

Pathophysiology (HPRS 2301) Fully Online



Credit: 3 semester credit hours (3 hours lecture)

Prerequisite/Co-requisite: BIOL 2301 & 2302; Complete the Online Orientation and answer yes to 7+ questions on the Online Learner Self-Assessment:
<http://www.lit.edu/depts/DistanceEd/OnlineOrientation/OOStep2.aspx>

Course 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.

Required Textbook and Materials

1. *Human Disease: A Systemic Approach* by M. Zelman, 8th edition. Pearson Publishing.
 - a. ISBN: 9780133424744
2. Pearson access code
3. Internet access

Course Objectives

Upon completion of the course, the student should be able to:

1. Identify the development of diseases and disorders of the human body.
2. Identify medical and surgical treatment processes.
3. Identify the fundamental characteristics of common diseases and conditions.
4. Distinguish environmental factors, physical, psychosocial, and cognitive characteristics of various diseases and conditions
5. Recognize the implications of therapeutic interventions for common diseases and conditions.

SCANS Skills and Competencies

Beginning in the late 1980's, the U.S. Department of Labor Secretary's Commission on Achieving Necessary Skills (SCANS) conducted extensive research and interviews with business owners, union leaders, supervisors, and laborers in a wide variety of work settings to determine what knowledge workers needed in order to perform well on a job. In 1991 the Commission announced its findings in *What Work Requires in Schools*. In its research, the Commission determined that "workplace know-how" consists of two elements: foundation skills and workplace competencies.

Course Outline

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| A. Mechanisms of Disease | c. Risk factors |
| 1. Introduction to Disease | d. Health Promotion and Disease Prevention |
| a. Disease Concepts and Terminology | e. Treatment of Disease |
| b. Causes of Disease | 2. Immunity and Disease |

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- a. Immunity
 - b. Nonspecific Immunity
 - c. Age and the immune system
 - d. Diagnostic Testing
 - e. Autoimmunity
 - f. Allergy
 - g. Immune deficiency
 - h. Cancers of the Immune System
 - 3. Infectious diseases
 - a. Introduction
 - b. Principles of Infectious Disease
 - c. Transmission of Infectious Disease
 - d. Nosocomial infections
 - e. Control of Infectious Diseases
 - f. Survey of Pathogenic Microorganisms
 - g. Treatment of Infectious disease
 - h. Emerging and Reemerging Infectious Diseases
 - i. Common Vaccine-Preventable Childhood Infectious Diseases
 - 4. Cancer
 - a. Introduction
 - b. Epidemiology
 - c. Tumor Formation
 - d. Naming Tumors
 - e. Known Risk Factors for Cancer
 - f. Signs and Symptoms of Cancer
 - g. Classification of cancer
 - h. Etiology of cancer
 - i. Diagnosis of Cancer
 - j. Grading and Staging Cancer
 - k. Cancer Treatment
 - l. Cancer Prevention
 - 5. Heredity and disease
 - a. DNA and Chromosomes
 - b. Transmission of Hereditary Diseases
 - c. Abnormal Chromosome Diseases
 - d. Sex Anomalies
 - e. Genetic Counseling and Diagnosis
 - f. Congenital Disorders
- B. Diseases and Disorders of the Systems
- 1. Diseases and Disorders of the Cardiovascular System
 - a. The circulatory system
 - b. Anatomy and Physiology Review
 - c. Diagnostic Tests and Procedures
 - d. Cardiovascular Disease
 - e. Congestive Heart Failure
 - f. Shock
 - g. Heart Disease in Infants and Children
 - h. Age-Related Disease
 - 2. Diseases and Disorders of the Blood
 - a. Anatomy and Physiology Review
 - b. Diagnostic Tests and Procedures
 - c. Anemia
 - d. Disorders of Hemostasis
 - e. Disorders of White Blood Cells
 - f. Age-Related Disease
 - 3. Diseases and Disorders of the Respiratory System
 - a. Anatomy and Physiology Review
 - b. Diagnostic Tests and Procedures
 - c. Upper Respiratory Diseases
 - d. Lower Respiratory Diseases
 - e. Age-Related Diseases
 - 4. Diseases and Disorders of the Gastrointestinal System
 - a. Anatomy and Physiology Review
 - b. Diagnostic Tests and Procedures
 - c. Diseases of the Mouth
 - d. Diseases of the Esophagus
 - e. Diseases of the Stomach
 - f. Diseases of the Intestines
 - g. Diseases Indicated by Stool Characteristics
 - h. Diseases of the Liver
 - i. Diseases of the Gallbladder
 - j. Diseases of the Pancreas
 - k. Age-Related Diseases
 - 5. Diseases and Disorders of the Urinary System
 - a. Anatomy and Physiology Review
 - b. Diagnostic Tests and Procedures
 - c. Acute Diseases and Disorders
 - d. Chronic Diseases and Disorders

