



## **Course Syllabus**

### **HPRS 2301 - Pathophysiology**

**Catalog Description:** Study of the pathology and general health management of diseases and injuries across the life span. Topics include etiology, symptoms, and the physical and psychological reactions to diseases and injuries.

**Prerequisites or Co-requisites:** HITT1305, BIOL 2404

**Semester Credit Hours:** 3

**Lecture Hours per Week:** 3

**Lab Hours per Week:** 0

**Contact Hours per Semester:** 48

**State Approval Code:** 510000

**Instructional Goals and Purposes:** The purpose of this course is to provide students with a basic understanding of factors that contribute to the occurrence of various diseases and how those diseases may be treated by clinical professionals. Students will learn how to recognize the signs and symptoms of diseases that may be found in a health record.

#### **Learning Outcomes:**

1. Distinguish environmental factors, physical, psychosocial, and cognitive characteristics of various diseases and conditions.
2. Identify implications of therapeutic interventions for diseases and conditions.
3. Demonstrate a basic understanding of the concepts and elements of disease.
4. Demonstrate an understanding of the mechanisms of diseases, the diagnosis of diseases, and the treatment of diseases.
5. Understand the pharmacological treatment of diseases or conditions.
6. Discuss common laboratory and diagnostic tests.

#### **Specific Course Objectives (includes SCANS):**

After studying the material presented in the text and online, the student should be able to complete all behavioral/learning objectives listed below with a minimum competency of 70% on assignments and exams.

##### **1. Demonstrate a basic understanding of the concepts and elements of disease.**

- a. Describe the difference between
  - i. Signs and symptoms of disease
  - ii. Acute and chronic disease
- b. Identify the predisposing factors of disease
- c. Track the essential steps in the diagnosis of disease

**(SCANS 1a-1,iv. 1b-i,iv,v,vi. 2c-i,ii,iii,iv. )**

##### **2. Demonstrate an understanding of the mechanisms of diseases, the diagnosis of diseases, and the treatment of diseases.**

- a. Developmental, Congenital, and Childhood Diseases and Disorders

- i. List the possible causes of congenital anomalies
  - ii. Discuss the purpose and procedure of amniocentesis
  - iii. Distinguish between muscular dystrophy and cerebral palsy
- b. Immunologic Diseases and Conditions
  - i. Name the functional components of the immune system
  - ii. Characterize the three major functions of the immune system
  - iii. Explain the difference between natural and acquired immunity
  - iv. Explain the ways that HIV is transmitted
- c. Diseases and Conditions of the Endocrine System
  - i. Describe the importance of hormones, and explain some of the critical body functions that they control
  - ii. Compare gigantism to acromegaly
  - iii. Classify the two major types of diabetes mellitus
- d. Diseases and Disorders of the Eye and Ear
  - i. Compare the conditions and causes of nystagmus with those of strabismus
  - ii. Name the possible causes of conjunctivitis
  - iii. Compare conductive hearing loss with sensorineural hearing loss
- e. Diseases and Conditions of the Integumentary System
  - i. Explain the functions of the skin
  - ii. Recognize common skin lesions
  - iii. Discuss the possible causes of contact dermatitis, atopic dermatitis, and psoriasis
  - iv. List preventative measures for decubitus ulcers
- f. Diseases and Conditions of the Musculoskeletal System
  - i. Distinguish between the features of lordosis, kyphosis, and scoliosis
  - ii. Differentiate between a strain and a sprain
- g. Diseases and Conditions of the Digestive System
  - i. Discuss the importance of normal teeth and a normal bite
  - ii. Compare the causes of herpes simplex to the cause of thrush
  - iii. Distinguish between the patient with anorexia and the patient with bulimia
  - iv. Describe a hiatal hernia and distinguish among the types of abdominal hernias
- h. Diseases and Conditions of the Respiratory System
  - i. Explain the process of respiration
- j. Discuss the causes and medical treatment for the common cold, sinusitis, and pharyngitis
- k. Diseases and Conditions of the Circulatory System
  - i. Explain the difference between myocardial infarction and angina pectoris
  - ii. Explain what happens when the pumping action of the heart fails
- l. Compare arteriosclerosis with atherosclerosis
- m. Define anemia, and list the presenting symptoms
- n. Diseases and Conditions of the Urinary System
  - i. Explain the diagnostic value of urinalysis
  - ii. Describe diabetic nephropathy
  - iii. Define stress incontinence
- o. Diseases and Conditions of the Reproductive System
  - i. Identify risk factors for STD's
  - ii. Explain what is meant by a silent STD
  - iii. Explain how genital herpes is transmitted
  - iv. Explain the value of prostate-specific antigen (PSA) as a screening test
- p. Neurologic Diseases and Conditions
  - q. List some of the problems to which the nervous system is susceptible
  - r. Name the common symptoms and signs of a CVA
  - s. Define a transient ischemic attack
  - t. Describe three mechanisms of spinal injury
- q. Mental Disorders

- i. Name some contributing factors to mental disorders
- ii. Relate treatment options for alcohol abuse
- iii. Name the classic signs and symptoms of schizophrenia
- iv. Explain the difference between reactive depression and a major depressive disorder
- v. Explain how posttraumatic stress disorder differs from other anxiety disorders
- iii. Disorders and Conditions Resulting from Trauma List the major types of trauma List environmental factors that may result in trauma Distinguish between an abrasion and an avulsion Explain the rule of nines

**(SCANS 1a-1,iv. 1b-i,iv,v,vi. 2c-i,ii,iii,iv. )**

**3. Understand the pharmacological treatment of diseases or conditions.**

- a. Identify substances used to prevent or treat conditions or diseases.

