

**RADT 65 Course Outline as of Fall 2024****CATALOG INFORMATION**

Dept and Nbr: RADT 65 Title: PATHOLOGY IN RADIOLOGY

Full Title: Pathology in Radiology

Last Reviewed: 9/25/2023

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.50	Lecture Scheduled	3.50	17.5	Lecture Scheduled	61.25
Minimum	3.50	Lab Scheduled	0	17.5	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	3.50		Contact Total	61.25
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 122.50

Total Student Learning Hours: 183.75

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

**Catalog Description:**

In this course, students will study cross-sectional anatomy of all body systems, recognition of anatomical landmarks, and all aspects of radiographic pathology, including normal variations and abnormal changes due to diseases and trauma. The course will introduce etiology of disease and pathophysiologic disorders that compromise health and wellness. Variations in characteristic radiologic appearances as well as correlations of radiographic manifestations using multiple imaging modalities for clinical diagnosis and treatment will be discussed. Students will research pathology as it relates to imaging and present an oral and written literature review.

**Prerequisites/Corequisites:**

Concurrent enrollement in RADT 71E

**Recommended Preparation:****Limits on Enrollment:**

Acceptance to Program

**Schedule of Classes Information:**

Description: In this course, students will study cross-sectional anatomy of all body systems, recognition of anatomical landmarks, and all aspects of radiographic pathology, including

normal variations and abnormal changes due to diseases and trauma. The course will introduce etiology of disease and pathophysiologic disorders that compromise health and wellness. Variations in characteristic radiologic appearances as well as correlations of radiographic manifestations using multiple imaging modalities for clinical diagnosis and treatment will be discussed. Students will research pathology as it relates to imaging and present an oral and written literature review. (Grade Only)

Prerequisites/Corequisites: Concurrent enrollement in RADT 71E

Recommended:

Limits on Enrollment: Acceptance to Program

Transfer Credit: CSU;

Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>CSU Transfer:</b>	Transferable	Effective: Fall 1981	Inactive:
<b>UC Transfer:</b>		Effective:	Inactive:

**CID:**

**Certificate/Major Applicable:**

Both Certificate and Major Applicable

## **COURSE CONTENT**

**Student Learning Outcomes:**

At the conclusion of this course, the student should be able to:

1. Identify common pathologies on radiographic and cross-sectional images
2. Present an oral and written literature review on an appropriate topic within the scope of medical imaging

**Objectives:**

At the conclusion of this course, the student will be able to:

1. Define common terms related to pathology
2. Describe the causes of disease
3. Explain radiologic pathology, including body systems, complications, and procedural considerations
4. Discuss the relevance of pathology to radiographic procedures
5. Locate major anatomical structures on computerized tomography (CT), magnetic resonance (MR), and ultrasound images in multiple cross-sectional imaging planes

**Topics and Scope:**

- I. Definitions/Terminology
  - A. Pathology
  - B. Disease

- 1. Acute
- 2. Chronic
- C. Pathogenesis
- D. Etiology
- E. Diagnosis
  - 1. Signs (objective)
  - 2. Symptoms (subjective)
- F. Prognosis
- G. Manifestations of pathology
- H. Incidence
- I. Prevalence
- J. Morbidity
- K. Mortality
- L. Epidemiology
- II. Causes of Disease (Processes, Examples)
  - A. Pathological
  - B. Traumatic
  - C. Surgical
  - D. Healing process
  - E. Complications
  - F. Genetics vs heredity
  - G. Congenital
- III. Radiologic and Cross-sectional Pathology
  - A. Body Systems
    - 1. Skeletal
    - 2. Digestive
    - 3. Respiratory
    - 4. Urinary
    - 5. Reproductive
    - 6. Circulatory/cardiovascular
    - 7. Endocrine
    - 8. Nervous
  - B. Definitions
  - C. Etiology
  - D. Sites
  - E. Complications
  - F. Prognosis
  - G. Radiographic and cross-sectional anatomic appearance
  - H. Procedural and technical considerations
  - I. Appropriate imaging concentration
- IV. Implications for Practice
  - A. Indications for procedure
  - B. Relevance to radiographic procedures
    - 1. Technical considerations
    - 2. Patient considerations
- V. American Medical Association Style
  - A. Research methodology
  - B. Reference list
  - C. Presentation style

**Assignment:**

1. Weekly chapter readings (30-40 pages/week)
2. Research literature review paper on an appropriate topic within the scope of medical imaging (5-10 pages)
3. Case studies (3-5)
4. Online cross-sectional anatomy modules (8-10)
5. Quizzes (6-8)
6. Midterm exam
7. Final exam
8. Oral presentation

**Methods of Evaluation/Basis of Grade:**

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Research literature review paper	Writing 20 - 50%
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**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Case studies and online modules	Problem solving 5 - 15%
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**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Oral presentation	Skill Demonstrations 5 - 15%
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**Exams:** All forms of formal testing, other than skill performance exams.

Quizzes, midterm exam, final exam	Exams 25 - 60%
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**Other:** Includes any assessment tools that do not logically fit into the above categories.

None	Other Category 0 - 0%
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**Representative Textbooks and Materials:**

- Radiographic Pathology for Technologists. 8th ed. Kowalczyk, Nina. Mosby. 2021.
- Sectional Anatomy for Imaging Professionals. 4th ed. Peteresen, Connie and Kelley, Lorrie. Mobsy. 2018.
- Instructor prepared materials.