University of Arkansas − Fort Smith
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General Syllabus

RISP 25002 Imaging Equipment

Credit Hours: 2 Lecture Hours: 2 Laboratory Hours: 0

Prerequisite: RISP 24302 Principles of Radiation Biology/Protection
Corequisites: RISP 25205 Clinical Education V, RISP 26101 Senior Seminar, and RISP 26001 Radiographic Pathology

Effective Catalog: 2019-2020

I. Course Information

A. Catalog Description

Introduces the student to various methods of recording images and relates principles of diagnostic image production and the specific equipment required. Also introduces various advanced imaging techniques and career options in their chosen field.

B. Additional Information - None

II. Student Learning Outcomes

A. Subject Matter

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

1. Discuss the different imaging modalities.
2. Identify the various components of the image intensifier and describe the relationship and purpose of each.
3. Discuss procedures and equipment used in fluoroscopy.
4. Discuss the equipment used in digital imaging.
5. Compare/contrast the different digital imaging processes.
6. Discuss the various components of PACS.

B. University Learning Outcomes

This course enhances student abilities in the following areas:

Analytical Skills
Critical Thinking Skills: Students will generate solutions/analysis of problems

associated with radiographic imaging equipment.

Quantitative Reasoning: Students will apply appropriate mathematical models to solve problems associated with radiographic equipment and/or radiation exposure.

Communication Skills (written and oral)
Students will compose coherent imaging science focused documents appropriate to the intended audience. Students will effectively communicate orally in a public setting by presenting a power point presentation concerning imaging science.

III. Major Course Topics

A. Ultrasound
B. CT Scan
C. MRI
D. Mammography
E. Radiation Therapy/Oncology
F. Fluoroscopy
G. Digital Radiography