**ESSEX COUNTY COLLEGE**

**Nursing and Allied Health Division**

**RTC 200 – Radiographic Pathology**

**Course Outline**

**Course Number & Name:**  RTC 200 Radiographic Pathology

**Credit Hours:**  2.0 **Contact Hours:**  2.0 **Lecture:** 2.0 **Lab:**  N/A **Other:**  N/A

**Prerequisites**:  Grade of “C” or better in RTC 112

**Co-requisites:** RTC 201, RTC 202, RTC 203, RTC 204, and RTC 205 **Concurrent Courses:** None

**Course Outline Revision Date:**  Fall 2011

**Course Description: T**his course deals with application of X-ray technology on seriously ill or injured patients to produce informative radiographs.  Students learn about anatomical changes resulting from disease and/or injury and how to take radiographs that are most informative for diagnosis and treatment.  Critiques of radiographic films are conducted at the classroom and clinical sites.

**Course Goals:** Upon successful completion of this course, students should be able to do the following:

1. identify common radiographic pathology, indicated imaging procedures, and imaging techniques;

2. define terminology and classifications associated with the disease process;

3. identify the radiographic appearance of the diseases; and

4. recognize the signs, symptoms, etiology, target areas of the disease, prognosis, and common treatments.

**Measurable Course Performance Objectives (MPOs)**: Upon successful completion of this course, students should specifically be able to do the following:

1. Identify common radiographic pathology, indicated imaging procedures, and imaging techniques:

1.1 *classify diseases in terms of their attenuation of x-ray photons; correlate to technical factor selection*;

1.2 *describe the various systemic classifications of disease in terms of etiology, manifestations, diagnosis, treatment, common sites, and prognosis;* and

1.3 *identify modality of choice for diagnosis and/or evaluation of disease or pathology*

**Measurable Course Performance Objectives (MPOs)** (continued):

2. Define terminology and classifications associated with the disease process:

2.1 *identify diseases caused by or contributed to genetic factors and diseases associated with autoimmune deficiency*;

2.2 *list and describe the case of tissue disruption and the healing process;*

2.3 *define basic terms related to pathology;* and

2.4 *discuss the classification of disease and the staging process*

3. Identify the radiographic appearance of the diseases:

3.1 *identify the radiographic appearance of common diseases of the respiratory, skeletal, gastrointestinal, urinary, cardiovascular, reproductive, hemopoetic, endocrine, and nervous systems;*

3.2 *identify diseases that MRI is indicated for diagnosis;*

3.3 *identify diseases that CT is indicated for diagnosis;*

3.4 *identify diseases that ultrasound is indicated for diagnosis;*

3.5 *identify diseases that interventional radiography is indicated for diagnosis;*

3.6 *identify benefits of nuclear medicine in diagnose;* and

3.7 *identify diseases diagnosed by mammograms*

4. Recognize the signs, symptoms, etiology, target areas of the disease, prognosis, and common treatments:

4.1 *list signs and symptoms associated with diseases of the respiratory, skeletal, gastrointestinal, urinary, cardiovascular, reproductive, hemopoetic, endocrine, and nervous systems;* and

4.2 *recognize the need for and describe proper patient care in trauma situations*

**Methods of Instruction**: Instruction will consist of lecture, class discussions/participation, Power Point slide shows, class activities, radiograph review, and laboratory activities.

**Outcomes Assessment:** Test and exam questions are blueprinted to the course objectives which are based on the minimum standards required by the American Radiology of Radiologic Technologists (ARRT) and the American Society of Radiologic Technologists (ASRT) suggested course curriculum. Note: Tests and exams are primarily structured in multiple-choice formats in conjunction with the ARRT exam. Also, checklist rubrics may be used to evaluate students for the level of mastery of course objectives.

**Course Requirements:** All students are required to:

1. Read the textbook and do the suggested homework problems in a timely manner.

2. Attend and be an active participant in all classes.

3. Take tests/exams in class and adhere to the test/exam schedule.

4. Turn off cell phones while in class.

5. Remain in the classroom during the entire class period.

6. Earn a “C” or better to pass this class. Students who do not earn a “C” or better will be required to withdraw from the Radiography Program as per program policy.

**Methods of Evaluation:** Final course grades will be computed as follows:

**% of**

**Grading Components final course grade**

* 4 or more Tests (dates specified by the instructor)  50%

Tests will be administered regularly throughout the semester to test student mastery of course objectives.

* **Midterm Exam** (date specified by the instructor)  **20%**

The midterm exam format may consist of multiple choice, short answer, and true/false questions and will include material from the readings, homework, lectures, and labs covered throughout the semester. The midterm exam will test the students’ mastery of course objectives and synthesis of course material covered from the beginning through the first half of the semester.

* **Final Exam**  **30%**

The final exam format may consist of multiple choice, short answer, and true/false questions and will include material from the readings, homework, lectures, and labs covered throughout the semester. The final exam will test the students’ mastery of course objectives and synthesis of course material covered throughout the entire semester.

**Academic Integrity:** Dishonesty disrupts the search for truth that is inherent in the learning process and so devalues the purpose and the mission of the College. Academic dishonesty includes, but is not limited to, the following:

* plagiarism – the failure to acknowledge another writer’s words or ideas or to give proper credit to sources of information;
* cheating – knowingly obtaining or giving unauthorized information on any test/exam or any other academic assignment;
* interference – any interruption of the academic process that prevents others from the proper engagement in learning or teaching; and
* fraud – any act or instance of willful deceit or trickery.

Violations of academic integrity will be dealt with by imposing appropriate sanctions. Sanctions for acts of academic dishonesty could include the resubmission of an assignment, failure of the test/exam, failure in the course, probation, suspension from the College, and even expulsion from the College.

**Student Code of Conduct:** All students are expected to conduct themselves as responsible and considerate adults who respect the rights of others. Disruptive behavior will not be tolerated. All students are also expected to attend and be on time for all class meetings. No cell phones or similar electronic devices are permitted in class. Please refer to the Essex County College student handbook, Lifeline, for more specific information about the College’s Code of Conduct and attendance requirements.

**Course Content Outline:** based on the text **Radiographic Pathology for Technologists,** 5thedition, by Nina Kowalczyk and James D Mace; ISBN-13 #: 978-0-323-04887-3

**Week Topics covered**

1 Definitions, terminology, manifestations of pathology

Imaging and technique considerations

Begin skeletal system

2 Skeletal system (continued)

3 – 4 **Test 1** on definitions and the skeletal system

Digestive system

5 – 7 **Test 2** on the digestive system

Urinary system

Reproductive system

8 **Midterm Exam** on definitions, skeletal, digestive, urinary, and reproductive systems

Begin respiratory system

9 – 11 Respiratory system (continued)

Circulatory system

12 – 14 **Test 3** on Respiratory and circulatory systems

Endocrine system

Nervous system

**Test 4** on Nervous system

15 **Final Exam**