

# El Paso Community College

## Syllabus

### Part II

## Official Course Description

<b>SUBJECT AREA</b>	<b>Radiologic Technology</b>
<b>COURSE RUBRIC AND NUMBER</b>	<b>RADR 1562</b>
<b>COURSE TITLE</b>	<b>Clinical –Radiologic Technology/Science-Radiographer IV</b>
<b>COURSE CREDIT HOURS</b>	<b>5      0    :    27</b>
	<b>Credits    Lec      Lab</b>

### I. Catalog Description

Provides a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. A grade of "C" or better is required in this course to take the next course. **Prerequisite: RADR 1561. (0:27). Professional Practice Insurance required.**

### II. Course Objectives

- A. Unit I - Radiography of the Chest and Abdomen
  - 1. Position the patient for any of the following examinations and projections: B3
    - a. chest
      - 1. PA/AP
      - 2. lateral
      - 3. apical-lordotic
      - 4. decubitus
      - 5. infant/pediatric chest modifications
      - 6. portable modifications
      - 7. supine(stretcher/gurney) and wheelchair modifications
      - 8. inspiration/expiration
    - b. abdomen
      - 1. supine
      - 2. upright
      - 3. decubitus
  - 2. Explain the examination to the patient in terms he/she can understand. E2, E3
  - 3. Select optimal exposure factors for each examination and projection based on the patient's age, body habitus, pathology, and physical condition. A3, B2, F1, H1, H2
  - 4. Manipulate equipment in a safe manner to achieve the projection(s) desired. B1, B2, H1
  - 5. Utilize accessory devices, as needed, to assist in the positioning of the patient and placement of the film cassette. H1, H2
  - 6. Protect the patient, yourself and other necessary personnel from unnecessary radiation exposure and physical harm. C5
  - 7. Identify the radiograph with the patient's name and with positioning markers. C1
  - 8. Evaluate the radiograph for proper alignment and exposure. F1, G2
  - 9. Identify and report obvious deviations in normal equipment performance to the appropriate clinical staff. G2, H3
  - 10. Maintain the integrity of the patient's IV's, catheters, and tubes (if applicable). G2
  - 11. Demonstrate a professional demeanor at all times in relations with instructors, peers, staff, patients, families and physicians. C1, C3, C5, E1

12. Recognize and facilitate the physical and psychological needs of the elderly and/or special needs patient before, during, and after the radiographic examination. E6
13. Produce medical images to verify tube and line placement.
14. Implement corrective modifications to non-diagnostic medical imaging results.
15. Achieve radiographic excellence with practice and reproducibility of medical imaging examinations.

B. Unit II - Radiography of the Upper Extremities and Shoulder Girdle B3

1. Position the patient for any of the following examinations and projections:
  - a. finger(s)
  - b. hand
  - c. wrist
  - d. forearm
  - e. elbow
  - f. humerus
  - g. shoulder joint
  - h. clavicle
  - i. scapula
  - j. acromio-clavicular joint
2. Explain the examination to the patient in terms he/she can understand. E2, E3
3. Select optimal exposure factors for each examination and projection based on the patient's age, body habitus, pathology, and physical condition. A3, B2, F1, H1, H2
4. Manipulate equipment in a safe manner to achieve the projection(s) desired. B1, B2, H1
5. Utilize accessory devices, as needed, to assist in the positioning of the patient and placement of the film cassette. H1, H2
6. Protect the patient, yourself and other necessary personnel from unnecessary radiation exposure and physical harm. C5
7. Identify the radiograph with the patient's name and with positioning markers. C1
8. Evaluate the radiograph for proper alignment and exposure. F1, G2
9. Identify and report obvious deviations in normal equipment performance to the appropriate clinical staff. G2, H3
10. Maintain the integrity of the patient's IV's, catheters, and tubes (if applicable). G2
11. Demonstrate a professional demeanor at all times in relations with instructors, peers, staff, patients, families and physicians. C1, C3, C5, E1
12. Recognize and facilitate the physical and psychological needs of the elderly and/or special needs patient before, during, and after the radiographic examination. E6
13. Produce medical images to verify tube and line placement.
14. Implement corrective modifications to non-diagnostic medical imaging results.
15. Achieve radiographic excellence with practice and reproducibility of medical imaging examinations.

