COURSE: RADR 2305

TITLE: Principles of Radiographic Imaging II

SEMESTER: __ 1. Fall __ 2. Spring __ 3. Summer

X 4. Fall __ 5. Spring

INSTRUCTOR: Tim Skaife, M.A., R.T.(R) skaifet@coastalbend.edu

OFFICE HOURS: Posted on Office Door. U103 Phone: 354-2302

LECTURE: TTh E112, 8:00-9:20 p.m.

PREREQUISITES: Completion of RADR 1213

TEXTBOOK: RADIOLOGIC SCIENCE FOR TECHNOLOGISTS, 9TH ED., Stewart C. Bushong, Sc.D.

REFERENCE: TEXTBOOK OF RADIOGRAPHIC POSITIONING AND RELATED ANATOMY, 6TH Ed., Bontrager.

COURSE DESCRIPTION: This course will discuss the various aspects of digital imaging. The interrelationship and influences other factors have on radiographic imaging. The mechanics of quality assurance in both digital and film are covered. Evaluation of the quality of images is covered also.

INSTRUCTIONAL METHODS: Various methods of instruction will be used for the presentation of materials during this course. These will include lecture, class discussion, independent study, outside reading assignments, audio-visuals, and "hands on" demonstration when appropriate. Additional instructional materials may be provided to supplement certain subject areas. It is recommended that any reading assignment be completed before class, in order to be better prepared for class discussion.

ATTENDANCE: All students are expected to attend all classes. In the event of sickness or other incidents requiring absences from class, the instructor is to be notified as soon as possible. Documented sickness with a doctor's excuse is the only condition warranting make-up examinations. All others are considered unexcused for test purposes. Because of the large amount and the unique nature of the material covered in each class session, if the student misses class, successful completion of the course will be at risk. Upon each absence, the student's final grade will be affected. Attendance is scored as one test worth 30 points. Each absence will deduct 5 points. If a student is more than 10 minutes late to class, the student is considered as absent.

GRADING: The grading scale used in this course will be as follows:

- 100.0 - 91.5 = A
- 91.4 - 82.5 = B
- 82.4 - 74.5 = C
- 74.4 - Below = F
EVALUATION: Testing will consist of periodic UNIT EXAMS over lecture, class discussion, handouts or other materials presented or discussed in class, and a comprehensive FINAL exam. The average of the lecture quizzes will count 80% of your total grade and the FINAL exam, which will consist primarily of multiple choice items, will count 20% of the total grade. **No make-up exams will be given unless prior arrangement is made with and agreed to by the instructor due to excused absence!** Excused absences include absence due to death in the immediate family or an emergency situation beyond your control that renders you physically unable to attend. Otherwise, if a student is not present when an exam is given, the student will receive a grade of zero for that exam. There will be **NO** make-up for missing the FINAL exam. All tests will be handed in by the end of the class period.

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Unit exams (4)</td>
<td>80%</td>
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<tr>
<td>Final exam (comprehensive)</td>
<td>20%</td>
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COURSE OBJECTIVES: Upon completion of the course, the student will:

1. define the factors that contribute to a high quality image.
2. discuss sensitometry as it relates to both digital and film characteristics and quality control.
3. demonstrate plotting and interpreting a characteristic (H&D) curve.
4. identify methods, frequency, and tolerance levels for radiographic, tomographic and fluoroscopic equipment.
5. perform tests on clinical radiographic equipment.
6. identify image artifacts and explain causes and corrective actions.
7. define the difference between direct digital radiography and indirect digital radiography.
8. describe the capture, coupling, and collection stages of each type of digital imaging system.
9. Distinguish between spatial resolution and contrast resolution.
10. Discuss the characteristics of digital imaging that should result in lower patient dose.

ADA POLICY:
Coastal Bend College is committed to providing educational opportunities to all qualified individuals, and in doing so, complies with the Americans with Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973 which states that no qualified person shall, because of their disability, be denied access to, participation in, or the benefits of any program or activity operated by the College. Students having questions about accessibility or requesting reasonable accommodations as indicated in the ADA or Section 504 should contact Ms. Velma Elizalde in Student Counseling.

DISCLAIMER:
The schedule, policies, and assignments in this course are subject to change in the event of extenuating circumstances or by mutual agreement between the instructor and the students. The instructor will always inform the students of any changes in a timely manner.

RADR2305.SYL (F11)