RUTGERS
School of Health Professions

Department of Clinical Laboratory & Medical Imaging Sciences
Radiologist Assistant Program
MSRA 5110 Pathophysiology for Radiologist Assistant

Course Description

This course describes the biology of various diseases. It builds on the knowledge that the students have acquired as a radiographer and builds upon it. The course will look at human biology, the manifestations of various diseases, and how diseases disrupt normal physiology, anatomy and biochemistry. Knowing how diseases disrupt normal physiology can also help to understand the rationale behind many types of treatment and radiographic appearance. Students that possess an understanding of the functional basis for disease will be better able to understand what may be occurring in their patient and the rationale for various types of therapy. This is a required course based on the curriculum set forth by the American Society of Radiologic Technologist and the standards set by the American Registry of Radiologic Technologist for advanced standing examination of the radiologist assistant. It is expected that for a web based course, outside work (reading, research, on-line discussions, etc.) will require 2-3 times the number of hours for each credit. Provide course description from approved CCCR syllabus.

Credits/Modes of Instruction

3 (Web Based 240-300 hours directed study).

Prerequisites

Learning Management Orientation

Course Goals and Objectives:

Goals

To provide students with a comprehensive understanding of normal physiology of the body and the consequences of diseases on the normal physiology. This in-depth study of the pathophysiological condition will equip the RA students to help assess multi-organ system dysfunctions. These basic understandings combined with critical thinking will enable the students to progress through the curriculum with a knowledge and analytical base necessary to excel during their clinical experiences. Ultimately, the factual material and critical clinical thinking ability acquired in the multi-organ dysfunction case studies will provide the basics and rationale for selective pharmacotherapy and the understanding of its use in varying disease states.

Objectives

The student should be able to:

- Discuss the pathophysiologic changes that occur as result of cellular inquiry.

• Analyze the role of the immune system in disease processes.

• Analyze the role of fluid/electrolyte and acid/base balance in maintaining physiologic homeostasis.

• Relate understanding of basic concepts of pathophysiology, including cellular inquiry, fluid/electrolyte to balance, acid –base balance, and immune response, to pathophysiologic changes that occur in selected disease processes.