# **MOHAWK VALLEY COMMUNITY COLLEGE, UTICA-ROME, NY**

**SCHOOL OF HEALTH SCIENCES**

# **COURSE OUTLINE**

**Spring Semester**

Course Name: **Radiographic Procedures/Pathology II C-1 P-4 Cr. 3**

Course Number**:** RT 106 CRN: 28563 (Lecture), 28564 & 28565 (Lab)

Pre-requisites: RT101, RT 102, RT 103

Co-requisites: RT 104, RT 107

**Course Description**:

Lab Component: This course introduces students to the skills necessary to perform the routine radiographic procedures with confidence. Through laboratory

demonstration, supervised lab practice, and image evaluation, students

receive instruction on the proper positioning of the patient to

achieve a finished radiographic image displaying specific structures on

particular body parts. The course also includes pathologic indications

for each projection and appropriate adjustments for certain pathologic

conditions that may affect the patient’s ability to assume certain

positions. Proper equipment manipulation and patient safety issues are

discussed throughout the course.

Lecture Component: The student is provided with the terminology of the skeletal system and the skills necessary to identify and locate the bones of the human skeleton on skeletal models and radiographic images. This information is correlated with instruction on proper patient positioning to produce radiographs displaying specific structures on particular body parts enabling the student to perform the routine procedures involving the skeletal system with confidence. The course also includes radiographic image presentation of pathological indications and the necessary adjustments to be made in exposure factor selection and positioning due to the pathology.

**Student Learning Outcomes:**

**Lecture:**

1. Describe the basic composition and characteristics of bone.
2. Summarize the functions of the skeletal system.
3. Identify and locate the bones of the human skeleton on skeletal models and radiographs.
4. Identify and describe bony processes and depressions found on the human skeleton as seen on skeletal models and radiographs.
5. Identify and describe articulations of the axial and appendicular skeleton.
6. Compare the movements permitted by the different types of articulations.
7. Differentiate the primary and secondary curves of the spine.
8. Recognize and identify, radiographically, various skeletal clinical indications to include benign and malignant processes.
9. Describe basic positioning and technical factor adjustment necessary to best demonstrate skeletal pathological processes.

**Lab:**

1. Obtain a complete history from the “patient” pertinent to the exam being performed
2. Interpret requests for radiographic examinations
3. Manipulate radiographic equipment properly
4. Develop the proper technical factors that need to be employed for specific human body examinations
5. Properly position the “patient” for specific projections
6. Provide evidence of radiographic protection
7. Demonstrate, in a non-energized laboratory, the correct positioning on a phantom
8. Critique radiographs for the structures best demonstrated for specific body projections
9. Determine alternate projections to accommodate, when necessary, the patient’s condition
10. Determine the steps to perform specific routine radiographic examinations
11. Develop critical thinking skills with the use of alternate projections

**Major Topics:**

**Lecture:**

1. Introduction to the Skeletal System

2.Upper Extremity and Shoulder Girdle

3. Lower Extremity and Pelvic Girdle

 4. Bony Thorax – Sternum and Ribs

5. Cervical and Thoracic Spine

6. Lumbar Spine, Sacrum, and Coccyx

 7. Cranium, Facial Bones, and Paranasal Sinuses

**Lab:**

1. Introduction to Radiographic Procedures

 a. Humerus and Shoulder Girdle

 b. Lower Limb

 c. Femur and Pelvic Girdle

 d. Bony Thorax - Sternum and Ribs

 e. Cervical and Thoracic Spine

 f. Lumbar Spine, Sacrum and Coccyx

 g. C-arm Demonstration

 2. Supervised Laboratory Practice

a. Humerus and Shoulder Girdle

 b. Lower Limb

 c. Femur and Pelvic Girdle

 d. Bony Thorax - Sternum and Ribs

 e. Cervical and Thoracic Spine

 f. Lumbar Spine, Sacrum and Coccyx

 g. C-arm Demonstration

 3. Introduction to C - arm equipment

 a. Safety

 b. Operation of equipment

 4. Rad Review board assignments

 5. Board Vitals assignments

RS 2/9/23