**(SCANS 1a-1,iv. 1b-i,iv,v,vi. 2c-i,ii,iii,iv. )**

**4. Discuss the common laboratory and diagnostic tests.**

- a. Obtain a basic understanding of the need for various laboratory and diagnostic tests in the diagnosis and treatment of disease.

**(SCANS 1a-1,iv. 1b-i,iv,v,vi. 2c-i,ii,iii,iv. )**

**Course Content:**

A general description of lecture/discussion topics included in this course are listed in the Learning Outcomes/Specific Course Objectives sections of this syllabus.

Students in all sections of this course will be required to do the following:

1. Demonstrate knowledge of course material by completing midterm examination and final examination under proctor supervision at either Panola College or an official Panola College testing center.
2. Read all class lecture material, which has been provided in an online format.
3. Use the current learning management system (LMS) to access assignments and course materials.
4. Use the current LMS email to communicate with the instructor.
5. Interact with other students through online discussion groups.
6. Complete all online assignments.

**Methods of Instruction/Course Format/Delivery:**

- Students in the Internet class will have access to this course via the current LMS.
- All assignments will be submitted through the current LMS. After the assignment has been graded, the student will be able to view his or her grades by clicking the Grades link in the left banner.
- Students should use the Email within the LMS to communicate with the instructor. This email gives you access to the instructor and other classmates without having to remember or type email addresses- you must select a name from the list. If you are not able to contact me using this email, you may use my Panola College email address, contact me by telephone, or stop by my office. I attempt to respond to all email within 24 hours. Please always include a subject line and your name in your email.

**Major Assignments / Assessments:**

The following items will be assigned and assessed during the semester and used to calculate the student's final grade.

**Assignments**

You will have short quizzes throughout this course. Additionally, throughout the course, you will have discussion questions that you will be required to respond to. As well, you will be required to respond back to the discussion response of at least two of your classmates.

All assignments are due by the scheduled deadline. No late work will be accepted.

1. Participation assignments
2. Discussion questions
3. Case Study Questions Chapter 1-17
4. Chapter Review Quizzes 1-17
5. Research Paper

### **Research Paper**

You will be required to complete a 3 page informative research paper on a disease/condition that we have covered in this course. Each student's topic will be preapproved by the instructor. Deductions will occur for absence of a thesis statement, content, minor and major formatting errors, typographical errors and a bibliography.

Research paper must be typed and double-spaced. Research paper must have a 12 font and standard margins. You must cite your references and you must turn in a bibliography. No bibliography equals no credit for the paper.

All research papers are due by the scheduled deadline. No late work will be accepted. Failure to turn in a paper will result in a final grade of F, regardless of average.

### **Assessments/Exams**

You will be required to demonstrate what you have learned by completing course examinations. **You will have major exams that will be taken at a Panola College testing center. You will be required to complete your midterm examination and final examination at Panola College or an official Panola College testing center. You will not be permitted to use any textbooks, notes, or study guide material to complete your examinations.**

1. 3 Major exams
2. 1 Final exam (compressive)

### **Course Grade:**

The grading scale for this course is as follows:

- Discussion and Participation 10%
- Research paper 15%
- Major exams 30%
- Chapter quizzes, Assignments 30%
- Final exam 15%

### **Grading Scale:**

- 90- 100..... A
- 80-89..... B
- 70-79..... C
- 60-69..... D
- Below 60..... F

All final grades will be posted to Campus Connect.

### **Texts, Materials, and Supplies:**

- *Disease of the Human Body*, Sixth Edition, Carol D. Tamparo, F.A.Davis, Copyright 2016
- Medical Dictionary
- Pharmacology Book

### **Required Readings:**

- *Disease of the Human Body*, Sixth Edition, Carol D. Tamparo, F.A.Davis, Copyright 2016

### **Other:**

- For current texts and materials, use the following link to access bookstore listings:  
<http://www.panolacollegestore.com>

- For testing services, use the following link: <http://www.panola.edu/elearning/testing.html>
- If any student in this class has special classroom or testing needs because of a physical learning or emotional condition, please contact the ADA Student Coordinator in Support Services located in the Administration Building or go to <http://www.panola.edu/student-success/disability-support-services/> for more information.
- Withdrawing from a course is the student's responsibility. Students who do not attend class and who do not withdraw will receive the grade earned for the course.
- Student Handbook, *The Pathfinder*: <http://www.panola.edu/student-success/documents/pathfinder.pdf>

