PARKLAND COLLEGE

Course Information Form (CIF)

Course Code: XCT 212

Course Title: Sectional Pathology

Department: Allied Health
PCS Code: 1.2 - Occupational/Technical Instruction
CIP Code: 51.0907
Repeatability: 0

Effective Date: Summer 2026

Credit Hours

Catalog Notation: 3-0-3
Credit Hour Distribution:

Lecture: 3	Lab: 0	Clinical: 0	**Total: 3**

General Course Information

Catalog Description

Sectional imaging procedures and pathology commonly found in CT and MRI.

General Course Objectives

This course will evaluate sectional imaging procedures and pathological conditions commonly seen in CT and MRI. Additionally, the course will outline radiographic (CT and MRI) appearance, etiology, signs/symptoms, and treatment options for various pathological conditions.

Minimum Placement Levels

English	Reading	Math
Placement out of ENG 099	Placement out of CCS 099	None

Prerequisites

Credit in XCT 210
Admission into the Radiologic Technology program

Recommended before enrolling (not required):
ARRT primary certification

Methods of Evaluation

1 objective exam, 1 PowerPoint presentation, 6-8 chapter review assignments, and 6-8 objective quizzes.

Instructional Materials and Additional Supplies

Comprehensive Radiographic Pathology, Eisenberg, R. L., and Johnson, N. M. (2021). 7th Ed. St. Louis: Elsevier Mosby.
Imaging Atlas of Human Anatomy, Weir, J., Abrahams, P. H., Spratt, J. D., and Salkowski, L. R. (2021). 5th Ed. St. Louis: Elsevier Mosby.

Course Content

General Learning Outcomes (GLOs)

- Communication: Students will demonstrate the ability to read, write, listen, and speak effectively.
- Technology: Students will demonstrate the ability to evaluate, select, and appropriately use current and emerging tools.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Sectional Anatomy	1. Differentiate anatomical structures on CT and MRI images. 2. Label anatomical structures within the head, neck, chest, abdomen, pelvis, and musculoskeletal systems on CT and MRI images. 3. Differentiate anatomical structures within the sagittal, coronal, axial, and oblique planes for CT and MRI. 4. Identify positioning landmarks for CT and MRI. 5. Identify appropriate CT or MRI procedure based on anatomical structures.	12	0	0
Scanning Procedures	1. Differentiate between a scout image and axial scans. 2. Discuss the procedure for patient positioning of the head, neck, chest, abdomen, pelvis, and musculoskeletal exams in CT and MRI. 3. Describe various methods of image acquisition. 4. Differentiate between spiral, non-spiral, dynamic, and multi-row detector. 5. Discuss the process for selecting scanning parameters such as slice thickness, mA, time, algorithm, and pitch.	12	0	0
Special Procedures	1. Describe the process of 3-D reconstruction/studies in CT and MRI. 2. Differentiate between 3-D studies in CT and MRI. 3. Describe the purpose of radiation therapy planning and the role of the technologist. 4. Compare and contrast the procedure for arthrography in CT and MRI. 5. Describe the purpose of PET/CT fusion.	9	0	0
Pathology	1. Identify pathological conditions on CT and MRI images for the head, neck, chest, abdomen, pelvis, and musculoskeletal systems. 2. Discuss the appropriate procedure modification for pathology and trauma in CT and MRI for head, neck, chest, abdomen, pelvis, and musculoskeletal systems. 3. List the different types of biopsies and their corresponding pathological conditions in CT and MRI. 4. Describe the purpose of drainage and aspiration in CT and MRI. 5. Differentiate between a drainage, aspiration, and biopsy in CT and MRI.	12	0	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
45	0	0