C. Unit III - Radiography of the Lower Extremities and Pelvic Girdle B3

1. Position the patient for any of the following examinations and projections:
  - a. toe(s)
  - b. foot
  - c. os calcis
  - d. ankle joint
  - e. lower leg
  - f. knee joint
  - g. patella
  - h. femur
  - i. hip joint
  - j. pelvis
2. Explain the examination to the patient in terms he/she can understand. E2, E3
3. Select optimal exposure factors for each examination and projection based on the patient's age, body habitus, pathology, and physical condition. A3, B2, F1, H1, H2
4. Manipulate equipment in a safe manner to achieve the projection(s) desired. B1, B2, H1
5. Utilize accessory devices, as needed, to assist in the positioning of the patient and placement of the film cassette. H1, H2

6. Protect the patient, yourself and other necessary personnel from unnecessary radiation exposure and physical harm. C5
7. Identify the radiograph with the patient's name and with positioning markers. C1
8. Evaluate the radiograph for proper alignment and exposure. F1, G2
9. Identify and report obvious deviations in normal equipment performance to the appropriate clinical staff. G2, H3
10. Maintain the integrity of the patient's IV's, catheters, and tubes (if applicable). G2
11. Demonstrate a professional demeanor at all times in relations with instructors, peers, staff, patients, families and physicians. C1, C3, C5, E1
12. Recognize and facilitate the physical and psychological needs of the elderly and/or special needs patient before, during, and after the radiographic examination. E6
13. Produce medical images to verify tube and line placement.
14. Implement corrective modifications to non-diagnostic medical imaging results.
15. Achieve radiographic excellence with practice and reproducibility of medical imaging examinations.

D. Unit IV - Radiography of the Bony Thorax and Vertebral Column B3

1. Position the patient for examinations of the:
  - a. ribs
  - b. sternum
  - c. sternoclavicular joints
  - d. lumbo-sacral spine.
  - e. sacrum
  - f. coccyx
  - g. sacro-iliac joints
  - h. thoracic spine
  - i. cervical spine
  - j. cervico-thoracic spine
2. Explain the examination to the patient in terms he/she can understand. E2, E3
3. Select optimal exposure factors for each examination and projection based on the patient's age, body habitus, pathology, and physical condition. A3, B2, F1, H1, H2
4. Manipulate equipment in a safe manner to achieve the projection(s) desired. B1, B2, H1
5. Utilize accessory devices, as needed, to assist in the positioning of the patient and placement of the film cassette. H1, H2
6. Protect the patient, yourself and other necessary personnel from unnecessary radiation exposure and physical harm. C5
7. Identify the radiograph with the patient's name and with positioning markers. C1
8. Evaluate the radiograph for proper alignment and exposure. F1, G2
9. Identify and report obvious deviations in normal equipment performance to the appropriate clinical staff. G2, H3
10. Maintain the integrity of the patient's IV's, catheters, and tubes (if applicable). G2
11. Demonstrate a professional demeanor at all times in relations with instructors, peers, staff, patients, families and physicians. C1, C3, C5, E1
12. Recognize and facilitate the physical and psychological needs of the elderly and/or special needs patient before, during, and after the radiographic examination. E6
13. Produce medical images to verify tube and line placement.
14. Implement corrective modifications to non-diagnostic medical imaging results.
15. Achieve radiographic excellence with practice and reproducibility of medical imaging examinations.

E. Unit V - Radiography of the Cranium and Facial Bones B3

1. Position and prepare the patient for examinations of the:
  - a. cranium
  - b. sella turcica
  - c. mastoids
  - d. paranasal sinuses
  - e. facial bones
  - f. nasal bones
  - g. zygomatic arches

