

Approved Innovative Course

- x Districts must have local board approval to implement innovative courses

TAC §74.13

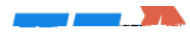
_____ for guidance on endorsement

Course Description:

The Imaging Technology Clinical course provides students with the opportunity to build upon the knowledge learned in Introduction to Imaging Technology and Imaging Technology I. The course prepares students to take the Limited Medical Radiologic Technician Licensing Exam (LMRT) by increasing their depth of knowledge in anatomy, radiology and on experience. This course is recommended for students grades **12**.

Essential Knowledge and Skills:

- (a) General Requirements. This course is recommended for students **12**. Recommended prerequisite: Introduction to Imaging Technology. Required prerequisite: Imaging Technology I. Students shall be awarded **two** credits for successful completion of this course
- (b) Introduction.
 - (1) Career and Technical Education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging profession
 - (2) The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services biotechnology research and development.



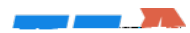
Imaging Technology II Clinical

- (3) The Imaging Technology Clinical course provides students with the opportunity to further their education in radiographic imaging. Students will develop a better understanding of radiographic physics, anatomy, equipment, and obtaining and correcting radiographic images. Students are given the opportunity to learn hands-on by participating in the clinical portion of this course. Imaging Technology II Clinical helps prepare students for college, career, and military readiness by allowing the student the opportunity to obtain an industry-based certification, enter the workforce upon graduation from high school, or transition to a postsecondary institution with the prior knowledge to be successful in a radiography field.
- (4) To pursue a career in the health science industry, students should learn to reason, think

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- (C) solve equations using the inverse square law;
 - (D) interpret data from tables, charts, and graphs to provide solutions to medical imaging problems;
 - (E) interpret complex technical material related to medical imaging; and
 - (F) apply critical thinking and problem solving to make informed decisions.
- (3) The student explains proper interactions with patients. The student is expected to:
- (A) communicate effectively with patients in a simulated setting, including using strategies to improve patient understanding of procedures and patient education;
 - (B) demonstrate proper physical assistance, including patient transfers, body mechanics, fall prevention, and assisting with medical equipment;
 - (C) report documentable information according to professional standards and facility policy;
 - (D) discuss the importance of infection control and how to prevent the spread of infections, including identifying the cycle of infection, modes of transmission, and standard precautions;
 - (E) demonstrate proper handwashing techniques;
 - (F) identify asepsis techniques and equipment;
 - (G) evaluate physical signs and symptoms for possible changes in radiographic procedure; and
 - (H) model cardiopulmonary resuscitation (CPR), first aid, and vital signs as applied to radiography in a simulated setting, including allergic reactions to contrast, physical injury, seizures, and diabetic reactions.
- (4) The student explains the ethical and legal responsibilities of medical imaging professionals. The student is expected to:
- (A) describe the legal terms and consequences associated with radiation and patient errors;
 - (B) differentiate between negligence, liability, and regulatory law;
 - (C) discuss the elements of a medical negligence lawsuit;
 - (D) compare personal and professional liability; and
 - (E) perform examinations within the designated medical imaging scope of practice in a simulated setting.
- (5) The student recognizes the rights and choices of the individual. The student is expected to:
- (A) model activities demonstrating patient choices within medical imaging;
 - (B) summarize the process of image and patient identification;
 - (C) analyze documentation related to patient rights and choices such as the patient's bill of rights;





Recommended Resources and Materials:

Campeau, Frances and Jeana Fleitz. Limited Radiography, 4th ed. CENGAGE Learning Custom Publishing, 2016.

Stewart C. Bushong. Radiologic Science for Technologists: Physics, Biology, and Protection, 11th ed. Mosby, 2016.

Bushong, Stewart Clareyle. Workbook for Radiologic Science for Technologists: Physics, Biology, and Protection, 11th ed. Mosby, 2017.

Long, Bruce W., Jeannean Hall Rollins, Barbara Smith, and Tammy Curtiss. Merrill's Atlas of Radiographic Positioning and Procedures, 14th ed. Mosby, 2019.

Long, Bruce W., Eugene Frank, and Ruth Ann Ehrlich. Radiography Essentials for Limited Practice, 2nd ed. Elsevier, 2016.

Cochard, Larry, Loria Goduartz, Nancy Carlaarmath, and Srinivasan Mukundan Jr. Netter's Introduction to Imaging: With Student Consult Access, 1st ed. Saunders, 2011.

Recommended

TYPE OF RESOURCE

WHERE TO FIND



Imaging Technology II Clinical

- x Limited Scope Medical Radiologic Technologist License.

Additional information:

Required training for the instructor:

- x American Society of Radiologic Technologists: Clinical Instructor Academy (\$110.00)
<https://www.asrt.org/main/continuingeducation/earnce/featured-ce/clinical-instructoracadcredit>

List of optional tra