

NURS 519
Advanced Pathophysiology for Nurse Educators
Spring 2021

Credit: Two Hours

Prerequisites: Admission to MSN program or permission of instructor

Course Description: • Normal physiological and pathophysiological mechanisms of disease are used to explain human responses to potential and actual health problems across the lifespan as a foundation for the nurse educator to educate nursing students.

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

1. Compare and contrast physiologic changes over the lifespan.
2. Analyze the relationship between normal physiology and pathological phenomena produced by altered states across the lifespan.
3. Analyze and apply current research-based knowledge regarding pathological changes in selected disease states.
4. Describe the developmental physiology, etiology, pathogenesis, and clinical manifestations of commonly found altered health states.
5. Develop a framework to assess, monitor and evaluate client responses.
6. Analyze responses to illness and treatment modalities using a holistic approach.

Hours & Location: Online

Faculty: Tonya Bragg-Underwood, DNP, APRN, CNE

Associate Professor

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Methodology: Exams, Short essay assignments

Student Disability Services

In compliance with university policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Office for Student Disability Services in Downing University Center, A-200. The phone number is 270.745.5004. Please DO NOT request accommodations directly from the professor or instructor without a letter of accommodation from the Office for Student Disability Services.

Required texts/references:

McCance, K., & Huether, S. (2014). Pathophysiology: The biologic basis for disease in adults and children (7th ed.). St. Louis, MO: Elsevier Mosby.

Grading scale:	90 -100	A
	80 - 89	B
	70 - 79	C
	60 - 69	D
	0 - 60	F

Evaluation

Short assignments (4) - 25 points each	100 points
Exams (8) – 50 points each	<u>400 points</u>
	500 points

See class schedule for due dates and outline.

3.1 Content outline:

- I. Introduction to cellular biology:
 - a. Normal and altered cellular and tissue biology
 - b. The cellular environment: fluids, electrolytes, acids and bases
- II. Introduction to genetics:
 - a. Genes and genetic diseases.
 - b. Genes, environment-lifestyle and common diseases
- III. Mechanisms of self-defense:
 - a. Innate immunity – inflammation
 - b. Alterations in immunity and inflammation
 - c. Infection
- IV. Cellular proliferation: Cancer
 - a. Cancer biology and epidemiology
 - b. Cancer in children
- V. The neurologic system
- VI. The endocrine system
 - a. Mechanisms and alterations of hormonal regulation
- VII. The reproductive systems
 - a. Structure and function of the reproductive systems
 - b. Alterations of the female and male reproductive systems
 - c. Sexually transmitted infections
- VIII. The hematologic system
 - a. Structure, function and alterations of the hematologic system
- IX. The cardiovascular, lymphatic and pulmonary systems
 - a. Structure, function and alterations in the cardiovascular, lymphatic and pulmonary systems

- b. Alterations in cardiovascular, lymphatic and pulmonary systems in children
- X. The renal, urologic and digestive systems
 - a. Structure and function of the renal, urologic and digestive systems
 - b. Alterations of the renal, urologic and digestive systems
 - c. Alterations of the renal, urologic and digestive systems in children
- XI. Musculoskeletal and integumentary systems
 - a. Structure and function of the musculoskeletal and integumentary systems
 - b. Alterations of the musculoskeletal and integumentary systems
 - c. Alterations of the musculoskeletal and integumentary systems in children