

**El Paso Community College**  
**Syllabus**  
**Part II**  
**Official Course Description**

<b>SUBJECT AREA</b>	<b>Medical Imaging Technology-Radiography</b>								
<b>COURSE RUBRIC AND NUMBER</b>	<b>RADR 1313</b>								
<b>COURSE TITLE</b>	<b>Principles of Radiographic Imaging I</b>								
<b>COURSE CREDIT HOURS</b>	<table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"><b>3</b></td> <td style="text-align: center;"><b>2</b></td> <td style="text-align: center;"><b>:</b></td> <td style="text-align: center;"><b>4</b></td> </tr> <tr> <td style="text-align: center;">Credits</td> <td style="text-align: center;">Lec</td> <td></td> <td style="text-align: center;">Lab</td> </tr> </table>	<b>3</b>	<b>2</b>	<b>:</b>	<b>4</b>	Credits	Lec		Lab
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Credits	Lec		Lab						

**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)**

- 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 (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.