Course Acronym:	RTEC
Course Number:	216
Descriptive Title:	Clinical Education 2
Division:	Health Sciences and Athletics
Department:	Radiologic Technology
Course Disciplines:	Radiologic Technology
Catalog Description:	This course provides continued development of clinical skills in the performance of radiographic examinations to include the chest, abdomen, upper and lower extremities, vertebral column, bony thorax, pelvis, cranium and facial bones. Emphasis will be placed on advanced contrast examinations and radiation protection of the patient, self, and co-workers, especially with the use of fluoroscopy and mobile radiographic equipment. Special imaging considerations for the pediatric and geriatric patients, the acutely ill, surgical and trauma patients will also be covered.
Prerequisite:	Radiologic Technology 217 with a minimum grade of C
Co-requisite:	
Recommended Preparation:	
Enrollment Limitation:	
Hours Lecture (per week):	0
Hours Laboratory (per week):	6
Outside Study Hours:	0
Total Course Hours:	108
Course Units:	2
Grading Method:	Letter Grade only
Credit Status:	Credit, degree applicable
Transfer CSU:	Yes
Effective Date:	4/16/2012
Transfer UC:	No
Effective Date:	
General Education: ECC	
Term:	
Other:	
CSU GE:	
Term:	
Other:	
IGETC:	
Term:	

Other:	
Student Learning Outcomes:	**SLO #1 Trauma and ER** Students will revise methods of performing a radiographic examination for trauma and emergency room patients. **SLO #2 Radiographic Analysis** Students will evaluate radiographic images and make appropriate changes when necessary. **SLO #3 Radiation Protection** Students will apply ALARA (as low as reasonably achievable) radiation safety principles on patients, self and other members of the health care team.
Course Objectives:	1. Demonstrate proper positioning and radiation protection while performing radiographic examination of the chest, abdomen, upper and lower extremities, bony thorax, pelvis, spine, cranium, facial bones, paranasal sinuses and contrast studies of the gastrointestinal and urinary systems using fluoroscopy. 2. Develop methods to successfully perform radiographic examinations for patients who due to their physical condition, mental state, or age, are unable to cooperate for the procedure, while being attentive to their physical comfort, safety and needs. 3. Demonstrate proper radiation protection for the patient, doctor and technologist during the use of radiographic, fluoroscopic and mobile equipment for various diagnostic procedures. 4. Set up the exam room and demonstrate the appropriate clinical skills required to successfully complete the minimum number of performance evaluations (competencies), as outlined in the student handbook and course syllabus. 5. Critique radiographic images for appropriate clinical information, patient positioning and image quality. Apply corrective action when applicable to produce a diagnostic quality radiographic image.
Major Topics:	**I. Code of Ethics and Professional Behavior (8 hours, lab)** A. Consistency, accuracy, responsibility and excellence (CARE) in medical imaging B. Standards for supervision 1. Direct 2. Indirect C. Patient care 1. Expectations 2. Rights 3. Responsibilities 4. Safety 5. Incident reporting **II. Professional and Effective Communication (8 hours, lab)** A. Patients B. Patient's family C. Radiology and health care team D. Confidentiality of patient records 1. Health Insurance Portability and Accountability Act **III. Radiography of Torso (14 hours, lab)** A. Chest Radiography 1. Portable Chest exam 2. Bilateral decubitus chest exam

