

El Paso Community College
Syllabus
Part II
Official Course Description

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| SUBJECT AREA | <u>Medical Imaging Technology-</u> <u>Radiography</u> |
| COURSE RUBRIC AND NUMBER | <u>RADR 1313</u> |
| COURSE TITLE | <u>Principles of Radiographic Imaging I</u> |
| COURSE CREDIT HOURS | <u>3 2 :</u> <u>Credits Lec Lab</u> |

I. Catalog Description

Introduces radiographic image quality and the effects of exposure variables. A grade of "C" or better is required in this course to take the next course. **(2:4). Lab fee.**

II. Course Objectives

Upon completion of this course, the student will be able to

- A. Explain how the four primary factors relate to beam intensity and patient dose. (B3)
- B. Given the necessary factors, correctly calculate for problems involving mA-time, mAs-distance, kVp-15% rule, inverse square law, and direct square law. (B3, H1, H2, H3)
- C. Describe the relationship among kVp, photon wavelength, and penetrating power. (B5)
- D. Evaluate the effect of SID, OID, and focal spot size on radiographic quality. (H1)
- E. Identify and explain the controlling and influencing factors of density and contrast. (H1, H2, H3)
- F. Describe the effect of grids and filters on density and contrast. (E1)
- G. Relate beam restriction to patient dosage. (E2)
- H. Explain the purpose of radiographic intensifying screens. (E1)
- I. Describe the mechanism of image formation. (B5)
- J. Discuss exposure technique needed to radiographically demonstrate any given anatomical part of a child as compared to that of an adult. (A3, E2)

III. THECB Learning Outcomes (WECM)

Upon completing this course, the student will be able to:

- 1. Apply the basic principles of radiographic image acquisition to image quality.
- 2. Analyze the effects of exposure variables upon image quality.

IV. Evaluation

- A. Methods
 - 1. quizzes and laboratory assignments
 - 2. unit examinations

3. 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 for this course is calculated as follows:

| | |
|--------------------------|--------------------------------|
| Quizzes/Worksheets/Labs | 10% towards final grade |
| Unit Examinations | 70% towards final grade |
| Comprehensive Final Exam | <u>20% towards final grade</u> |
| TOTAL | 100% |

Final grades will be determined by rounding the total points earned in the course to equal a whole number. A number followed by a decimal of .5 or more will be rounded to the next highest whole number. A number followed by a decimal of less than .5 will be rounded down to the next lowest whole number.

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.

VII. **Title IX and Sex Discrimination**

Title 9 (20 U.S.C. 1681 & 34 C.F.R. Part 106) states the following "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any educational program or activity receiving Federal financial assistance." The Violence Against Women Act (VAWA) prohibits stalking, date violence, sexual violence, and domestic violence for all students, employees and visitors (male and female). If you have any concerns related to discrimination, harassment, or assault (of any type) you can contact the Assistant to the Vice President for Student and Enrollment Services at 915-831-2655. Employees can call the Manager of Employee Relations at 915-831-6458. Reports of sexual assault/violence may also be reported to EPCC Police at 915-831-2200.