

**ADVANCED PATHOPHYSIOLOGY****A Web-Based Learning Course**

**Hello and Welcome** to this course entitled **Advanced Pathophysiology**. My name is Dr. John P. Harley and I will be your instructor for this course. This course is designed for Advanced Practice Nurses. The purpose of this syllabus is to orient you to the course.

**COURSE TITLE:** Advanced Pathophysiology  
(3 hrs credit)

**TEXTBOOK:** *Pathophysiology: The  
Biological Basis for Disease  
in Adults and Children*

McCance & Huether. 7<sup>th</sup> edition Mosby/Elsevier. ISBN: 978-0-323088541  
2014. This is the book I recommend, however, any other advanced  
pathophysiology book will be acceptable.



*in*

**INSTRUCTOR:**

Dr. John P. Harley  
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Foundation Professor,  
Teaching Learning Center Fellow  
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and  
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*All questions about course content should be directed to Dr. Harley. He will respond with in 24-48 hours. If you have not received a response in that time fram please contact him again as the message might not have reached him. For technical assistance during the webcourse contact Emily Woods at [emily.woods1@uku.edu](mailto:emily.woods1@uku.edu) or Hazel Chappel at [hwchap1@email.uky.edu](mailto:hwchap1@email.uky.edu).*

**CLASS:** This class will utilize a technology to enhance active construction of knowledge. This is an internet course that will be available to students through the College/University where they are enrolled. The class time will be asynchronous with students using two specific pathophysiologic web sites, and assignments per module.

**COURSE DESCRIPTION:** This course is designed to present an orientation to disease as disordered physiology. It is intended to enable advanced practice nurses to understand *how* and *why* the symptoms and signs of various conditions appear. In approaching disease as disordered physiology, this course analyzes the mechanism(s) of production of the symptoms and signs of different disease syndromes. In doing so, it recognizes the student's and practitioner's need to understand the mechanism(s) underlying the disease and **its clinical manifestations so that rational therapies can be devised.** Thus, appropriate screening and diagnostic laboratory evaluative methods will also be included.

**COURSE OBJECTIVES:** The advanced practice nurse should possess a well-grounded understanding of normal physiologic and pathologic mechanisms of disease that serves as one primary component of the foundation for clinical assessment, decision making and management. The graduate should be able to relate this knowledge to "interpreting changes in normal function that result in symptoms indicative of illness" and in assessing an individual's response to pharmacologic management of illness. At the completion of this course, students will have the knowledge and skills to:

1. compare and contrast physiologic changes over the life span
2. analyze the relationship between normal physiologic and pathological phenomena produced by altered states across the life span
3. synthesize and apply current research-based knowledge regarding pathological changes in selected disease states
4. describe the developmental physiology, normal etiology, pathogenesis, and clinical manifestations of commonly found/seen altered health states
5. analyze physiologic responses to illness and treatment modalities
6. analyze data with respect to diagnosing client problems

**TEACHING/LEARNING METHODS:** This course will be taught using a combination of 10 modules and specific World-Wide Web sites. **The assumption is made that all students have access to computer facilities, the Internet, a web browser (current Firefox or IE) or higher, Adobe Acrobat and Adobe Flash Player installed, a color printer, and an E-mail address.** Since active learning is required, students are expected to complete all assignments in a timely manner. However, this is student directed and no time limits are set within the technology.

**THE INTERNET AND WEB SITES:** The Internet has been portrayed with a variety of images. Allusions are made to road systems ("the electronic superhighway"), Star Trek adventurers ("internauts in space"), and to a world community (the "electronic global village"). An exciting way to learn about pathophysiology is by using the Internet and different WEB SITES. For any of the different body systems or sites, the Internet offers a broad array of academic and academic related resources:

- professional and governmental archives and databases
- on-line journals
- access to commercial databases and abstract services
- professional discussion via news groups, mailing lists, and discussion groups
- academic and public library catalogs
- grant listings and deadlines
- directories of researchers and research projects funded by federal government
- conference announcements and calls for papers
- academic, government and industry job announcements
- faculty biographies and university course descriptions
- educational and other software

The module activities (assignments) will come from two major Web-Sites:

1. <http://medstat.med.utah.edu/WebPath/webpath.html>

**The Internet Pathophysiology Laboratory for Medical Education**

This web-based resource includes over 1900 images along with text, tutorials, laboratory exercises, and examination items for self-assessment that demonstrates pathophysiologic concepts

2. <http://www.medicinenet.com>

**MedicineNet.com**

This web-based resource lists pathophysiological conditions alphabetically, related terms, a main article, related medical procedures/tests, related news and updates, and related diseases and treatments.

For ease, please bookmark these two sites.

**Evaluation:** There is one posttest for each module which consists of questions from the modules and the two web sites. Each posttest is designed to test your understanding of the material in the module. By completing all of the modules and the final exam with an 80% or more, you will get 3 hours of credit certified by the University of Kentucky. You can only take each posttest twice. The modules are worth 80% of the course grade and the final exam 20%

There are 600 points in the course. The final letter grade will be computed from a percentage of correct questions. The percentage grade will be sent to your school and your letter grade will be computed based on the policy of your school.

For Example:

600 points = 100%  
 540 points = 90%  
 480 points = 80%

**WEB-BASED LEARNING:**

To take this course, each student must:

1. have Internet access
2. register for the course
3. follow instruction
4. set up an account
5. receive an enrollment key for the course

**MODULE TOPICS AND ASSIGNMENTS**

| <b>MODULE</b>            | <b>MAJOR TOPIC</b>  |
|--------------------------|---|
| <b>Module 1</b>          | Introduction to General Pathology: Mechanisms of Disease<br>Pathophysiological conditions from Web Sites 1 & 2, Postest 1 |
| <b>Module 2</b>          | Hematologic Disorders<br>Pathophysiological conditions from Web Sites 1 & 2, Postest 2                                    |
| <b>Module 3</b>          | Cardiovascular Physiology<br>Pathophysiological conditions from Web Sites 1 & 2, Postest 3                                |
| <b>Module 4</b>          | Renal Pathophysiology<br>Pathophysiological conditions from Web Sites 1 & 2, Postest 4                                    |
| <b>Module 5</b>          | Respiratory Pathophysiology<br>Pathophysiological conditions from Web Sites 1 & 2, Postest 5                              |
| <b>Module 6</b>          | Endocrine and Metabolic Disorders<br>Pathophysiological conditions from Web Sites 1 & 2, Postest 6                        |
| <b>Module 7</b>          | Disorders of the reproductive Systems<br>Pathophysiological conditions from Web Sites 1 & 2, Postest 7                    |
| <b>Module 8</b>          | Fluid and Electrolyte Disorders<br>Pathophysiological conditions from Web Sites 1 & 2, Postest 8                          |
| <b>Module 9</b>          | Gastrointestinal Pathophysiology<br>Pathophysiological conditions from Web Sites 1 & 2, Postest 9                         |
| <b>Module 10</b>         | Neurological Disorders<br>Pathophysiological conditions from Web Sites 1 & 2, Postest 10                                  |
| <b>Final Examination</b> |   |