

STUDENT WARNING: This course syllabus is from a previous semester archive and serves only as a preparatory reference. Please use this syllabus as a reference only until the professor opens the classroom and you have access to the updated course syllabus. Please do NOT purchase any books or start any work based on this syllabus; this syllabus may NOT be the one that your individual instructor uses for a course that has not yet started. If you need to verify course textbooks, please refer to the online course description through your student portal. This syllabus is proprietary material of APUS.

American Public University System

The Ultimate Advantage is an Educated Mind

School of Health Sciences
NURS604
Advanced Pathophysiology and Pharmacology
Credit Hours: 3
Length of Course: 8 weeks
Prerequisite: none

Instructor Information

Please refer to the Instructor Profile on the course homepage for your instructor's contact information and biography.

Course Description

This course builds on the undergraduate knowledge of pharmacology and the relationship of pharmacological therapies to patient health and outcomes, as well as pathophysiological conditions. Students study the actions and effects of medications as well as complementary and alternative therapies on the human system across the life span. Using a variety of theories and frameworks, students use clinical reasoning to evaluate ambiguous and complex clinical presentations. Students discuss the role of the advanced practice nurse educator in ensuring safe medication practice in a variety of settings.

Course Scope

This course is divided into 8 weeks and is designed to build on the student's undergraduate knowledge of pathophysiology and pharmacology for patients throughout the lifespan. Students will use a variety of theories and frameworks for clinical reasoning regarding fundamental principles of pharmacology across the body systems. Students will use evidence based literature to support work in this course and help build a solid foundation for evidence based practice.

Course Learning Objectives

The following objectives are aligned with the MSN Program Outcomes (PO):

STUDENT WARNING: This course syllabus is from a previous semester archive and serves only as a preparatory reference. Please use this syllabus as a reference only until the professor opens the classroom and you have access to the updated course syllabus. Please do NOT purchase any books or start any work based on this syllabus; this syllabus may NOT be the one that your individual instructor uses for a course that has not yet started. If you need to verify course textbooks, please refer to the online course description through your student portal. This syllabus is proprietary material of APUS.

1. Critically analyze the relationships between pathophysiological conditions and pharmacological interventions. (PO4)
2. Examine the role of the advanced practice nurse in promoting safe medication practices. (PO1, PO2, PO7)
3. Evaluate the effectiveness of nursing and pharmacologic interventions relative to care of specific populations. (PO4)
4. Utilize current evidence-based research to support appropriate pharmacological and complementary therapies. (PO4, PO5, PO7)
5. Apply scientific principles and the nursing process to the development of care delivery for patients with complex pathophysiological conditions. (PO4, PO5)
6. Define the role of the advanced practice nurse in caring for patients with complex clinical presentations. (PO1, PO7, PO8)
7. Utilize current evidence-based research to support patient care and health outcomes. (PO3, PO4, PO5, PO6, PO7, PO8)
8. Integrate patient and family preference into the development of healthcare delivery. (PO4)

Module Learning Objectives are located within the course.

Masters Essentials covered in this course include I, II, IV, V, VI, VII, VIII, IX.

Course Delivery Method

This course delivered via distance learning will enable students to complete academic work in a flexible manner, completely online. Course materials and access to an online learning management system will be made available to each student. Online assignments are due weekly as noted on the course outline and can include Forum questions and written assignments. Assigned faculty will support the students throughout this eight-week course.

Course Materials

Required Course Textbooks:

Huether, S. & McCance, K. (2016). *Understanding Pathophysiology* (6th ed). Missouri: Elsevier

Academic Writing Requirements:

The School of Health Sciences requires use of APA format and style and all students are encouraged to have a current copy of the *APA Publication Manual*. All written assignments are to be submitted in APA format style unless otherwise noted in the assignment directions.

Evaluation Procedures

STUDENT WARNING: This course syllabus is from a previous semester archive and serves only as a preparatory reference. Please use this syllabus as a reference only until the professor opens the classroom and you have access to the updated course syllabus. Please do NOT purchase any books or start any work based on this syllabus; this syllabus may NOT be the one that your individual instructor uses for a course that has not yet started. If you need to verify course textbooks, please refer to the online course description through your student portal. This syllabus is proprietary material of APUS.

Discussions

Please join the discussions each week. Replies must be posted in the week due and replies after the end of the each week will not be graded. The Discussions are for student interaction and input should be submitted before the week ends in order to fully participate in the discussions. Students should demonstrate their own knowledge in the discussions and avoid copying and pasting from websites. In this class there are 9 graded discussions. The Week 8 discussion is a Reflection discussion, and you will be graded on completion of the reflection questions, not on the content.

Guidelines:

- Post the initial response to each discussions by 11:55pm, ET, Wednesday
- Initial responses are to be original in content and demonstrate a thorough analysis of the topic.
- Reply to ***more than 2*** of your classmates in each forum by 11:55pm, ET, Sunday.
- Responses to classmates are significant to advance the discussions.
- All discussions can be accessed in the Discussions section of the course.
- Respond to all questions posed to you in your initial post by instructor and/or peers.

