MORAVIAN COLLEGE
School of Nursing
RM 235 Priscilla Payne Academic Center
Bethlehem, Pennsylvania

COURSE NO: NURS 530

COURSE TITLE: Advanced Pathophysiology

CREDIT HOURS: Three

SEMESTER: Fall 2015

CONTACT HOURS: 3 hours of lecture weekly

INSTRUCTOR: Ann Marie Szoke, DNP, CRNP
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TEXTBOOKS:
Required:

Porth, C.M. & Matfin, G. (2008). *Pathophysiology: Concepts in altered health states (9th ed.)*. Philadelphia, PA: Lippincott, Williams, & Wilkins.

PREREQUISITES: None

COURSE DESCRIPTION:
This course introduces advanced models of mechanisms that result in disease, with an emphasis on dysfunction at the genetic, cellular, tissue, and organ levels. Students are provided foundational concepts in pathophysiological processes that may be applied to advanced specialty areas.

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

1. Explain the natural history and clinical manifestation of common acute and chronic diseases in terms of their etiology, risk factors, and pathogenesis.
2. Discuss genetic, cellular, and tissue adaptive responses to stress, injury, and illness that may or may not result in disease.
3. Describe the relationship between pathophysiological processes and alterations in body structure and function.

4. Evaluate the influence of age and gender on the occurrence of select diseases across the lifespan.
5. Integrate advanced concepts to understand the pathophysiological sequence of events that occurs with multi-system diseases.
6. Identify the physiological rationale for requesting various studies useful in diagnosing common diseases.
7. Explain the physiological rationale that undermines select treatments prescribed for acute and chronic diseases.

TEACHING METHODS:
Lecture, discussion, select audiovisuals, case study analysis.

EVALUATION:
Course grades are based on the following numerical equivalencies:

A = 93-100	C = 73-76.99
A- = 90-92.99	C- = 70-72.99
B+ = 87-89.99	D+ = 67-69.99
B = 83-86.99	D = 64-66.99
B- = 80-82.99	D- = 60-63.99
C+ = 77-79.99	F = Below 60

All examinations will utilize multiple choice items. The following examinations and assignments are weighted as noted to calculate the student's final course grade:

Examination #1:	30%
Examination #2	30%
Examination #3	30%
Discussion assignments	10%

Examinations:
The multiple choice examinations will be administered at designated time as noted in this syllabus. Students will be expected to complete the exam within a 2 hour timeframe. Students are expected to comply with the Academic Honesty policy of Moravian College while testing, and are expected to take each test without consulting texts, notes, or other knowledgeable persons, etc., unless otherwise directed to do so by faculty. There are absolutely no make-up examinations/assignments, and the faculty reserves the right to assign a zero for any missed exam for all but verifiable health emergencies.

Homework Discussions:
These are discussion based assignments. Faculty expectations for these assignments include the following:

> Students will complete three discussion assignments on blackboard. These will consist of a question related to a topic in one of the power point presentations or a topic discussed in one of the weeks clinical issues**.** Students are required to

complete all three assignments for a total of 10% of the grade. The assignments will be due in between the tests, they will be graded on points for initial answer to the discussion question and then you will be required to answer two of you fellow classmates posts.

The overall purpose of the black board discussion assignments are to encourage dialogue among students. Failure to complete the assignment will result in a failing grade for the semester.

ACADEMIC HONESTY:
Academic honesty in all course-related assignments is an expectation of this course. Students who plagiarize on assignments will receive a zero for the assignment. Students who cheat on examinations will receive a zero for that examination. Students who plagiarize or cheat will be prosecuted in accordance with policies outlined in the *Moravian College Student Handbook*.

LEARNING DISABILITIES:
Students who wish to request accommodations in this class for a disability should contact the Academic Support Center, located on the first floor of Monocacy Hall (extension 1401). Accommodations cannot be provided until authorization is received from the Academic Support Center.

TOPICAL OUTLINE

Reading on your own for review
Overview of Course
Introduction of key terms
Brief review of cell and tissue characteristics
Cellular adaptation, injury and death

Readings: Porth - Chapter 5 (**if you need a detailed review of cell and tissue characteristics, then Chapter 4 too**)

September 2: Week I

Genetic control of cell function and inheritance
Genetic and congenital disorders
Neoplasia

Readings: Porth - Chapters 6, 7 and 8

Blood cells and the hematopoietic system
Disorders of hemostasis
Disorders of red blood cells
Disorders of white blood cells and lymphoid tissues

Readings: Porth – Chapters 25, 26, 27, and 28

Assignment # 1 (open September 9 until 15)

September 9: Week II

Structure and function of the cardiovascular system
Disorders of blood flow in the systemic circulation
Disorders of cardiac function
Heart failure and circulatory shock
Disorders of cardiac conduction and rhythm

Readings: Porth - Chapters 29,31,32,33, and 34

September 16: Week III

Structure and function of the respiratory system
Respiratory tract infections, neoplasms and childhood disorders
Disorders of ventilation and gas exchange

Readings: Porth – Chapters 35,36, and 37

Exam 1: Will cover material from Week 1,2,3. Exam will be distributed at end of class September 16 and you will have until beginning of class September 23, 2015 to return the test.

Septemberr 23: Week IV

Structure and function of the kidney
Disorders of fluid and electrolyte balance
Disorders of acid-base balance
Disorders of renal function
Acute renal failure and chronic kidney disease
Disorders of the bladder and lower urinary tract

Readings: Porth – Chapters 38,39,40,41,42, and 43

Mechanisms of endocrine control
Disorders of endocrine control of growth and metabolism
Diabetes mellitus and the metabolic syndrome

Readings: Porth – Chapters 48, 49, and 50

Assignment #2 : (Open October 24 – October 30)

September 30: Week V

Structure and function of the gastrointestinal system
Disorders of gastrointestinal function
Disorders of hepatobiliary and exocrine pancreas function

Readings: Porth – Chapters 44, 45, and 46

Structure and function of the male genitourinary system
Disorders of the male genitourinary system
Structure and function of the female genitourinary system
Disorders of the female genitourinary system

Readings: Porth – Chapters 51, 52, 53, an

Exam 2 will be distributed at the end of class September 30 and will be due back beginning of class October 7, 2015. It will cover material from lectures in week IV and V.

October 7: Week V

Structure and function of the musculoskeletal system
Disorders of musculoskeletal function: Trauma, infection, and neoplasms
Disorders of musculoskeletal function: Rheumatic disorders

Readings: Porth – Chapters 56, 57 and 59

Neuro:
Organization and control of neural function
Somatosensory function, pain and headache
Disorders of motor functions
Disorders of brain function
Disorders of thought, emotion, and memory

Readings: Porth – Chapters 17,18,19,20, and 22

Assignment #3: (open October 8 thru 13)

October 15: Week VII

Mechanisms of infectious disease
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Inflammation, tissue repair and wound healing
Disorders of the immune response
Acquired immunodeficiency syndrome

Readings: Porth – Chapters 12,13,14,15, and 16

Exam 3 will be distributed at end of class October 15 and will be due on October 21 before you head over to lecture. This will cover material from week VI and VII.

October 21: Week VIII

We will meet at class room to collect test and all head over to the Sipple lecture on campus. This will be your last class.