



**St. Luke's University Hospital School of Nursing  
at Moravian College  
Bethlehem, PA**



**BIO205: Pathophysiology  
Fall 2012**

**Faculty:** Jennifer A. Specht, PhD, RN

**Email:** [Jennifer.Specht@Moravian.edu](mailto:Jennifer.Specht@Moravian.edu)

**Phone:** (610) 625-7720

**Office:** Hamilton Hall 205

**Office Hours:** Mondays: 1030a – 1230p

Wednesdays: 1030a – 1230p; 230p – 430p

Fridays: By appointment

**TEXTBOOKS:**

Required:

Porth, C. M. (2011). *Essentials of pathophysiology (3rd ed)*. Philadelphia, PA: Lippincott, Williams, & Wilkins.

**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. (Prerequisites: Biology 103 and 104)

**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.

**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  |

### 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 eight quizzes will be administered, and the student may drop the lowest two quiz grades. There will be no quiz make-ups. Absence during a quiz for any reason, even verifiable illness or family emergency, will not merit a make-up.

### Class Participation:

Each class day will begin promptly at 1:10 P.M. and end at 2:20 P.M. At any time during those class periods, students may be asked to respond to questions using their electronic Student Response Systems (i.e., iClickers™). The correct answers to these items will be discussed in class promptly after students have finished responding to them (and each item will be allotted up to one full minute to complete). Students may not share, borrow, or exchange iClickers with each other or risk paying the penalty for cheating (refer to a later discussion on “Academic Honesty” in this syllabus).

Students must register their iClickers before the second week of classes begins. They are also advised to complete the online training tutorial by the end of the first week of classes so that they are ready to begin to participate in class using this technology. Without completing these processes, they risk missing the opportunity to gain class participation points. Students must register their iClickers on the following website: [www.iClicker.com](http://www.iClicker.com). Note that on the bottom of this homepage, there is a link to “Register Your iClicker.” Students should link onto this, follow the directions as specified on that page to register their iClickers, and then link to the iClicker tutorial that is on the next page and complete the tutorial.

Students will begin to earn class participation points after the first week of class. On some days, the class may begin promptly at 1:10 P.M. with one or two items derived from content learned during the previous class day and/or from assigned textbook readings for that day or the previous class. Students are responsible for bringing their iClickers to class with them on a daily basis and assuring that the batteries are fully charged. It is in students’ best interests to arrive to class promptly with iClickers that are turned on so that they are ready to respond. There will be no opportunities given for tardy students to makeup those items.

Students may also be required to respond to items in the midst of any given lecture. Students who leave class early will likewise not be given opportunities to makeup those items. These items will be derived from content learned during the lectures.

Those students who miss a class for a verifiable serious illness, emergency, educational trip, or varsity sporting event will not be held liable for missed participation points on those days. Please note that these cases must be verified as appropriate. Whether or not the absence is considered excusable is left to the discretion of the course faculty.

Students will earn one point for each question answered and an additional point if the item is answered correctly. At the end of the semester, points earned (i.e., all item points that the student earned over the course of the semester) will be divided by the maximum possible points (i.e., number of items posted over the course of the semester multiplied by two points) to calculate the participation grade.

Course Grades:

|                                |     |
|--------------------------------|-----|
| Quizzes (highest six of eight) | 30% |
| Mid-Term Examination           | 30% |
| Final Examination              | 30% |
| Class Participation            | 10% |

**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 the course faculty. Students who cheat on iClicker responses, quizzes or other examinations will receive a zero for that day's activities/assignment. Students may not receive nor send text messages or email messages during class. Likewise, students may not use their cellular phones during class. It will be assumed that students who use this type of technology during class are cheating. Students found using this technology will receive grades of zero for any participation points and on quizzes or examinations given during that entire class period. In addition, students who 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 Elaine Mara, assistant director of learning services for academic and disability support at 1307 Main Street, or by calling 610-861-1510. Accommodations cannot be provided until authorization is received from the Academic Support Center.

**It is within the instructor's purview to apply qualitative judgment in determining grades for an assignment or for the course.**

**The syllabus is subject to change at the discretion of the instructor.**

**COURSE OUTLINE: \*\*All reading assignments must be completed prior to class\*\***

| <b><u>Date:</u></b> | <b><u>Lecture Content and Student Assignments</u></b>   |
|---------------------|---|
| August 27           | Overview of Course<br>Introduction to iClickers™<br>Introduction of Key Terms<br>Cellular Responses to Stress, Injury and Aging<br><br><u>Readings:</u><br>Porth, Introduction Section (xix-xxiv) and Chapter 2   |
| August 29           | Inflammatory Response<br>Cell Proliferation and Tissue Regeneration and Repair<br><br><u>Readings:</u><br>Porth, Chapters 3 and 4   |
| September 3         | NO CLASS – Labor Day Holiday  |
| September 5         | <b>IClicker PARTICIPATION POINTS BEGIN ON THIS DATE</b><br><br>Genetic Control of Cellular Function and Inheritance<br>Genetic Disorders<br><br><u>Assignment:</u> Register iClickers and complete tutorial prior to class<br><br><u>Readings:</u><br>Porth, Chapters 5 and 6 |
| September 10        | <b>Quiz #1 (Chapters Intro/2, 3/4, and 5/6)</b><br>Neoplasia<br><br><u>Readings:</u><br>Porth, Chapter 7  |
| September 12        | White Blood Cell and Lymphoid Tissue Disorders<br><br><u>Readings:</u><br>Porth, Chapter 11   |
| September 17        | Disorders of Hemostasis<br><br><u>Readings:</u><br>Porth, Chapter 12  |