## SCANS CRITERIA

### 1) **Foundation skills are defined in three areas: basic skills, thinking skills, and personal qualities.**

- a) **Basic Skills:** A worker must read, write, perform arithmetic and mathematical operations, listen, and speak effectively. These skills include:
  - i) **Reading:** locate, understand, and interpret written information in prose and in documents such as manuals, graphs, and schedules.
  - ii) **Writing:** communicate thoughts, ideas, information, and messages in writing, and create documents such as letters, directions, manuals, reports, graphs, and flow charts.
  - iii) **Arithmetic and Mathematical Operations:** perform basic computations and approach practical problems by choosing appropriately from a variety of mathematical techniques.
  - iv) **Listening:** receive, attend to, interpret, and respond to verbal messages and other cues.
  - v) **Speaking:** Organize ideas and communicate orally.
- b) **Thinking Skills:** A worker must think creatively, make decisions, solve problems, visualize, know how to learn, and reason effectively. These skills include:
  - i) **Creative Thinking:** generate new ideas.
  - ii) **Decision Making:** specify goals and constraints, generate alternatives, consider risks, and evaluate and choose the best alternative.
  - iii) **Problem Solving:** recognize problems and devise and implement plan of action.
  - iv) **Visualize ("Seeing Things in the Mind's Eye"):** organize and process symbols, pictures, graphs, objects, and other information.
  - v) **Knowing How to Learn:** use efficient learning techniques to acquire and apply new knowledge and skills.
  - vi) **Reasoning:** discover a rule or principle underlying the relationship between two or more objects and apply it when solving a problem.
- c) **Personal Qualities:** A worker must display responsibility, self-esteem, sociability, self-management, integrity, and honesty.
  - i) **Responsibility:** exert a high level of effort and persevere toward goal attainment.
  - ii) **Self-Esteem:** believe in one's own self-worth and maintain a positive view of oneself.
  - iii) **Sociability:** demonstrate understanding, friendliness, adaptability, empathy, and politeness in group settings.
  - iv) **Self-Management:** assess oneself accurately, set personal goals, monitor progress, and exhibit self-control.
  - v) **Integrity and Honesty:** choose ethical courses of action.

### 2) **Workplace competencies are defined in five areas: resources, interpersonal skills, information, systems, and technology.**

- a) **Resources:** A worker must identify, organize, plan, and allocate resources effectively.
  - i) **Time:** select goal-relevant activities, rank them, allocate time, and prepare and follow schedules.
  - ii) **Money:** Use or prepare budgets, make forecasts, keep records, and make adjustments to meet objectives.
  - iii) **Material and Facilities:** Acquire, store, allocate, and use materials or space efficiently. Examples: construct a decision time line chart; use computer software to plan a project; prepare a budget; conduct a cost/benefits analysis; design an RFP process; write a job description; develop a staffing plan.
- b) **Interpersonal Skills:** A worker must work with others effectively.
  - i) **Participate as a Member of a Team:** contribute to group effort.
  - ii) **Teach Others New Skills.**
  - iii) **Serve Clients/Customers:** work to satisfy customer's expectations.

- iv) **Exercise Leadership:** communicate ideas to justify position, persuade and convince others, responsibly challenge existing procedures and policies.
- v) **Negotiate:** work toward agreements involving exchange of resources, resolve divergent interests.
- vi) **Work with Diversity:** work well with men and women from diverse backgrounds.

Examples: collaborate with a group member to solve a problem; work through a group conflict situation, train a colleague; deal with a dissatisfied customer in person; select and use appropriate leadership styles; use effective delegation techniques; conduct an individual or team negotiation; demonstrate an understanding of how people from different cultural backgrounds might behave in various situations.

c) **Information:** A worker must be able to acquire and use information.

- i) **Acquire and Evaluate Information.**
- ii) **Organize and Maintain Information.**
- iii) **Interpret and Communicate Information.**
- iv) **Use Computers to Process Information.**

Examples: research and collect data from various sources; develop a form to collect data; develop an inventory record-keeping system; produce a report using graphics; make an oral presentation using various media; use on-line computer data bases to research a report; use a computer spreadsheet to develop a budget.

d) **Systems:** A worker must understand complex interrelationships.

- i) **Understand Systems:** know how social, organizational, and technological systems work and operate effectively with them.
- ii) **Monitor and Correct Performance:** distinguish trends, predict impacts on system operations, diagnose deviations in systems' performance and correct malfunctions.
- iii) **Improve or Design Systems:** suggest modifications to existing systems and develop new or alternative systems to improve performance.

Examples: draw and interpret an organizational chart; develop a monitoring process; choose a situation needing improvement, break it down, examine it, propose an improvement, and implement it.

e) **Technology:** A worker must be able to work with a variety of technologies.

- i) **Select Technology:** choose procedures, tools or equipment including computers and related technologies.
- ii) **Apply Technologies to Task:** understand overall intent and proper procedures for setup and operation of equipment.
- iii) **Maintain and Troubleshoot Equipment:** Prevent, identify, or solve problems with equipment, including computers and other technologies.

Examples: read equipment descriptions and technical specifications to select equipment to meet needs; set up and assemble appropriate equipment from instructions; read and follow directions for troubleshooting and repairing equipment.