

# El Paso Community College

## Syllabus

### Part II

## Official Course Description

<b>SUBJECT AREA</b>	<u>Medical Imaging Technology-Radiography</u>
<b>COURSE RUBRIC AND NUMBER</b>	<u>RADR 2431</u>
<b>COURSE TITLE</b>	<u>Advanced Radiographic Procedures</u>
<b>COURSE CREDIT HOURS</b>	<u>4                    2    :                    6</u>
	Credits                    Lec                    Lab

### I. Catalog Description

Studies positioning and alignment of anatomical structures and equipment, evaluation of images for proper demonstration of anatomy and related pathology. A grade of “C” or better is required in this course to take the next course. **Corequisite: RADR 2333. (2:6). Lab fee.**

### II. Course Objectives

- A. Unit I – The Study of Pathology
  - 1. Define terminology associated with the study of pathology. F1.
  - 2. Discuss disease classifications. F1
  - 3. Differentiate between structural and functional disease. B2, F1
  - 4. Discuss exogenous and endogenous injury, major causes of each, and examples of each..B2, F1, F2
  
- B. Unit II – Pathology of the Skeletal System
  - 1. Describe the formation of bone and the process of bone growth.
  - 2. Recognize and give examples of
    - a. congenital and hereditary bone disorders diseases
    - b. bone infections
    - c. metabolic bone diseases
    - d. fractures
    - e. nonneoplastic bone disorders
    - f. bone tumors
  
- C. Unit III – Pathology of the Respiratory System
  - 1. Describe the gross anatomy of the respiratory system. B4
  - 2. Relate major manifestations of respiratory disease. F2
  - 3. Discuss major pathological conditions of the respiratory tract in terms of etiology and structural changes. F3
  
- D. Unit IV – Pathology of the Digestive and Accessory Digestive System
  - 1. Describe the gross anatomy of the alimentary tract. B4
  - 2. Relate major manifestations of alimentary tract disease. F2
  - 3. Discuss major pathological conditions of the alimentary tract in terms of etiology and structural changes. F3
  
- E. Unit V – Pathology of the Urinary System
  - 1. Describe the gross anatomy of the urinary system. B4
  - 2. Relate major manifestations of urinary tract disease. F2
  - 3. Discuss major pathological conditions of the urinary tract in terms of etiology and structural changes. F3

- F. Unit VI – Pathology of the Cardiovascular System
1. Describe the gross anatomy of the cardiovascular system. B4
  2. Relate major manifestations of cardiovascular disease. F2
  3. Discuss major pathological conditions of the cardiovascular system in terms of etiology and structural changes. F3
- G. Unit VII – Pathology of the Central Nervous System
1. Describe the gross anatomy of the central nervous system. B4
  2. Relate major manifestations of central nervous system disease. F2
  3. Discuss major pathological conditions of the central nervous system in terms of etiology and structural changes. F3
- H. Unit VIII – Pathology of the Reproductive System
1. Describe the gross anatomy of the reproductive system. B4
  2. Relate major manifestations of reproductive tract disease. F2
  3. Discuss major pathological conditions of the reproductive tract in terms of etiology and structural changes. F3
- I. Unit IX – Sectional Anatomy of the Brain and Skull.  
Locate topographical features of the brain and calvarium to include: B2, F1, F2
- a. Lobes of the brain
  - b. ventricular system
  - c. coverings of the brain
  - d. structural components the brainstem
  - e. structures within the brain
  - f. major vessels of the brain
- J. Unit X – Sectional Anatomy of the Neck and Thorax.  
Locate the following anatomical features: B2, F1, F2
- a. Major vessels.
  - b. Spine and central nervous system components.
  - c. Peripheral nerves.
  - d. Prominent bony and muscular anatomy.
  - e. Thyroid anatomy.
  - f. Components of the airway and pulmonary system.
  - g. Structures of the alimentary tract.
  - h. Cardiac structures.
- K. Unit XI – Sectional Anatomy of the Abdomen and Pelvis.  
Locate the following features: B2, F1, F2
- a. Vascular anatomy.
  - b. Spine components and peripheral nerves.
  - c. Organs of the hematopoetic system.
  - d. Structures of the digestive tract..
  - e. Hepatobiliary organs.
  - f. Urinary tract.
  - g. Pelvic organs and reproductive tract.
- L. Unit XII – Contrast Media
1. Discuss characteristics of radiographic contrast media.. F1
  2. Identify applications for different types of radiographic contrast media. B2
  3. Relate contraindications for the use of various radiographic contrast media. F1, F3
  4. Explain the preparation of different types of radiographic contrast media. F3
  5. Recognize and respond appropriately to adverse reactions caused by radiographic contrast media. B2
- M. Unit XII – Contrast Studies.
1. Relate the preparation, indications and technical requirements for gastrointestinal contrast examinations. F1, F3

2. Relate the preparation, indications and technical requirements for genito-urinary tract contrast examinations. F1, F3
3. Relate the preparation, indications and technical requirements for intraspinal contrast examinations. F1, F3
4. Relate the preparation, indications and technical requirements for vascular contrast examinations. F1, F3
5. Relate the preparation, indications and technical requirements contrast examinations of the joints. F1, F3

### III. THECB Learning Outcomes (WECM)

1. Perform advanced level procedures in positioning.
2. Align anatomic structures and equipment.
3. Evaluate images.

### IV. Evaluation

- A. Methods
1. Written assignments and quizzes
  2. Research Paper
  3. Unit examinations
  4. Comprehensive final examination

- B. Grading Scale
- |            |   |     |   |   |
|------------|---|-----|---|---|
| 93         | - | 100 | = | A |
| 85         | - | 92  | = | B |
| 75         | - | 84  | = | C |
| 65         | - | 74  | = | D |
| 64 & below |   |     | = | F |

A total final course grade of below C (i.e., less than 70%) is not acceptable for completion of this course.

- C. Final Grade Determination  
The final grade determination for this course is calculated as follows:

Written assignments & quizzes	10% toward final grade
Research paper	10% toward final grade
Unit examinations	50% toward final grade
Comprehensive final examination	<u>30% toward final grade</u>
TOTAL	100%

### V. Disability Statement (Americans 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.