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- e. Congenital Disorders
- f. Age-Related Diseases
- 6. Diseases and Disorders of the Reproductive System
 - a. Anatomy and Physiology of the Female Reproductive System
 - b. Diagnostic Tests and Procedures
 - c. Diseases of the Female Reproductive System
 - d. Benign conditions of the Breast
 - e. Menstrual Disorders
 - f. Disorders of Pregnancy
 - g. Female Age-Related Diseases
 - h. Anatomy and Physiology of the Male Reproductive System
 - i. Diagnostic Tests and Procedures
 - j. Diseases of the Male Reproductive System
 - k. Male Age-Related Diseases
 - l. Sexually Transmitted Infections
- 7. Diseases and Disorders of the Endocrine System
 - a. Anatomy and Physiology Review
 - b. Pituitary Gland
 - c. Thyroid Gland
 - d. Parathyroid Glands
 - e. Adrenal Glands
 - f. Endocrine Pancreas
 - g. Ovaries and Testes
 - h. Diagnostic Tests and Procedures
 - i. Diseases of the Pituitary
 - j. Diseases of the Thyroid Gland
 - k. Diseases of Parathyroid Gland
 - l. Diseases of the Adrenal Glands
 - m. Hyposecretion of the Pancreas
 - n. Abnormalities in Secretion of Sex Hormones
 - o. Age-Related Diseases
- 8. Diseases and Disorders of the Nervous System
 - a. Anatomy and Physiology Review
 - b. Diagnostic Tests and Procedures
 - c. Brain and Spinal Cord Trauma
 - d. Epilepsy
 - e. Stroke
 - f. Disorders of the Cranial Nerves
 - g. Infectious Diseases of the Nervous System
 - h. Degenerative Diseases of the Nervous System
 - i. Developmental and Congenital Disorders
 - j. Brain tumors
 - k. Age-Related Diseases
- 9. Diseases and Disorders of the Eye and Ear
 - a. Anatomy and Physiology Review: the Eye
 - b. Diagnostic Tests and Procedures: the Eye
 - c. Diseases and Disorders of the Eye
 - d. Anatomy and Physiology Review: the Ear
 - e. Diagnostic Tests and Procedures: the Ear
 - f. Diseases and Disorders of the Ear
 - g. Age-Related Diseases and Disorders
- 10. Mental Disorders
 - a. Introduction
 - b. Risk Factors
 - c. Early Warning Signs and Symptoms of Mental Disorders
 - d. Causes of Mental Disorders
 - e. Diagnosing Mental Disorders
 - f. Treating Mental Disorders
 - g. Specific Mental Disorders
 - h. Age-related disorders
- 11. Diseases of musculoskeletal system
 - a. Anatomy and Physiology Review
 - b. Diagnostic Tests and Procedures
 - c. Diseases of Bones
 - d. Diseases and Disorders of Joints
 - e. Diseases of the Muscles
 - f. Age-related diseases
- 12. Diseases and Disorders of the Integumentary System
 - a. Anatomy and Physiology Review

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- b. Diagnostic Tests and Procedures
- c. Skin Lesions
- d. Epidermoid Cysts
- e. Drug eruptions
- f. Infectious Skin Diseases
- g. Hypersensitivity or Immune Disorders of the Skin
- h. Benign Tumors of Skin
- i. Skin Cancer
- j. Sebaceous Gland Disorders
- k. Pigment Disorders
- l. Skin Trauma and Injury
- m. Age-Related Diseases

Grade Scale:

90 - 100	A
80 - 89	B
70 - 79	C
60 - 69	D
0 - 59	F

Course Evaluation:

Final grades will be calculated according to the following criteria:

Chapter quizzes/activities/case studies	20%
Participation/Discussions	20%
Unit Exams (4)	45%
Comprehensive Final Exam (Proctored)*	15%

*The student will be required to take the comprehensive final exam in a proctored environment.

Course Requirements:

1. Students can complete this course without physically visiting the institution offering the course.
2. Completion of interactive chapter exercises including multiple choice quizzes, true/false quizzes, and fill in the blank.
3. The student will be responsible for completion of case studies.
4. The student will post discussions as instructed along with any other assignments instructed to complete.
5. The student will complete online quizzes and unit exams by the due dates shown on the course calendar.
6. The student will complete the final exam at the posted time.
7. The student will be required to take the final exam in a proctored environment. If you live within 60 miles from campus, please plan to take the proctored exam within the LIT ACT Testing Center located in T1 Building. Learners from a distance may make alternative arrangements.

Course Policies:

Students must provide their own textbooks, writing instruments, and other necessary supplies for classes.

