School of Nursing and Health Professions Syllabus

HUDSON COUNTY COMMUNITY COLLEGE

HUDSON is HOME!

Term: **Credit: 1CR**

Course Code: RAD 106

Title of Course: Radiographic Imaging III

Days & Times:

Location:

Instructor:

Office Hours:

Office Location:

Email:

Phone:

Prerequisites/ Corequisites: RAD 104, 105

Co-Req RAD 103

COURSE DESCRIPTION:

In this third course, anatomy and positioning terminology and their procedures protocols for entire spinal column are presented. Demonstration of applicable factors and protection methods are learned as well as using problem solving methodologies to achieve quality radiographs while providing compassionate and optimum patient care.

COURSE OBJECTIVE:

- Define general radiographic and anatomic relational terminology.
- Identify specific anatomical structures in radiographs and drawings for the entire spinal column.
- List the correct central ray placement, part position, and criteria for entire spinal column.
- Based on clinical situations, describe the preferred positioning routine to assist the physician with the diagnosis of a specific condition or disease process.
- Distinguish between acceptable and unacceptable radiographs based on exposure factors, motion, collimation, positioning, or other errors.
- Given a hypothetical situation, identify the correct modifications of position, exposure factors, or both to improve the radiographic image.

STUDENT LEARNING OUTCOMES:

- Aim to provide a comprehensive framework for students to develop their skills and knowledge in radiographic positioning and anatomy for the specified spinal column regions, ensuring they are well-prepared for clinical practice. Upon successful completion of this course, the student will be able to apply the anatomical knowledge and radiographic imaging procedures to their clinical education:

A. Anatomical knowledge SLO 1

- Identify and describe the anatomical structures of the cervical spine, thoracic spine, lumbar spine, sacrum, coccyx, intervertebral joints, intervertebral foramina, sacral foramina, and sacroiliac joints.

B. Radiographic Imaging Procedures and Positioning for Cervical and Thoracic spine SLO 2

- Demonstrate proper patient positioning for common and alternative cervical spine radiographs, including AP, lateral, oblique, and open-mouth views.
- Evaluate cervical spine radiographs for proper positioning, exposure, and anatomical accuracy.
- Identify and interpret common pathologies of the cervical spine on radiographs, such as fractures, dislocations, and degenerative changes.
- Demonstrate proper patient positioning for thoracic spine radiographs, including AP, lateral, oblique, and swimmer's views.
- Select appropriate technical factors to achieve diagnostic quality images with minimal radiation exposure.

C. Radiographic Imaging Procedures and Positioning for Lumbar spine, Sacrum, Coccyx and Sacroiliac joints SLO 3

- Demonstrate proper patient positioning for lumbar spine radiographs, including AP, lateral, oblique, and spot views of the lumbosacral junction.
- Demonstrate proper patient positioning for lumbosacral junction, sacrum, and coccyx radiographs including AP, AP axial and lateral views.
- Select appropriate technical factors to achieve diagnostic quality images with minimal radiation exposure.
- Evaluate lumbar spine radiographs for correct positioning, adequate exposure, and clear anatomical detail.
- Identify and interpret common lumbar spine pathologies, such as herniated discs, spondylolisthesis, and spinal stenosis.
- Recognize and describe common pathologies of the sacrum and coccyx on radiographs, such as fractures, congenital anomalies, and degenerative changes.

Lab/Clinical:

First Step: Lab demonstration class is mandatory and is completed in the non-energized lab room on campus before the Didactic portion of the imaging studies.

Second Step: Lab Evaluations are performed by students who have successfully passed the didactic component of the imaging study. School faculty observe and grade the student on lab evaluations. Date of performed lab is documented on Student's Individual CCE record. Passing grade on lab evaluations is 85% and must be completed before student moves onto Performance of Patient Procedure phase.

Third Step: Patient Performance Phase: *Students must perform One Patient Procedure (non-graded) under Direct Supervision Prior to performing a (graded) ICCE. Students must*

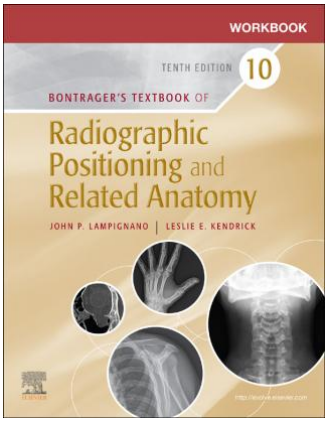
document and have signed by a licensed R.T. (staff radiographer) on their Student Individual CCE record that they have performed the radiographic study. The student can perform the study immediately after passing the lab evaluation, once the study becomes available in the department.

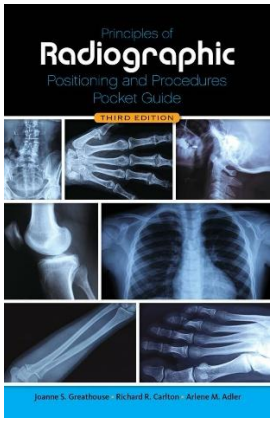
Fourth Step: Initial Clinical Competency Evaluations: B 4- I A (Handbook) One week time frame between Lab and Competency must pass before the student can be evaluated on the competency evaluation unless the faculty C.I. approves it earlier for an unusual case. **Only faculty or designated clinical instructors can evaluate and grade the student's CCE.**

TEXTBOOK REQUIRED:

Lampignano & Bontrager, (2021) Textbook & Workbook for Radiographic Positioning and Related Anatomy, 10th ed. **(2 Books)**

Carlton, Greathouse & Adler, (2024) Bontrager's Handbook of Radiographic Positioning and Techniques *(pocket guide for use at clinical),* 10th ed





EVALUATION METHODS:

- # of unit section averages = 70% of final grade
- Final Exam = 30% of final grade
- Total = 100% for final grade of subject

WEEKLY OUTLINE:

Week	Topic	Learning Outcomes (L.O)
1	**Anatomy of entire spine**	**SLO 1 & 2**
2	**Positioning: Cervical & Thoracic studies**	**SLO 1 & 2**

3	**Lumbar/sacrum /coccyx positioning**	**SLO 1, 3 & 3**
4	**Review entire spine for final.**	**SLO 1, 3 & 3**
5	**Final Exam**	**FINAL**

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https://www.hccc.edu/administration/academic-affairs/syllabus-addendum.html