Course: HI 130 Pathophysiology for Health Information

Credit: 4 Quarter Hours Method of Delivery: Classroom

Course Description: This course provides an introduction to the study of pathophysiology. Diseases that affect humans can range from mild to severe and can be acute or chronic. We will discuss how some diseases are localized versus others that become systemic. We will discuss the predisposition of certain disease processes based on heredity, baseline health status and coexisting factors such as the use of medications, caffeine, tobacco and alcohol. Students will describe the Standard Precaution guidelines for disease prevention and identify laboratory and imaging data that is specific to each disease process. Genetics and diseases that affect the human body throughout the life cycle will be explored; building upon concepts utilized in BIO 110.

Prerequisites: BIO 110 Anatomy and Physiology I, HI 100 Medical Terminology For Health Information

Corequisites: BIO 120 Anatomy and Physiology II

Text(s) & Manual(s): Human Diseases 3rd edition **Author(s):** Neighbors, M. & Tannehill-Jones, R.

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Materials needed for this course:

Additional Supplies: CD to accompany textbook

Topics:

- 1. Introduction to Human Diseases
- 2. Mechanisms of Disease
- 3. Neoplasms
- 4. Inflammation and Infection
- 5. Immune System Diseases and Disorders
- 6. Musculoskeletal System Diseases and Disorders
- 7. Blood and Blood-Forming Organs Diseases and Disorders
- 8. Cardiovascular System Diseases and Disorders
- 9. Respiratory System Diseases and Disorders
- 10. Lymphatic System Diseases and Disorders
- 11. Digestive System Diseases and Disorders
- 12. Liver, Gallbladder and Pancreatic Diseases and Disorders
- 13. Urinary System Diseases and Disorders
- 14. Endocrine System Diseases and Disorders
- 15. Nervous System Diseases and Disorders
- 16. Eye and Ear Diseases and Disorders
- 17. Reproductive System Diseases and Disorders
- 18. Integumentary System Diseases and Disorders
- 19. Genetic and Developmental Diseases and Disorders
- 20. Childhood Diseases and Disorders
- 21. Mental Health Diseases and Disorders

Learning Objectives: Upon completion of this course, the student will be able to:

- 1. Define terms specific to pathophysiology i.e. mechanisms of disease, cellular adaptation, prognosis, immune deficiency disorders upon completion of lecture materials and web related activities.
- 2. State predisposing factors (age, gender, environment, lifestyle and heredity) and how they correlate to specific disease entities.

- 3. Describe how the aging process and developmental stage directly effects pathophysiology changes in the human body.
- 4. Recognize the specificity of pathophysiology for each separate body system.
- 5. Identify Standard Precautions recommended by Centers for Disease Control and Prevention.
- 6. List common signs and symptoms associated with each disease process.
- Recognize common laboratory and imaging tests utilized in the diagnostic pursuit of pathophysiology state.

Methods of Evaluating Student Performance and Instructor's Grading Scale: A pretest is administered during Week 1 for assessment purposes only and is <u>not</u> included in the final grade. Textbook homework and quizzes are valued at 1 point per question.

Midstate Grading scale:

90 - 100 A

80 - 89 B

70 - 79 C

60 - 69 D

0 - 59 F

Midstate Plagiarism Policy:

Plagiarism is using another person's words without giving credit to the author. Original speeches, publications, and artistic creations are sources for research. If students use the author's words in a paper or assignment, they must acknowledge the source. Plagiarism is strictly against the academic policy of the college and is grounds for failing the course. If repeated, plagiarism may result in suspension from the college. (See the Midstate College catalog and/or Student Handbook for additional information.)

In courses containing writing assignments, the college promotes the use of an electronic resource which compares the student's writing against previously submitted papers, journals, periodicals, books, and web pages. Students and instructors can use this service to reduce the incidence of plagiarism. This electronic resource has been found to conform to legal requirements for fair use and student confidentiality. It is able to provide a report to the student indicating the parts of the assignment that match.

