

RAD 374-3
SECTIONAL ANATOMY and IMAGING APPLICATIONS

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COURSE DESCRIPTION:

This course focuses on identifying anatomical structures produced by Computed Tomography (CT) and Magnetic Resonance Imaging (MRI) scanners in the transverse, sagittal, coronal, and orthogonal planes. The CT and MR images place emphasis on the brain, spine, head, neck, chest, abdomen, pelvis, musculoskeletal (joints), and vascular system. In addition, discussion on dynamic scanning, fast scanning, spiral scanning, and three-dimensional imaging will be presented. Prerequisite: RAD 362 or consent of instructor.

TEXTBOOKS:

Required:

Weir, J. (2011). *Imaging atlas of human anatomy* (4th ed.). St. Louis: Mosby-Wolfe.

Hofer, M. (2010). *CT teaching manual* (4th ed.). Germany: Georg Thieme Verlag.

Optional:

Drake, R. L., Vogl, W., & Mitchell, A. W. M. (2005). *Gray's anatomy for students*. Philadelphia: Elsevier.

Additional:

Edelman, R. R., & Hesselink, J. R. (1996). *Clinical magnetic resonance imaging*. Philadelphia: W. B. Saunders Company.

Wegner, O. H. (1993). *Whole body computed tomography* (2nd ed). Boston: Blackwell Scientific Publications.

Note: These books are located in the Reserve Area of the Undergraduate Library.

COURSE OBJECTIVES:

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

1. Using CT and MRI images identify and label the pertinent anatomical structures of the brain, spine, head, neck, chest, abdomen, pelvis, musculoskeletal (joints), and vascular system.
2. Describe imaging applications used in CT and MRI to demonstrate the various anatomical structures.
3. Define the terminology used in sectional anatomy and imaging applications.

GRADING SCALE:

The grading will be on a straight scale. Course grades will be based on tests, and the final exam.

EVALUATION AND POINT VALUE FOR THE COURSE:

	<u>Maximum Points</u>	<u>Your Points</u>
Quizzes (5)	50	_____
Tests (3)	150	_____
Final Exam	<u>100</u>	_____
Total	300	

A = 93 – 100%	279 – 300 points	Test #1 – Brain, Head, & Spine
B = 85 – 92%	255 – 278 points	Test #2 – Chest, Abdomen, & Pelvis
C = 77 – 84%	231 – 254 points	Test #3 – Musculoskeletal
D = 70 – 76%	210 – 230 points	
F = Below 70%	below 209 points	

All students are expected to attend class and come prepared to discuss the topic assigned for that day. Tests will cover the lecture, text, handouts, and images reviewed during class. No make-up tests will be given for other than instructor approved absences.