- h. mandible
  - i. temporomandibular joints
  - j. orbit/optic foramina
  - 2. Explain the examination to the patient in terms he/she can understand. E2, E3
  - 3. Select optimal exposure factors for each examination and projection based on the patient's age, body habitus, pathology, and physical condition. A3, B2, F1, H1, H2
  - 4. Manipulate equipment in a safe manner to achieve the projection(s) desired. B1, B2, H1
  - 5. Utilize accessory devices, as needed, to assist in the positioning of the patient and placement of the film cassette. H1, H2
  - 6. Protect the patient, yourself and other necessary personnel from unnecessary radiation exposure and physical harm. C5
  - 7. Identify the radiograph with the patient's name and with positioning markers. C1
  - 8. Evaluate the radiograph for proper alignment and exposure. F1, G2
  - 9. Identify and report obvious deviations in normal equipment performance to the appropriate clinical staff. G2, H3
  - 10. Maintain the integrity of the patient's IV's, catheters, and tubes (if applicable). G2
  - 11. Demonstrate a professional demeanor at all times in relations with instructors, peers, staff, patients, families and physicians. C1, C3, C5, E1
  - 12. Recognize and facilitate the physical and psychological needs of the elderly and/or special needs patient before, during, and after the radiographic examination. E6
  - 13. Produce medical images to verify tube and line placement.
  - 14. Implement corrective modifications to non-diagnostic medical imaging results.
  - 15. Achieve radiographic excellence with practice and reproducibility of medical imaging examinations.
- F. Unit VI - Contrast and Special Examinations B3
- 1. Position and prepare the patient for examinations of the:
    - a. upper gastrointestinal tract
    - b. lower gastrointestinal tract
    - c. accessory digestive organs
    - d. genito-urinary tract
    - f. central nervous system (e.g., myelography)
    - g. vascular system (venography and arteriography)
    - h. joints (arthrography)
  - 2. Explain the examination to the patient in terms he/she can understand. E2, E3
  - 3. Select optimal exposure factors for each examination and projection based on the patient's age, body habitus, pathology, and physical condition. A3, B2, F1, H1, H2
  - 4. Manipulate equipment in a safe manner to achieve the projection(s) desired. B1, B2, H1
  - 5. Utilize accessory devices, as needed, to assist in the positioning of the patient and placement of the film cassette. H1, H2
  - 6. Protect the patient, yourself and other necessary personnel from unnecessary radiation exposure and physical harm. C5
  - 7. Identify the radiograph with the patient's name and with positioning markers. C1
  - 8. Evaluate the radiograph for proper alignment and exposure. F1, G2
  - 9. Identify and report obvious deviations in normal equipment performance to the appropriate clinical staff. G2, H3
  - 10. Maintain the integrity of the patient's IV's, catheters, and tubes (if applicable). G2
  - 11. Demonstrate a professional demeanor at all times in relations with instructors, peers, staff, patients, families and physicians. C1, C3, C5, E1
  - 12. Recognize and facilitate the physical and psychological needs of the elderly and/or special needs patient before, during, and after the radiographic examination. E6
  - 13. Demonstrate an understanding of adverse contrast media reactions and their management. B2, G2
  - 14. Produce medical images to verify tube and line placement.
  - 15. Implement corrective modifications to non-diagnostic medical imaging results.
  - 16. Achieve radiographic excellence with practice and reproducibility of medical imaging examinations.
- G. Unit VII - Venipuncture and Aseptic Techniques
- 1. Demonstrate basic venipuncture techniques utilized for intravenous contrast administration.

2. Practice standard aseptic techniques for infection control (universal precautions)

H. Unit VIII. Surgical Procedures

1. Take radiographs under a sterile field.
2. Utilize mobile radiographic equipment, e.g., c-arms, to perform radiographic procedures at the surgical suite.

**III. THECB Learning Outcomes (WECM)**

As outlined in the learning plan, apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry and will demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry.

**IV. Evaluation**

A. Methods

1. Hospital Evaluation
2. Clinical Traits Evaluation
3. Clinical Competency Evaluation

B. Grading Scale

96	-	100	=	A
91	-	95	=	B
85	-	90	=	C
80	-	84	=	D
Below		80	=	F

A total final course grade of below C (i.e., less than 85%) is not acceptable for successful completion of this course.

C. Final Grade Determination

The final grade determination for this course is calculated as follows:

Hospital Evaluation	10% toward final grade
Clinical Traits Evaluation	10% toward final grade
Competency Evaluations	<u>80% toward final grade</u>
TOTAL	100%

**V. Disability Statement (American with/Disabilities Act [ADA])**

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024).

**VI. 6 Drop Rule**

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.