in the area of rotation
    d. Participate as much as is allowed in the imaging process
    e. Effectively communicate /interact with others
    f. Demonstrate a basic understanding of the examinations performed in the specialty area
10. While on off-hour rotations the students will demonstrate with **indirect supervision** the following skills:
    1. successfully performing radiographs on difficult patients, i.e., E.R., trauma, uncooperative patients, etc.
    2. make independent judgements in the areas of technique, positioning, restraining devices, and film quality using reasoning skills.
    3. build self-esteem and self-management skills.
11. The student will be able to visualize the exam, organize information, and pre-set the examination room by selecting proper equipment and materials that may be needed prior to admitting the patient to the examination room.
12. The student will work as a team with first year radiology students on Fridays. They should demonstrate leadership skills and assist in orientating the new students into the field of radiology.
13. The student will serve a diverse population.
14. The student will be able to identify anatomy, as well as common pathologic or abnormal conditions on medical images. This will be demonstrated as part of the task analysis and film critique lessons.
15. The student should be able to troubleshoot errors, correct problems, and maintain equipment.
16. Five (5) written examinations will be administered by the clinical instructor. These will include two (2) film critique assignments, one (1) syllabus quiz on Blackboard, and two terminal evaluations (1) in positioning and (1) in technique.
17. The student will demonstrate the cognitive and psychomotor skills necessary to complete the following terminal competencies:

TERMINAL COMPETENCIES:

Student successfully completing the Radiologic Technology Program at Lamar Institute of Technology will have mastered the following terminal competencies before graduation.

1. Communicate effectively with patients and healthcare professionals verbally, nonverbally and in written medical communication.
2. Demonstrate the ability to perform life support procedures such as CPR.
3. Demonstrate knowledge of infection control and practice standard precautions.
4. Apply knowledge of basic nursing procedures and body mechanics when interacting with
   diverse populations.
5. Demonstrate an understanding of human anatomy and physiology and the way in which each system is affected by pathological processes.
6. Demonstrate knowledge of technical factors and equipment manipulation necessary to produce diagnostic medical images.
7. Demonstrate empathy for the patient.
8. Exhibit proper operation of medical imaging equipment and utilization of accessory devices.
9. Position patients using acceptable positioning principles and techniques.
10. Recognize emergency patient conditions and adapt positioning and technical factors to accommodate those conditions.
11. Understand the principles of radiation biology and the effects produced by ionizing radiation.
12. Practice radiation protection for oneself and the patient.
13. Possess basic understanding of contrast media administration and adverse reactions occurring with administration.
14. Recognize safe limits of equipment operation and troubleshoot equipment malfunctions.
15. Demonstrate basic knowledge of quality control techniques.
16. Demonstrate an understanding of exposure index by calculating correct technique when exposure index is out of range.
17. Demonstrate competence in analyzing digital images for diagnostic quality.
18. Utilize techniques that correspond to current ARRT/ASRT guidelines for optimizing quality while reducing patient dose. (i.e., higher kvp-lower mas using 15% rule)
19. Exhibit the ability to retrieve images from PACS and print them to hard copy or other media (CD, DVD etc.)
20. Competently performs operations of a digital image plate reader and/or direct radiography equipment.
21. Show proper use of annotations, image rotation and flipping.
22. Demonstrate independent judgement in the performance of work assignments.
23. Support the professional code of ethics and comply with the professional scope of practice.
24. Competently perform a full range of radiographic procedures on children and adults.
25. Demonstrate the ability to adequately perform radiographs on difficult patients using both
    fixed and portable equipment.

26. The student will demonstrate during off-hour rotations the following:
    a. Successfully performing radiographs on difficult patients, i.e., trauma uncooperative patients, etc.
    b. Make independent judgements in the areas of technique, positioning and film quality.
    c. Demonstrate speed and accuracy from start to finish when radiographing patients.

REQUIRED TEXTBOOK AND MATERIALS

A computer with internet access is required. The computer must be able to run current programs and platforms such as Windows 10 and the internet connection must be reliable and robust. The course has online requirements. The computer must have a camera and microphone for online conferencing. Computers are available for student use in the Learning Lab TC 112 & Media Center MPC 155.

