

LAST REVIEW: 2010-2011 **NEXT REVIEW:** 2015-2016 **STATUS:** A

COURSE TITLE: Radiographic Pathology

COMMON COURSE NUMBER: RTE 2782

CREDIT HOURS: 1

CONTACT HOUR BREAKDOWN

CLOCK HOURS:

Lecture: 16 Lab:

Clinic: Other:

PREREQUISITE(S): RTE 2385, RTE 2457, RTE 2457L, RTE 2533, RTE 2834

COREQUISITE(S):

PRE/COREQUISITE(S): RTE 2130, RTE 2130L, RTE 2623, RTE 2844

COURSE DESCRIPTION: An Introduction to the study of human disease and the radiographic appearance of specific diseases. Topics will include: Pathogenesis, disease classification systems, and the study of specific disease of the respiratory, skeletal, gastrointestinal, hepatobiliary, urinary, cardiovascular & hematopoietic, nervous, endocrine and reproductive systems with radiologic imaging considerations.

UNIT TITLES

- | | |
|---|---|
| 1. Pathology Principles | 6. Diseases of the Cardiovascular & Hematopoietic Systems |
| 2. Diseases of the Respiratory System | 7. Diseases of the Nervous System |
| 3. Diseases of the Skeletal System | 8. Diseases of the Endocrine System |
| 4. Diseases of the Gastrointestinal & Hepatobiliary Systems | 9. Diseases of the Reproductive System |
| 5. Diseases of the Urinary System | 10. Miscellaneous Diseases |

EVALUATION: Assessment includes Assignments, Comprehensive Unit Exams, Comprehensive Final Exam.

Common Course Number: RTE 2782

UNITS

Unit 1 Pathology Principles

General Outcome:

- 1.0 The student shall be able to accurately describe the various pathologic conditions occurring in the human body and discuss their general causes.**

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 1.1 Define terms related to pathology.**
- 1.2 Describe the various alterations of cell growth.**
- 1.3 Describe the various hereditary diseases & radiographic manifestations.**
- 1.4 Describe the various immune reactions of the body.**
- 1.5 Discuss the changes in technique relating to pathology.**
- 1.6 Discuss the imaging differences between CT, MRI and sonography with respect to advantages in demonstrating specific pathologies.**
- 1.7 Describe the degeneration-necrosis-inflammation-repair process.**

Common Course Number: RTE 2782

UNITS

Unit 2 Diseases of the Respiratory System

General Outcome:

2.0 The student shall be able to describe the pathophysiology and radiographic manifestations of diseases of the respiratory system.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 2.1** Describe the physiology of the respiratory system.
- 2.2** Identify anatomic structures on diagrams and radiographs of the respiratory system.
- 2.3** Define terminology relating to the respiratory system.
- 2.4** Describe the various pathologic conditions affecting the respiratory system, as well as their radiographic manifestations.
- 2.5** Describe technical factor conversions required when radiographing patients with pathologic conditions affecting the respiratory system.

Common Course Number: RTE 2782

UNITS

Unit 3 Diseases of the Skeletal System

General Outcome:

3.0 The student shall be able to describe the pathophysiology and radiographic manifestations of all the common diseases and disorders of the skeletal system.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 3.1** Describe the physiology of the skeletal system.
- 3.2** Identify skeletal system anatomic structures on diagrams and radiographs.
- 3.3** Define terminology relating to the skeletal system.
- 3.4** Describe pathologic conditions affecting the skeletal system, as well as their radiographic manifestations.
- 3.5** Describe technical factor conversions required when radiographing patients with pathologic conditions affecting the skeletal system.

Common Course Number: RTE 2782

UNITS

Unit 4 Diseases of the Gastrointestinal & Hepatobiliary Systems

General Outcome:

4.0 The student shall be able to describe the pathophysiology and radiographic manifestations of all the common diseases and disorders of the gastrointestinal & hepatobiliary systems.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 4.1** Describe the physiology of the gastrointestinal & hepatobiliary system.
- 4.2** Identify anatomic structures on diagrams and radiographs of the gastrointestinal & hepatobiliary system.
- 4.3** Define terminology relating to the gastrointestinal & hepatobiliary system.
- 4.4** Describe the various pathologic conditions affecting the gastrointestinal & hepatobiliary system, as well as their radiographic manifestations.
- 4.5** Describe technical factor conversions required when radiographing patients with pathologic conditions affecting the gastrointestinal & hepatobiliary system.