| <u><b>Date:</b></u> | <u><b>Lecture Content and Student Assignments</b></u>   |
|---------------------|---|
| September 19        | Red Blood Cell Disorders<br><br><u>Readings:</u><br>Porth, Chapter 13   |
| September 24        | <b>Quiz #2 (Chapters 7, 11, 12 and 13)</b><br>Disorders of the Male Genitourinary System<br><br><u>Readings:</u><br>Porth, Chapter 39                     |
| September 26*       | <i>Guest Lecturer: Dr. Lori Hoffman, Associate Professor</i><br>Disorders of the Female Genitourinary System<br><br><u>Readings:</u><br>Porth, Chapter 40 |
| October 1           | Mechanisms of Infectious Disease<br><br><u>Readings:</u><br>Porth, Chapter 14   |
| October 3           | <b>Quiz #3 (Chapters 39, 40 and 14)</b><br>Immunity and Immune Response Disorders<br><br><u>Readings:</u><br>Porth, Chapters 15 and 16                    |
| October 8           | NO CLASS – Fall Break   |
| October 10          | Cardiovascular Function<br><br><u>Readings:</u><br>Porth, Chapters 17   |
| October 15          | <b>Mid-Term Examination (Content covered 8/27-10/3)</b>   |
| October 17          | Disorders of Blood Flow and Blood Pressure<br><br><u>Readings:</u><br>Porth, Chapters 18  |

| <b><u>Date:</u></b> | <b><u>Lecture Content and Student Assignments</u></b>   |
|---------------------|---|
| October 22          | <p><b>Quiz #4 (Chapters 15/16, 17 and 18)</b><br/>Disorders of Cardiac Function</p> <p><u>Readings:</u><br/>Porth, Chapter 19 (no pages 474-483)</p>              |
| October 24          | <p>Heart failure and Circulatory Shock</p> <p><u>Assignment:</u> Attendance at evening Sipple Lecture mandatory</p> <p><u>Readings:</u><br/>Porth, Chapter 20</p> |
| October 29          | <p>Respiratory Function and Respiratory Tract Infections</p> <p><u>Readings:</u><br/>Porth, Chapters 21 and 22 (no pages 554-563)</p>                             |
| October 31          | <p><b>Quiz #5 (Chapters 19, 20 and 21/22)</b><br/>Obstructive Airway Disorders</p> <p><u>Readings:</u><br/>Porth, Chapter 23 (only pages 573-586)</p>             |
| November 5          | <p>Kidney Function<br/>Acute Renal Failure and Chronic Kidney Disease</p> <p><u>Readings:</u><br/>Porth, Chapters 24, 25 (only pages 620-627) and 26</p>          |
| November 7          | <p>Gastrointestinal Function and Disorders</p> <p><u>Readings:</u><br/>Porth, Chapters 28 and 29</p>  |
| November 12         | <p><b>Quiz #6 (Chapters 23, 24-26 and 28/29)</b><br/>Hepatobiliary Function</p> <p><u>Readings:</u><br/>Porth, Chapter 30 (no pages 752-757)</p>                  |

| <b><u>Date:</u></b> | <b><u>Lecture Content and Student Assignments</u></b>  |
|---------------------|--|
| November 14         | Endocrine Control and Disorders<br><br><u>Readings:</u><br>Porth, Chapters 31 and 32   |
| November 19*        | <i>Guest Lecturer: Dr. Kerry Cheever, Professor</i><br>Diabetes Mellitus and Metabolic Syndrome<br><br><u>Readings:</u><br>Porth, Chapter 33   |
| November 21         | NO CLASS – Thanksgiving Break  |
| November 26         | <b>Quiz #7 (Chapters 30, 31/32 and 33)</b><br>Neural Function and Somatosensory Function/Pain<br><br><u>Readings:</u><br>Porth, Chapters 34 (no pages 837-845) and 35 (no pages 883-888) |
| November 28         | Neuromuscular Function Disorders<br>Brain Function Disorders<br><br><u>Readings:</u><br>Porth, Chapters 36 and 37 (no pages 951-955; no pages 959-963)                                   |
| December 3          | <b>Quiz #8 (Chapters 34/35 and 36/37)</b><br>Skeletal System Function and Disorders<br><br><u>Readings:</u><br>Porth, Chapters 42 and 43 (no pages 1113-1127)                            |
| December 5          | Metabolic and Rheumatic Disorders<br><br><u>Readings:</u><br>Porth, Chapter 44   |

Tuesday, December 11<sup>th</sup> at 130pm **Final Examination (Content covered 10/10-12/5)**