ATTENDANCE POLICY

1. For students in the radiology program to acquire the necessary clinical competency outlined in our curriculum, it is necessary that students complete all assigned clinical hours. Therefore, students missing **any** clinical hours will be required to make-up time missed at the end of the semester. Time will be made-up after the last scheduled clinic day or at the discretion of the clinical instructor. Students not completing make up time before the grades are due for the semester, will receive an incomplete (I) in the clinical course.

2. Any absence while assigned to a specialty area or off-hour rotation will require the clinical instructor to adjust the clinical schedule to assure all students meet the accreditation guidelines. For example, a student missing a day when assigned to an evening shift will have one of the future clinical days changed to an evening shift. The schedule adjustments will be made by the clinical instructor at their discretion.

3. Students who have tardy time totaling at least one (1) hour will be required to make-up all the missed time at the end of the semester. When a student is tardy he/she will not be allowed to make-up the time that day. If a student leaves clinic early for any reason, it will be added to the total tardy time.

4. If a student is unable to arrive at clinic within one hour of their scheduled time they will not be allowed to attend clinic on that day.

5. Students who miss a total of 24 hours during a Fall or Spring semester or 21 hours in the Summer semester **will receive a warning with the Disciplinary Action Form (DAF)**. **When a fourth day is missed a DAF will be filled out and the Student's clinical grade will be lowered one full letter grade. Each subsequent absence may result in dropping of a letter grade pending a review by department committee**.

6. Students who exhibit excessive tardiness will receive a warning with the DAF. Further tardiness will result in disciplinary action which may include an attendance contract and/or lowering of the student's clinical grade.

7. Students who fail to follow proper call-in procedures when unable to attend clinic will have their clinic grade lowered one full letter grade for EACH day they fail to follow proper call in procedure.

8. Extenuating circumstances will be reviewed.

DROP POLICY

If you wish to drop a course, you are responsible for initiating and completing the drop process by the specified drop date as listed on the Academic Calendar. If you stop coming to class and fail to drop the course, you will earn an "F" in the course.

STUDENT EXPECTED TIME REQUIREMENT

For every hour in class (or unit of credit), students should expect to spend at least two to three hours per week studying and completing assignments. For a 3-credit-hour class, students should prepare to allocate approximately six to nine hours per week outside of class in a 16-week session OR approximately twelve to eighteen hours in an 8-week session. Online/Hybrid students should expect to spend at least as much time in this course as in the traditional, face-to-face class.

COURSE CALENDAR

DATE	TOPIC	READINGS (Due on this Date)	ASSIGNMENTS (Due on this Date)
Jan. 17, 2023 through May 4, 2023	Students will x-ray hospital/clinic patients with direct and indirect supervision each day.		Tuesday/Thursday/Fri 7am-3pm

COURSE EVALUATION

Final grades will be calculated according to the following criteria:

40% Task Analyses
40% Clinical Behavior Reports
20% Four (4) written tests including: two (2) film critiques, one (1) syllabus quiz, and one (1) additional clinic test.

GRADING SCALE

95-100 =A
87- 94 =B
80- 86 =C

70- 79 =D
69- below =F

LIT does not use +/- grading scales

Failure to successfully complete the required objectives will result in an "I" (Incomplete) in the clinical course. An incomplete must be removed by the next long semester or the (I) will be recorded as an (F) and the student will be required to repeat the clinical course.
*****a minimum of 80% is required for successful completion of this course*****

By the end of the semester the student will:
1. Successfully complete six (6) **Task Analyses** from the categories listed below.
    a. Difficult or atypical patient (Trauma, multiple exams, lumbar puncture)*
    b. Contrast Examinations (BE, IVU, retrograde pyelogram, arthrogram)*
    c. Head (Skull, sinus, facial bones, mandible, CT brain)*
    d. Spines
    e. Pediatric =<6yrs (Chest, abdomen, or extremity)
    f. Geriatric =65+years (Abdomen, extremity, spine, or contrast exam) Must be physically or cognitively impaired due to aging.
    g. C-arm
    h. Portables (Abdomen, extremity, Pedi chest) Pedi chest will count in the pediatric category.

