COURSE INFORMATION FORM

DISCIPLINE
Radiologic Technology

COURSE TITLE
Radiographic Procedures I

CR.HR  3.0  LECT HR.  2.5  LAB HR.  1.0  CLIN/INTERN HR.  ________  CLOCK HR.  ________

CATALOG DESCRIPTION
Anatomy, radiographic procedures, patient positioning and image evaluation of the chest, abdomen, digestive system, urinary system, and upper limb.

PREREQUISITES
RATE 160 and concurrent enrollment in RATE 165 and RATE 173

EXPECTED STUDENT OUTCOMES IN THE COURSE (ESO)
Upon completion of this course, the student will be able to:
1. Identify, describe and draw the anatomy of the chest, abdomen, digestive system, urinary system, and upper limb.
2. Compare and contrast the function of each of the primary and accessory organs of the digestive system.
3. Summarize the function of each organ of the urinary system.
4. Simulate radiographic procedures of the chest, abdomen, digestive system, urinary system, and upper limb, on a person or phantom, in a laboratory setting demonstrating: proper use of contrast media, supplies, equipment and positioning aids; procedure modifications to meet patient needs; general radiation safety and protection practices; effective patient communication and education; and professional standards of practice.
5. Synthesize and demonstrate specific procedural considerations for performing radiographic examinations of the chest, abdomen, digestive system, urinary system, and upper limb.
6. Determine the structures demonstrated on routine radiographic procedures of the chest, abdomen, digestive system, urinary system, and upper limb.
7. Evaluate images of the chest, abdomen, digestive system, urinary system, and upper limb for positioning, centering, appropriate anatomy and overall image quality.

GENERAL EDUCATION OUTCOMES (ESO)
Specify which general education outcomes, if any, are substantially addressed by the course. Numbers in parentheses identify the Expected Student Outcomes linked to the specific General Education Outcome.

Outcomes  ESO
3. Life-long learning
   C. Attributes of an awareness of the convergence of knowledge
      3. Synthesize information to facilitate application.  (5)
PROGRAM-LEVEL OUTCOMES

CAREER AND TECHNICAL EDUCATION PROGRAM OUTCOMES
Specify which Career and Technical program outcomes, if any, are substantially addressed by the course by completing the “Career and Technical Education template” to show the relationship between course and program outcomes to assessment measures.

1. Students will demonstrate competence in performing clinical activities.
   a. Students will demonstrate accurate positioning skills.
   b. Students will practice appropriate radiation protection.
2. Students will communicate effectively in both oral and written forms.
3. Students will think critically and apply problem solving skills.

CLASS-LEVEL ASSESSMENT MEASURES
Student accomplishment of expected student outcomes will be assessed using the following measures. (Identify which measures are used to assess which outcomes.)

1. Written examinations (1-7)
2. Laboratory simulation and practical (4)
3. Image evaluation reports (5,6,7)
4. Radiographic image and anatomy identification activities (6)
5. Workbook exercises (1-7)
6. Role-playing (4)
7. Classroom discussions (1-7)
Individual instructors may order this outline as fits the needs of their individual courses. In addition, they may place more emphasis on some areas than on others. What is assured is that this particular list is covered in the course. Other topics may be added to a course as the instructor sees fit, and as time and interest allow. An *asterisk can be used to mark an item as optional.

I. Thoracic viscera
   A. Anatomy and physiology
   B. Chest imaging procedures
      1. General considerations
         a. Exam indications
         b. Patient preparation
         c. Room preparation
         d. Sequence of exam
         e. Positioning considerations
      2. Special considerations
         a. Atypical conditions
         b. Age specific
         c. Special need patients
   C. Image Evaluation
      1. Image identification
      2. Appropriate identification information
      3. IR selection, alignment and orientation
      4. CR and part alignment
      5. CR, IR and part long axis alignment
      6. Radiographic marker usage
      7. Artifacts and foreign bodies
      8. Motion
      9. Beam restriction/ collimation
     10. Anatomy of interest
     11. Technical considerations
     12. Exam specific positioning criteria

II. Abdomen
   A. Anatomy and physiology
   B. Abdomen imaging procedures
      1. General considerations
         a. Exam indications
         b. Patient preparation
         c. Room preparation
         d. Sequence of exam
         e. Positioning considerations
      2. Special considerations
         a. Atypical conditions
b. Age specific
  c. Special need patients
C. Image Evaluation
   1. Image identification
   2. Appropriate identification information
   3. IR selection, alignment and orientation
   4. CR and part alignment
   5. CR, IR and part long axis alignment
   6. Radiographic marker usage
   7. Artifacts and foreign bodies
   8. Motion
   9. Beam restriction/ collimation
  10. Anatomy of interest
  11. Technical considerations
  12. Exam specific positioning criteria

III. Digestive System
   A. Anatomy and physiology
      1. Membranes
      2. Organ location
      3. Alimentary canal
      4. Accessory digestive organs
      5. Body habitus
   B. Contrast Media
   C. GI Radiographic procedures
      1. General considerations
         a. Exam indications
         b. Patient preparation
         c. Room preparation
         d. Sequence of exam
         e. Positioning considerations
      2. Special considerations
         a. Atypical conditions
         b. Age specific
         c. Special need patients
   D. Image Evaluation
      1. Image identification
      2. Appropriate identification information
      3. IR selection, alignment and orientation
      4. CR and part alignment
      5. CR, IR and part long axis alignment
      6. Radiographic marker usage
      7. Artifacts and foreign bodies
      8. Motion
      9. Beam restriction/ collimation
     10. Anatomy of interest
     11. Technical considerations
     12. Exam specific positioning criteria

IV. Urinary system
   A. Anatomy and physiology
B. Contrast Media
C. Urinary Radiographic procedures
   1. General considerations
      a. Exam indications
      b. Patient preparation
      c. Room preparation
      d. Sequence of exam
      e. Positioning considerations
   2. Special considerations
      a. Atypical conditions
      b. Age specific
      c. Special need patients
D. Image Evaluation
   1. Image identification
   2. Appropriate identification information
   3. IR selection, alignment and orientation
   4. CR and part alignment
   5. CR, IR and part long axis alignment
   6. Radiographic marker usage
   7. Artifacts and foreign bodies
   8. Motion
   9. Beam restriction/ collimation
   10. Anatomy of interest
   11. Technical considerations
   12. Exam specific positioning criteria
V. Upper limb
   A. Anatomy
   B. Upper limb Radiographic procedures
      1. General considerations
         a. Exam indications
         b. Patient preparation
         c. Room preparation
         d. Sequence of exam
         e. Positioning considerations
      2. Special considerations
         a. Atypical conditions
         b. Age specific
         c. Special need patients
         d. Trauma patients
   C. Image Evaluation
      1. Image identification
      2. Appropriate identification information
      3. IR selection, alignment and orientation
      4. CR and part alignment
      5. CR, IR and part long axis alignment
      6. Radiographic marker usage
      7. Artifacts and foreign bodies
      8. Motion
      9. Beam restriction/ collimation
10. Anatomy of interest
11. Technical considerations
12. Exam specific positioning criteria