Instructor: Carol Fremaux, RHIA

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Room/phone: 236/692-4092

Office Hours: Posted

Policies and Procedures:

- 1. All work is to be submitted on time unless unusual circumstances occur. If you miss class, you are expected to use your course outline to determine what you missed. You will have seven days to make arrangements to make up the missed work without penalty. The grade will drop 10% for each week you delay in completing material following the seven day grace period. <u>Late work will NOT be</u>
 <u>accepted without prior approval from the instructor.</u>
 This includes homework, projects, and quizzes.
- You are expected to be on time. If you must arrive or leave during class, do so quietly. You are not excused from class for any reason. <u>Attendance is expected, not suggested.</u> Class is like having a job. Excessive absence will hurt your performance and your ability to pass this class. Please see the Midstate College Catalog for additional information. If for some reason you are not able to attend class. I am not available to re-teach the missed lesson on a one to one basis.
- 3. Academic dishonesty is never tolerated and will be referred to the dean.
- 4. Cell phone ringers must be silenced and absolutely no texting or taking calls will be allowed during class.
- 5. The final exam *must* be completed. Failure to do so will result in failure of the course.

Student Presentations:

- 1. Choose a topic applicable to current issues in Pathophysiology and its relevancy to your chosen career.
- 2. Create a PowerPoint presentation for your classmates regarding this topic.
- 3. Present the topic to your classmates on date to be determined.
- 4. Include a reference page with minimum of 3 credible references.
- 5. Presentation should be 15-20 minutes.

Week	Dates	Assignments
1	20-May	No Class - Orientation
2	27-May	No Class – Memorial Day
3	3-Jun	Chapters 1, 2 & 3
4	10-Jun	Chapters 4, 5, & 6
5	17-Jun	Chapters 7, 8 & 9
6	24-Jun	Chapters 10 & 11
7	1-Jul	Chapters 12 & 13
8	8-Jul	Chapters 14 & 15
9	15-Jul	Chapters 16 & 17
10	22-Jul	Chapters 18 & 19
11	29-Jul	Chapters 20 & 21 and STUDENT PRESENTATIONS
12	5-Aug	FINAL EXAMINATION

Weekly Summary & Discussion

Week 1

No Class - Orientation

Week 2

No Class – Memorial Day

Week 3

Topics:

Chapters 1, 2, and 3: Introduction to the course and assignments; Introduction to Human Diseases; Mechanisms of Disease; and Neoplasms.

Objectives:

- 1. Define the basic terminology used in the study and mechanisms of human diseases along with the study of neoplasms.
- 2. Discuss the pathogenesis of disease.
- 3. Describe the Standard Precaution guidelines for disease prevention.
- 4. Identify the predisposing factors to human diseases.
- 5. Identify disorders of the immune system.
- 6. Describe some common tests used to diagnose disease states and disorders.

Assignments:

- 1. Review the syllabus.
- 2. Read: Chapters 1, 2 and 3, pages 2-49.
- 3. Homework: Complete as assigned.

Week 4

Topics: The Inflammatory Process; Immune System Diseases/Disorders; and Musculoskeletal System Disease/Disorders.

Objectives:

- 1. Identify important terminology related to the defense mechanisms and the musculoskeletal system.
- 2. Describe the basic defense mechanisms in the body.
- 3. Explain the steps in the inflammatory process.
- 4. Identify the common infectious microorganisms and the resulting diseases.
- 5. Identify the common laboratory test conducted to identify pathogenic organisms.
- 6. Describe the common diagnostics used to determine type, cause, or both of an immune system disorder and the musculoskeletal system.
- 7. Identify disorders of the immune and the musculoskeletal system.

Assignments:

- 1. Read: Chapters 4, 5 & 6, pages 50-122.
- 2. Homework: Complete as assigned.

Week 5

Topics: Blood and Blood-forming Organs Diseases/Disorders; Cardiovascular System Diseases/Disorders; Respiratory System Diseases/Disorders.

Objectives:

- 1. Define the terminology common to the blood systems, cardiovascular system and respiratory systems.
- 2. Identify the important signs and symptoms associated with blood system disorders, cardiovascular system and respiratory systems.
- 3. Describe the common diagnostics used to determine type, cause or both of a blood system, cardiovascular and/or respiratory system disorder.
- 4. Identify the common disorders of the blood, cardiovascular and respiratory systems.
- Describe the typical course and management of the common blood, cardiovascular and respiratory system disorders.

Assignments:

- 1. Read: Chapters 7, 8 & 9 pages 124-201.
- 2. Homework: Complete as assigned.
- 3. Quiz: Chapters 1-3.