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1. Students must log onto Blackboard and access this course a minimum of 4 - 5 times per week.
2. Internet Usage – Students are expected to use proper net etiquette while participating in course emails, assignment submissions, and online discussions.
3. Cheating of any kind will not be tolerated. If proven to have cheated, a grade of “0” will be assigned and possible expulsion from the class and/or program.
4. All exams will be taken on the scheduled dates. There will be **NO MAKE UP EXAMS**.
5. All assignments are due when stated. Late assignments are not accepted.
6. Additional course policies are outlined in “Classroom Policies” provided at the beginning of the semester.
7. Students are expected to follow the Lamar Institute of Technology Code of Conduct and Disciplinary Policy
8. Any violation of classroom policies may result in student being asked to leave class and result in an absence.
9. **If you wish to drop a course, the student is responsible for initiating and dropping the course. If you stop logging-in to the course and do not complete the course drop process, then you will receive an “F” grade for the course.**
10. The instructor will respond to e-mail and voice mail communication within 24 hours Monday through Friday with the exception of weekends and holidays. Assignment grades will be published within 2 weeks of the assignment due date.

Technical Requirements:

The latest technical requirements, including hardware, compatible browsers, operating systems, software, Java, etc. can be found online at:

<http://kb.blackboard.com/pages/viewpage.action?pageId=25368512>

A functional internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of the online technology and resources.

Disabilities Statement:

The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the online resource:

<http://www.lit.edu/depts/stuserv/special/defaults.aspx>

Course Schedule:

Week of Semester	Topic	Textbook Reference
Week 1	Course Introduction Ch 1: Introduction to Disease	N/A Online: <ul style="list-style-type: none">• Unit 1: Chapter 1

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		Textbook: Pp. 2 - 13
Week 2	Ch 2: Immunity and Disease Ch 3: Infectious Disease	Online: <ul style="list-style-type: none"> Unit 1: Chapter 2 Unit 1: Chapter 3 Textbook: Pp. 14 - 33 & 34 - 55
Week 3	Ch 4: Cancer	Online: <ul style="list-style-type: none"> Unit 1: Chapter 4 Textbook: Pp. 56 - 69
Week 4	Ch 5: Heredity and Disease <hr/> Exam 1 (Chapters 1 – 5)	Online: <ul style="list-style-type: none"> Unit : Chapter 5 <u>Textbook: Pp. 70 - 86</u>
Week 5	Ch 6: Diseases and Disorders of the Cardiovascular System	Online: <ul style="list-style-type: none"> Unit 2: Chapter 6 Textbook: Pp. 88 - 121
Week 6	Ch 7: Diseases and Disorders of the Blood	Online: <ul style="list-style-type: none"> Unit 2: Chapter 7 Textbook: Pp. 122 - 137
Week 7	Ch 8: Diseases and Disorders of the Respiratory System	Online: <ul style="list-style-type: none"> Unit 2: Chapter 8 Textbook: Pp. 138 - 165
Week 8	Ch 9: Diseases and Disorders of the Gastrointestinal System <hr/> Exam 2 (Chapters 6 – 9)	Online: <ul style="list-style-type: none"> Unit 2: Chapter 9 <u>Textbook: Pp. 166 - 197</u>
Week 9	Ch 10: Diseases and Disorders of the Urinary System	Online: <ul style="list-style-type: none"> Unit 3: Chapter 10 Textbook: Pp. 198 - 219
Week 10	Ch 11: Diseases and Disorders of the Reproductive System	Online: <ul style="list-style-type: none"> Unit 3: Chapter 11 Textbook: Pp. 220 - 261
Week 11	Ch 12: Diseases and Disorders of the Endocrine System	Online: <ul style="list-style-type: none"> Unit 3: Chapter 12 Textbook: Pp. 262- 291
Week 12	Ch 13: Diseases and Disorders of the Nervous System <hr/> Exam 3 (Chapters 10 – 13)	Online: <ul style="list-style-type: none"> Unit 3: Chapter 13 <u>Textbook: Pp. 292 - 319</u>
Week 13	Ch 14: Diseases and Disorders of the Eye and Ear	Online: <ul style="list-style-type: none"> Unit 4: Chapter 14 Textbook: Pp. 320 – 337
Week 14	Ch 15: Mental Disorders Ch 16: Diseases and Disorders of the Musculoskeletal System	Online: <ul style="list-style-type: none"> Unit 4: Chapter 15 Unit 4: Chapter 16 Textbook: Pp. 338 – 357 & 358 -

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Week 15	Ch 17: Diseases and Disorders of the Integumentary System <hr/> Exam 4 (Chapters 14 – 17)	Online: <ul style="list-style-type: none">• Unit 4: Chapter 17 Textbook: Pp. 380 - 418
Week 16	Proctored Comprehensive Final Exam (Chapters 1 – 17)* *Must be taken in a proctored environment	

Contact information will be provided by instructor.