An initial post must precede the response posts to peers. An initial post received after Wednesday 11:55 pm will receive a 10% deduction for each day, for 3 days, prior to discussions being graded. This means the highest grade possible for a late submission of 3 days, is 70%. However, response posts are due by Sunday 11:55 pm. If response posts are not submitted by this time, the discussion is over. Therefore, no points can be awarded for collaboration, and the highest grade possible for late submission past 3 days is 60%.

Tests/ Quizzes

There are no tests/quizzes in this course.

Written Assignments

There are 2 written assignments due throughout the course. All assignment instructions and grading rubrics are located in the Assignments area of MyClassroom. Assignments are due by 11:55 pm EST on the Sunday of the week they are assigned, or as indicated in the Assignments area.

Course Grading Outline

Grading Instrument	Percentage of Final Grade
Discussion Forums/Small group discussion	30%
Assignment: Paper on Diabetes Type 2	35%

STUDENT WARNING: This course syllabus is from a previous semester archive and serves only as a preparatory reference. Please use this syllabus as a reference only until the professor opens the classroom and you have access to the updated course syllabus. Please do NOT purchase any books or start any work based on this syllabus; this syllabus may NOT be the one that your individual instructor uses for a course that has not yet started. If you need to verify course textbooks, please refer to the online course description through your student portal. This syllabus is proprietary material of APUS.

Assignment: Power Point Presentation	35%
Total	100%

Course Outline				
Module	Topic	Learning Objectives	Reading(s)	Assignment(s)
1	Fundamental Principles of Pathophysiology and Pharmacology	<ol style="list-style-type: none"> 1. Demonstrate understanding of basic pharmacokinetics and pharmacodynamics and describe and explore the role of the advanced practice nurse in pharmacotherapy. 2. Differentiate the pharmacological actions of medications used to treat common disease entities and evaluate drug regimens to support appropriate and safe drug therapy. 3. Analyze the etiologic agents and mechanisms that cause disease states in the cellular environment of fluids and electrolytes, acids and bases across the lifespan. 4. Differentiate between physiological functioning of genes and the mechanisms of underlying pathophysiological alterations of disease syndromes in genetically-linked disorders. 	As assigned	Introduction Discussion Week 1 Discussion
Module	Topic	Learning Objectives	Reading(s)	Assignment(s)
2	Mechanisms of Self-defense, Cancer and Chemotherapeutic Agents, Allergies & Allergic Reactions, and Inflammation	<ol style="list-style-type: none"> 1. Summarize human defense mechanisms and barriers to immunity, including physical, mechanical and biochemical barriers. 2. Explain the inflammatory process and identify components of inflammation. 3. Analyze the infectious process and defects in mechanisms of defense. 	As assigned	Week 2 Discussion

STUDENT WARNING: This course syllabus is from a previous semester archive and serves only as a preparatory reference. Please use this syllabus as a reference only until the professor opens the classroom and you have access to the updated course syllabus. Please do NOT purchase any books or start any work based on this syllabus; this syllabus may NOT be the one that your individual instructor uses for a course that has not yet started. If you need to verify course textbooks, please refer to the online course description through your student portal. This syllabus is proprietary material of APUS.

		<ol style="list-style-type: none"> 4. Summarize immunity deficiencies and hypersensitivity responses. 5. Summarize concepts of the stress response and disease. 6. Summarize the characteristics and genetic basis of cancer. 7. Analyze the clinical manifestations and treatment of cancer. 		
Module	Topic	Learning Objectives	Reading(s)	Assignment(s)
3	Nervous System Pathophysiology and Pharmacology	<ol style="list-style-type: none"> 1. Distinguish between the functions of the central and peripheral nervous systems, and compare and contrast the two divisions of the peripheral nervous system. 2. Compare and contrast the actions of the sympathetic and parasympathetic divisions of the autonomic nervous system. 3. Differentiate among the following terms and explain their mechanisms of action: cholinergic antagonists, muscarinic antagonists, nicotinic antagonists, ganglionic blockers, and neuromuscular blockers. 4. Explain the physiological responses produced when a drug activates adrenergic receptors. 5. Identify and describe various disorders of the CNS and discuss the major classes of medications used to treat these disorders. 	As assigned	Week 3 Discussion
Module	Topic	Learning Objectives	Reading(s)	Assignment(s)
4	Endocrine and Hematologic Systems Pathophysiology and Pharmacology	<ol style="list-style-type: none"> 1. Summarize the structure and function of the endocrine and hematologic systems and recognize the pathophysiological alterations of these systems. 	As assigned	Week 4 Discussion Diabetes Type 2 Paper

STUDENT WARNING: This course syllabus is from a previous semester archive and serves only as a preparatory reference. Please use this syllabus as a reference only until the professor opens the classroom and you have access to the updated course syllabus. Please do NOT purchase any books or start any work based on this syllabus; this syllabus may NOT be the one that your individual instructor uses for a course that has not yet started. If you need to verify course textbooks, please refer to the online course description through your student portal. This syllabus is proprietary material of APUS.