Week 6

Topics: Lymphatic System Diseases and Disorders; Digestive System Diseases and Disorders. **Objectives:**

- 1. Define the terminology common to the lymphatic system and digestive system.
- Identify the important signs and symptoms associated with common lymphatic and digestive system disorders.
- 3. Describe the common diagnostics used to determine the type and cause of lymphatic and digestive system disorders.
- 4. Identify common disorders of the lymphatic and digestive systems.
- 5. Describe the typical course and management of the common lymphatic and digestive system disorders.

Assignments:

1. Read: Chapters 10 & 11, pages 202-239

2. Homework: Complete as assigned.

3. Quiz: Chapters 4-6.

Week 7

Topics: Liver, Gallbladder and Pancreas Diseases and Disorders; Urinary System Diseases and Disorders.

Objectives:

- 1. Identify the important signs and symptoms associated with common liver, gallbladder, and pancreas disorders.
- 2. Describe the common diagnostics used to determine the type and cause of liver, gallbladder, or pancreas disorders and urinary system disorders.
- 3. Identify common disorders of the liver, gallbladder, pancreas and urinary systems.
- 4. Describe the typical course and management of the common liver, gallbladder, pancreas and urinary disorders.

Assignments:

- 1. Read: Chapters 12 & 13, pages 240-277.
- 2. Homework: Complete as assigned.
- 3. Quiz: Chapters 7-9.

Week 8

Topics: Endocrine System Diseases and Disorders; Nervous System Diseases and Disorders. **Objectives:**

- 1. Define the terminology common to the endocrine and nervous systems.
- 2. Identify the important signs and symptoms associated with common endocrine and nervous system disorders.
- 3. Describe the common diagnostics used to determine the type and cause of endocrine or nervous system disorders.
- Identify common disorders of the endocrine and nervous systems.
- Describe the typical course and management of the common endocrine and nervous system disorders.

Assignments:

- 1. Read: Chapters 14 & 15, pages 278-329.
- Homework: Complete as assigned.
- 3. Quiz: Chapters 10 & 11.

Week 9

Topics: Eye and Ear Diseases and Disorders; Reproductive System Diseases and Disorders. **Objectives:**

- 1. Define the terminology common to the eye, ear and reproductive system.
- 2. Identify the important signs and symptoms associated with common eye, ear and reproductive system disorders.
- 3. Describe the common diagnostics used to determine the type and cause of eye, ear and reproductive disorders.

- 4. Identify common disorders of the eye, ear and reproductive system.
- 5. Describe the typical course and management of the common eye, ear and reproductive disorders.

Assignments:

- 1. Read: Chapters 16 & 17, pages 330-393.
- 2. Homework: Complete as assigned.
- 3. Quiz: Chapters 12 & 13.

Week 10

Topics: Integumentary System Diseases/Genetic & Developmental System. **Objectives:**

- 1. Define the terminology common to the integumentary system and genetic/developmental system.
- 2. Identify the important signs and symptoms associated with common integumentary and genetic/developmental system.
- 3. Describe the common diagnostics used to determine the type and cause of integumentary and genetic/developmental system disorders.
- 4. Identify common disorders of the integumentary and genetic/developmental system.
- 5. Describe the typical course and management of the common integumentary and genetic/developmental system disorders.

Assignments:

- 1. Read: Chapters 18 & 19, pages 394-455.
- 2. Homework: Complete as assigned.
- 3. Quiz: Chapters 14 & 15.

Week 11

Topics: Childhood diseases and disorders; mental health diseases and disorders. **Objectives:**

- 1. Define the terminology common to childhood and mental health disorders.
- 2. Identify the important signs and symptoms associated with childhood and mental health diseases.
- 3. Describe the common diagnostics used to determine the type and cause of childhood diseases.
- 4. Describe the typical course and management of the common childhood and mental health diseases.
- 5. State the common drugs abused by children, the effects of the drugs, and the potential health hazard of drug use.
- 6. List the immunizations available to prevent childhood diseases.
- 7. Identify the safety precautions for preventing poisonings in children.
- 8. Describe the typical course and management of the common mental health disorders.
- 9. State the mental health disorders found in the older population.

Assignments:

- 1. Read: Chapters 20 & 21, 456-506.
- 2. Homework: Complete as assigned.
- 3. Complete Student Presentations.
- 4. Quiz: Chapters 16 & 17.

Week 12Complete the Final Examination
Complete the Course Evaluation