	B. Abdomen 1. Upright 2. Decubitus C. Bony thorax 1. Pelvis 2. Ribs 3. Clavicle **IV. Fluoroscopic Imaging (14 hours, lab)** A. Gastrointestinal studies B. Genitourinary studies **V. Skull Radiography (15 hours, lab)** A. Facial Bones B. Paranasal Sinuses C. Mandible D. Orbits E. Temporomandibular articulations F. Nasal Bones G. Zygomatic Arches **VI. Trauma Examinations (16 hours, lab)** A. Orthopedic trauma exams B. Trauma chest radiography C. Portable trauma exams D. Surgical C-arm exams **VII. Age-Related Radiography (14 hours, lab)** A. Geriatric Radiography B. Pediatric Radiography C. Special Needs Patients **VIII. Extremity Exams (14 hours, lab)** A. Upper extremities B. Lower extremities **IX. Image Critique (5 hours, lab)** A. Presentation of images B. Explanation of image quality
Total Lecture Hours:	0
Total Laboratory Hours:	108
Total Hours:	108
Primary Method of Evaluation:	3) Skills demonstration
Typical Assignment Using Primary Method of Evaluation:	Demonstrate technical competence and prudent judgment while administering ionizing radiation to perform a diagnostic imaging procedure using the c-arm fluoroscopy unit in the operating room with direct supervision of a radiologic technologist (R.T.) and physician who hold a fluoroscopy permit issued by the State of California, Radiation Health Branch.
Critical Thinking Assignment 1:	During an image critique session, present in an oral and written format, a review of a radiographic examination that you performed at the clinical site within the past month. Discuss the difficulties presented with performing and completing this procedure. The

	presentation must include an analysis and critique of all radiographic images presented. The critique shall include the technical factors used, positioning, pathology involved, terminology explanation and radiation protection principles employed.
Critical Thinking Assignment 2:	At the clinical facility, demonstrate proper patient positioning, radiation protection and use of radiographic equipment in the performance of a procedure in the operating room for repair of a fractured hip, to include how to obtain a cross-table lateral in a sterile environment. Describe what adjustments must be made to obtain the best quality images possible for diagnosis.
Other Evaluation Methods:	Clinical Evaluation, Performance Exams
Instructional Methods:	Demonstration, Lab, Role play/simulation
If other:	
Work Outside of Class:	Course is lab only - minimum required hours satisfied by scheduled lab time
If Other:	
Up-To-Date Representative Texts:	***Merrill's Radiographic Positioning & Procedures*** (VOL 1& 2) Long et all, 15th Ed. Elsevier 2022
Alternative Texts:	
Required Supplementary Readings:	Radiologic Technology Student Handbook
Other Required Materials:	Lead Radiographic Positioning Markers with Student's initials Radiation monitoring dosimetry badges. Uniforms and shoes as described in the RT Program Dress Code Policy
Requisite:	Prerequisite
Category:	sequential
Requisite course(s): List both prerequisites and corequisites in this box.	Radiologic Technology-217
Requisite and Matching skill(s):Bold the requisite skill. List the corresponding course objective under each skill(s).	**Knowledge of radiation safety as it pertains to patients, self and others**. RTEC 217 - Demonstrate competency in the principles of radiation protections standards. RTEC 217 - Select technical factors to produce quality diagnostic images with the lowest radiation exposure possible. **Knowledge of infection control and sterile technique.** RTEC 217 - Utilize protocols of infection control. RTEC 217 - Adapt procedures to meet age-specific, disease-specific, and cultural needs of the patient. **Knowledge of the radiographic equipment and positioning skills utilized in the performance of radiographic procedures.** RTEC 217 - Identify anatomical structures of the skull and facial bones on diagrams and radiographs. RTEC 217 - Assist and perform radiographic examinations of all areas, excluding special procedures, under the appropriate level of supervision in all aspects.
Requisite Skill:	
Requisite Skill and Matching Skill(s): Bold	

the requisite skill(s). If applicable	
Requisite course:	
Requisite and Matching skill(s):Bold the requisite skill. List the corresponding course objective under each skill(s).	
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Enrollment Limitations and Category:	
Enrollment Limitations Impact:	
Course Created by:	Dawn Charman
Date:	10/04/2011
Original Board Approval Date:	04/16/2012
Last Reviewed and/or Revised by:	Eric Villa
Date:	02/14/2024
Last Board Approval Date:	05/20/2024
Effective Term:	FALL 2025