

MORAVIAN COLLEGE

COURSE NO: Biology 205

COURSE TITLE: Pathophysiology

SEMESTER: Fall, 2007

INSTRUCTOR: Kerry H. Cheever, PhD, RN, Professor
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TEXTBOOKS:Required:

Porth, C.M. (2007). *Essentials of pathophysiology: concepts of altered health states (2nd ed)*. Philadelphia, PA: Lippincott, Williams, & Wilkins.

PREREQUISITES:

Biology 103 and 104

COURSE DESCRIPTION:

Mechanisms of disease in humans. Emphasis is on dysfunction at cellular, tissue, and organ levels. Chemical, physical, and genetic stress factors are examined to understand how they affect human systems.

COURSE OBJECTIVES:

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

1. Understand genetic, cellular, and tissue adaptive responses to stress and injury.
2. Recognize the etiology and pathogenesis of common diseases.
3. Discuss the natural history and clinical manifestation of common diseases.
4. Describe the relationship between pathophysiological processes and alterations in body structure and/or function.

TEACHING METHODS:

Lecture, discussion, select audiovisuals, case study analyses.

EVALUATION:

Course grades are based on the following numerical equivalencies:

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

Examinations:

All examinations will utilize items with four multiple choice responses. Only one response will be correct. This type of format will help to prepare the student to successfully take the nursing board examination (i.e., NCLEX-RN). Examinations include quizzes, a mid-term examination, and a final examination. The mid-term examination will test all course content covered from the beginning of the term, and the final examination will test all course content covered since the mid-term examination. Students will be allotted the entire class/testing period to take the mid-term and the final examinations. Quizzes will be given at the beginning of class, and will include 20 items. ALL students will be allotted 30 minutes to take the quizzes, beginning with the first minute of class. Lateness to class for ANY reason will not merit extra testing time. A total of seven quizzes will be administered, and the student may drop the lowest quiz grade. There will be no quiz makeups. Absence during a quiz for any reason, even verifiable illness or family emergency, will not merit a makeup.

Short Papers on Diseases:

Students will each submit two short papers over the course of the semester on diseases of their own choosing. These papers will focus on a disease, which may be either a common disease or an obscure disease, as long as the disease is not discussed in advance of paper submission in classroom lectures (refer to topical content to determine which diseases should be excluded). Any student who wishes to discuss selection of a disease with the course faculty is welcome to do so. These papers should follow the standard stylistic requirements for nursing majors, which utilizes style elements from the *American Psychological Association Manual (APA)* (5th edition). Group papers are not acceptable.

Papers must be submitted by the due date or the student will receive a zero for the assignment. Early submissions are very welcome.

Required elements of these papers include the following:

- 2-4 pages in length (standard 8.5” x 11” paper), not including the title page and references, using one inch margins, double-spaced, 12 point, Times New Roman font. Do not include an abstract. Papers that do not adhere to these requirements will not be reviewed nor accepted.
- Writing style and grammar (please utilize full sentences and paragraphs) 15%
- References: 2-4 peer-reviewed citations, not including sources that include *Wikipedia* and other non-reviewed sources. One source may be the textbook for this course. 10%

Sections:

- General Characteristics 15%
- Risk Factors: if relevant, please include the following: 15%
 - Discussion of Genetic Transmission
 - Discussion of Disease Transmission
- Clinical Manifestations 15%
- Natural Course of Disease 15%
- Levels of Prevention/Treatment 15%

Course Grades:

Quizzes (highest six of seven)	30%
Mid-Term Examination	25%
Final Examination	25%
Disease Papers (10% each)	20%

COURSE ATTENDANCE POLICY

Students are expected to attend class but will not merit extra points for class attendance, nor have points deducted for lack of attendance. Students are expected to read assigned textbook readings prior to class, and review relevant concepts from Anatomy and Physiology prior to class lectures. Students who are experiencing course-related difficulty should consult the course faculty in a timely and constructive manner.

ACADEMIC HONESTY

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

COURSE OUTLINE

<u>Date:</u>	<u>Lecture Content and Student Assignments</u>
August 28	Overview of Course Introduction of Key Terms Cellular adaptation, injury, & healing <u>Readings:</u> Porth, Chapter 2
August 30	Genes, gene-environment interaction, genetic anomalies <u>Readings:</u> Porth, Chapters 3 & 4
September 4	Oncogenesis, cancer clinical manifestations & treatment <u>Readings:</u> Porth, Chapter 5
September 6	Quiz #1 Hematopoiesis Hemostasis Coagulopathies <u>Readings:</u> Porth, p. 179-181, and Chapter 10
September 11	Anemias <u>Readings:</u> Porth, Chapter 11
September 13	Leukocytic and lymphoid disorders <u>Readings:</u> Porth, Chapter 9
September 18	Quiz #2 Immune responses and immune disorders <u>Readings:</u> Porth, Chapters 13 & 15

<u>Date:</u>	<u>Lecture Content and Student Assignments</u>
September 20	Inflammatory responses <u>Readings:</u> Porth, Chapter 14
September 25	Clinical manifestations of infectious diseases and their treatment <u>Readings:</u> Porth, Chapter 12
September 27	Quiz #3 Cardiovascular disorders Hypertension <u>Readings:</u> Porth, Chapters 16 & 17
October 2	Coronary artery disease <u>Readings:</u> Porth, Chapter 18
October 4	First Disease Paper Due Heart failure <u>Readings:</u> Porth, Chapter 19
October 11	Female reproductive disorders Menstrual disorders Breast disorders <u>Readings:</u> Porth, Chapter 39
October 16	Quiz #4 Male reproductive disorders Testicular and prostatic disorders <u>Readings:</u> Porth, Chapter 38

<u>Date:</u>	<u>Lecture Content and Student Assignments</u>
October 18	MidTerm Examination
October 23	Pulmonary disorders Ventilation-perfusion mismatch Restrictive pulmonary diseases <u>Readings:</u> Porth, Chapters 20 & 21
October 25	Obstructive pulmonary diseases <u>Readings:</u> Porth, Chapter 22
October 30	Renal disorders Acid-base, fluid & electrolyte regulation <u>Readings:</u> Porth, Chapter 23
November 1	Quiz #5 Acute and chronic renal failure <u>Readings:</u> Porth, Chapter 25
November 6	Gastrointestinal disorders Peptic ulcer disease Inflammatory bowel diseases <u>Readings:</u> Porth, Chapters 27 & 28
November 8	Hepatobiliary and exocrine pancreatic disorders Hepatitis & cirrhosis <u>Readings:</u> Porth, Chapter 29
November 13	Quiz #6 Musculoskeletal disorders Bone fractures <u>Readings:</u> Porth, Chapters 41 & 42

<u>Date:</u>	<u>Lecture Content and Student Assignments</u>
November 15	Rheumatic diseases <u>Readings:</u> Porth, Chapter 43
November 20	Second Disease Paper Due Neurological disorders Somatosensory disorders Nociception <u>Readings:</u> Porth, Chapters 33 & 34
November 27	Motor function disorders <u>Readings:</u> Porth, Chapter 35
November 29	Quiz #7 Brain function disorders Disruption in thought and mood <u>Readings:</u> Porth, Chapter 36
December 4	Endocrine disorders Thyroid disorders <u>Readings:</u> Porth, Chapters 30 & 31
December 6	Diabetes mellitus <u>Readings:</u> Porth, Chapter 32