This is a list of exams that qualify for each category. It is not comprehensive and will be determined at the discretion of the clinical instructor.
Part of the task analysis process is to monitor and correct performance if repeat radiographs are required. These task analyses are at the discretion of your instructor and they may choose the examinations you are to perform. **A student may be given the opportunity to repeat 1 task analysis during a long semester under the following conditions**

- Repeating the task analysis will change the student's letter grade for the semester
- Repeating the task analysis will not prohibit another student from completing the required Task Analysis.

2. Receive at least two (2) **Clinical Behavior Reports.** They will demonstrate affective behaviors needed by a professional such as: integrity, time management, sociability, and responsibility.
3. Demonstrate critical thinking, problem solving and cognitive skills on **written tests.** Students will have at least two (2) film critique assignments.

4. A comprehensive test on the practical application of *technique* will be completed by each student. **This test must be completed with a grade of 80% or better for the student to complete this course.**

5. A full body *positioning* competency exam will be performed by each student in order to complete the ARRT competency requirements. **This exam must be completed with a grade of 90% or better in order for the student to complete this course.**

6. Rotate through **Special Assignments**. **At least one task analysis must be done while on a Specialty Rotation.**
7. Complete a syllabus quiz in Blackboard to ensure the student reads and understands the clincal syllabus.

ACADEMIC DISHONESTY

Students found to be committing academic dishonesty (cheating, plagiarism, or collusion) may receive disciplinary action. Students need to familiarize themselves with the institution's Academic Dishonesty Policy available in the Student Catalog & Handbook at http://catalog.lit.edu/content.php?catoid=3&navoid=80#academic-dishonesty.

TECHNICAL REQUIREMENTS

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at https://lit.edu/online-learning/online-learning-minimum-computer-requirements. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

DISABILITIES STATEMENT

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email specialpopulations@lit.edu. You may also visit the online resource at Special Populations - Lamar Institute of Technology (lit.edu).

STUDENT CODE OF CONDUCT STATEMENT

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at www.lit.edu. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

STARFISH

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

ADDITIONAL COURSE POLICIES/INFORMATION

CLINIC POLICIES

1. Dosimeters must be worn at all times.
2. Identification badges must be worn at all times with name CLEARLY visible.
3. Beepers, cell phones, laptops, and any other electronic devices are NOT allowed in clinic.
4. Students will abide by ALL handbook policies.
5. Student's failure to abide by handbook policies may result in the clinical grade being **lowered one full letter** for each occurrence.

There will be grade and monetary consequences if a student loses their dosimeter. Each dosimeter is a three month record of their occupational radiation dose. A lost badge removes three months of the lifetime occupational exposure from their record. It is lost and cannot be replaced. If a student loses their dosimeter the following will occur:

• The student will report the lost dosimeter to Brenda Barrow and their clinical instructor.

• The student will pay $28 to the program to cover the cost of ordering a new dosimeter. The student will have point deductions on the next Clinical Behavior Report to emphasize the importance of the dosimeter. The student will receive a "Poor" in the Professional Appearance category due to the dosimeter being a part of the uniform of a student radiographer. The student will receive a "Poor" in the Quality of Work category which emphasizes professional standards including radiation protection. The clinical instructor will report the loss by documenting on the Disciplinary Action Form.

BLACKBOARD

This course is Web Enhanced. All students will be required to login to **BLACKBOARD once a week on Tuesday,** to check e-mail and complete assignments. Assignments will be posted throughout the semester. It is your responsibility to meet the deadlines. **Students should access Blackboard on a computer and not a cell phone. Not all information displays correctly in the Blackboard app or on the cell phone browser. Issues caused by using a cell phone for access will be the responsibility of the student. For example, if you take a quiz, and it does not work properly, the quiz will not be reset. You will receive the grade assigned. Late**

work will not be accepted. If you are unable to meet a deadline in this course, send an e-mail and we will discuss your options.