		<ol style="list-style-type: none"> 2. Discuss research findings related to treatment modalities of various endocrine and hematologic system alterations. 3. Examine the clinical manifestations of endocrine and hematologic diseases. 		
Module	Topic	Learning Objectives	Reading(s)	Assignment(s)
5	Cardiovascular and Lymphatic Systems Pathophysiology and Pharmacology	<ol style="list-style-type: none"> 1. Describe the major structures and functions of the cardiovascular and lymphatic systems and recognize pathophysiological alterations in these systems. 2. Compare and contrast the different types of lipids and illustrate how lipids are transported through the blood. 3. Identify indications for treatment with diuretics and compare and contrast the loop, thiazide, potassium-sparing, osmotic, and carbonic anhydrase inhibitor diuretics. 4. Describe general principles guiding the pharmacotherapy of hypertension and compare and contrast the roles of nonpharmacologic and pharmacologic methods in the management of hypertension. 5. Describe the clinical manifestations and pharmacologic management of heart failure. 	As assigned	Week 5 Discussion
Module	Topic	Learning Objectives	Reading(s)	Assignment(s)
6	Pulmonary and Gastrointestinal Systems Pathophysiology and Pharmacology	<ol style="list-style-type: none"> 1. Summarize the structure and function of the pulmonary and digestive systems and recognize the pathophysiological alterations of these systems. 2. Discuss research findings related to treatment modalities 	As assigned	Week 6 Discussion

STUDENT WARNING: This course syllabus is from a previous semester archive and serves only as a preparatory reference. Please use this syllabus as a reference only until the professor opens the classroom and you have access to the updated course syllabus. Please do NOT purchase any books or start any work based on this syllabus; this syllabus may NOT be the one that your individual instructor uses for a course that has not yet started. If you need to verify course textbooks, please refer to the online course description through your student portal. This syllabus is proprietary material of APUS.

		of various pulmonary and gastrointestinal alterations. 3. Examine the clinical manifestations and treatment options for pulmonary and digestive system diseases.		
Module	Topic	Learning Objectives	Reading(s)	Assignment(s)
7	Renal, Urologic, and Reproductive Systems Pathophysiology and Pharmacology	<ol style="list-style-type: none"> 1. Summarize the structure and function of the renal, urologic, and reproductive systems and recognize the pathophysiological alterations of these systems. 2. Discuss treatment modalities of various renal, urologic, and reproductive alterations. 3. Examine the clinical manifestations of renal, urologic, and reproductive system diseases. 	As assigned	Week 7 Discussion
Module	Topic	Learning Objectives	Reading(s)	Assignment(s)
8	Musculoskeletal and Integumentary Systems Pathophysiology & Pharmacology	<ol style="list-style-type: none"> 1. Summarize the structure and function of the musculoskeletal and integumentary systems and recognize the pathophysiological alterations of these systems. 2. Discuss research findings related to treatment modalities of various musculoskeletal and integumentary alterations. 3. Examine the clinical manifestations & treatment modalities for musculoskeletal and integumentary system disorders. 	As assigned	Week 8 Reflection Discussion PowerPoint Slide Presentation

Policies

Please see the [Student Handbook](#) to reference all University policies. Quick links to frequently asked question about policies are listed below.

[Drop/Withdrawal Policy](#)

[Plagiarism Policy](#)

STUDENT WARNING: This course syllabus is from a previous semester archive and serves only as a preparatory reference. Please use this syllabus as a reference only until the professor opens the classroom and you have access to the updated course syllabus. Please do NOT purchase any books or start any work based on this syllabus; this syllabus may NOT be the one that your individual instructor uses for a course that has not yet started. If you need to verify course textbooks, please refer to the online course description through your student portal. This syllabus is proprietary material of APUS.

[Extension Process and Policy](#)

[Disability Accommodations](#)

Nursing Program Policies

Assignment and Coursework Grading Policy

Students are expected to submit classroom assignments by the designated due date and to complete the course according to the published class schedule. Failure to submit coursework by the designated due date will result in a ten percent (10%) penalty per day until three (3) days after the coursework is due. Therefore, after three (3) days, the maximum grade the student can achieve with a late submission will be a grade of 70% (C-). If a student is ill, has a family crisis, or will miss scheduled coursework deadlines for any reason, the student shall notify the instructor in advance if at all possible. Assignments will NOT be accepted more than seven (7) days after the due date unless prior arrangements have been made in advance of the due date.

Course Completion and Progression Requirements

For all capstone courses that begin after January 1, 2017, graduate students must earn a B- (80%) or better on their capstone thesis/project/paper and a B- (80%) or better in their capstone course to pass the course. This policy aligns with the comprehensive exam, which also requires a B- (80%) or better to pass. Graduate students must have at least a 3.0 GPA in order to graduate.