Common Course Number: RTE 2782

UNITS

Unit 5 Diseases of the Urinary System

General Outcome:

5.0 The student shall be able to describe the pathophysiology and radiographic manifestations of all the common diseases and disorders of the urinary system.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 5.1** Describe the physiology of the urinary system.
- 5.2** Identify urinary system anatomic structures on diagrams and radiographs.
- 5.3** Define terminology relating to the urinary system.
- 5.4** Describe the various pathologic conditions affecting the urinary system, as well as their radiographic manifestations.
- 5.5** Describe technical factor conversions required when radiographing patients with pathologic conditions affecting the urinary system.

Common Course Number: RTE 2782

UNITS

Unit 6 Diseases of the Circulatory & Hematopoietic Systems

General Outcome:

6.0 The student shall be able to describe the pathophysiology and radiographic manifestations of all the common diseases and disorders of the cardiovascular & hematopoietic systems.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 6.1** Describe the physiology of the cardiovascular & hematopoietic systems.
- 6.2** Identify anatomic structures on diagrams and radiographs of the cardiovascular & hematopoietic systems.
- 6.3** Define terminology relating to the cardiovascular & hematopoietic system.
- 6.4** Describe the various pathologic conditions affecting the cardiovascular & hematopoietic systems, as well as their radiographic manifestations.
- 6.5** Describe technical factor conversions required when radiographing patients with pathologic conditions affecting the cardiovascular & hematopoietic systems.

Common Course Number: RTE 2782

UNITS

Unit 7 Diseases of the Nervous System

General Outcome:

7.0 The student shall be able to describe the pathophysiology and radiographic manifestations of all the common diseases and disorders of the nervous system.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 7.1** Describe the physiology of the nervous system.
- 7.2** Identify nervous system anatomic structures on diagrams and radiographs.
- 7.3** Define terminology relating to the nervous system.
- 7.4** Describe the various pathologic conditions affecting the nervous system, as well as their radiographic manifestations.
- 7.5** Describe technical factor conversions required when radiographing patients with pathologic conditions affecting the nervous system.

Common Course Number: RTE 2782

UNITS

Unit 8 Diseases of the Endocrine System

General Outcome:

8.0 The student shall be able to describe the pathophysiology and radiographic manifestations of all the common diseases and disorders of the endocrine system.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 8.1** Describe the physiology of the endocrine system.
- 8.2** Identify endocrine system anatomic structures on diagrams and radiographs.
- 8.3** Define terminology relating to the endocrine system.
- 8.4** Describe the various pathologic conditions affecting the endocrine system, as well as their radiographic manifestations.
- 8.5** Describe technical factor conversions required when radiographing patients with pathologic conditions affecting the endocrine system.

Common Course Number: RTE 2782

UNITS

Unit 9 Diseases of the Reproductive System

General Outcome:

9.0 The student shall be able to describe the pathophysiology and radiographic manifestations of all the common diseases and disorders of the reproductive system.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 9.1** Describe the physiology of the reproductive system.
- 9.2** Identify anatomic structures on diagrams and radiographs of the reproductive system.
- 9.3** Define terminology relating to the reproductive system.
- 9.4** Describe the various pathologic conditions affecting the reproductive system, as well as their radiographic manifestations.
- 9.5** Describe technical factor conversions required when radiographing patients with pathologic conditions affecting the reproductive system.

Common Course Number: RTE 2782

UNITS

Unit 10 Miscellaneous Diseases

General Outcome:

10.0 The student shall be able to describe the pathophysiology and radiographic manifestations of the common diseases and disorders caused by vitamin deficiencies, hereditary abnormalities and other diseases that do not fit easily into a single body system approach to the study of disease.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 10.1** Describe the pathologic conditions caused by various vitamin deficiencies.
- 10.2** Define terminology relating to the nutritional disorders.
- 10.3** Describe the pathologic conditions associated with: sarcoidosis, muscular dystrophy, melanoma, and systemic lupus erythematosus.
- 10.4** Describe hereditary abnormalities including chromosomal aberrations and genetic amino acid disorders.