



Nursing (NURS) 516

Pharmacotherapeutics and Pathophysiology for Nurse Practitioners I (Revision 2)

Status: Replaced with new revision, see the [course listing](#) for the current revision ❌

Delivery mode: [Paced study](#). Delivered via Brightspace.

Credits: 3

Area of study: Health

Prerequisite: None

Precluded: NURS 516 cannot be taken for credit if credit has been obtained for NURS 519 or NURS 521

Faculty: [Faculty of Health Disciplines](#) 

(Pre-learning) Introduction to Pharmacology and Pathophysiology 

Notes:

If you have difficulty accessing the pre-learning, please email fhdgradadmin@athabascau.ca for assistance.

Overview

NURS 516 is part of a program of study leading to the Post-Master's Diploma: Nurse Practitioner, or the Master of Nursing (Nurse Practitioner) degree. NURS 516 is a prerequisite course for NURS 517, NURS 518, NURS 522, NURS 524, NURS 526, NURS 527, NURS 528, NURS 530 and NURS 531. NURS 516 can be taken as an elective course by other Master of Nursing or Master of Health Studies students and by non-program students.

NURS 516 provides students with an integrated approach to pathophysiology and pharmacology that will support clinical decision making about the diagnosis and treatment of acute and chronic presentations commonly managed by nurse practitioners. The course is comprised of ten units, the first three of which are foundational, covering prescriptive practices, pharmacologic and pathophysiologic principles. The remaining seven units integrate the pathophysiology of body system with the pharmacologic agents used in the management of diseases of those body systems. Using a case-based approach students apply what they have learned to clinical scenarios depicting

client presentations that students are likely to encounter in their clinical placements and in their practices as entry-level nurse practitioners.

NURS 516 covers a portion of the body systems with the remainder of the systems addressed in NURS 517. Together these courses provide foundational knowledge of pharmacology and pathophysiology that will be used to support clinical decision making. The content of NURS 516 is supported by other courses in the Nurse Practitioner program that teach management of common acute and chronic diseases of adult men and women, children, and older adults.

It is assumed that students who enroll in NURS 516 and NURS 517 (Pharmacotherapeutics and Pathophysiology for Nurse Practitioners I & II) will possess a basic background in pathophysiology and pharmacology. It is therefore expected that students will have completed the following self-paced, self-study learning modules: (i) Introduction to Pathophysiology for Nurse Practitioners; and (ii) Introduction to Pharmacology for Nurse Practitioners. Links to both modules are available in NURS 000 and in the NP guide. These learning modules each consist of 4 units, and include videos and self-test questions. Please note: these are not for credit.

Outline

NURS 516 consists of the following units:

- Unit 1: Orientation (Week 1)
- Unit 2: Prescriptive Practice (Week 2)
- Unit 3: OTC, Herbal Drugs and Cannabinoids (Week 3)
- Unit 4: Dermatological System (Week 4)
- Unit 5: Cardiovascular System (Weeks 5, 6)

- Unit 6: Hematological System (Week 7)
- Unit 7: Respiratory System (Weeks 8, 9)
- Unit 8: Gastrointestinal System (Week 10)
- Unit 9: Genitourinary System (Week 11)
- Unit 10: Renal, Fluids and Electrolytes (Week 12)
- Consolidation (Week 13)

Learning outcomes

By the end of NURS 516, you will be able to:

- 1.** articulate the link between the presenting signs and symptoms of common diseases across the lifespan with disordered physiology.
- 2.** diagnose health conditions based on clinical and laboratory data.
- 3.** outline the role(s) of diagnostic tests.
- 4.** describe the mechanisms of action, contraindications, and interactions of drugs used to treat common health conditions;
- 5.** in collaboration with clients, monitor responses to therapeutic interventions;
- 6.** evaluate and apply research findings to the development of evidence-based, comprehensive client pharmaceutical plans of care;
- 7.** identify and incorporate special considerations when prescribing for specific populations: pregnancy, breastfeeding, older adults, children and infants, and genetic factors;

8. evaluate prescribed drug regimens for safety, clinical efficacy and outcomes, in partnership with the client;
9. identify and incorporate strategies to address potential barriers to regimen adherence into client assessment and education;
10. demonstrate an understanding of the selection and use of drugs in the management and treatment of disease, including the application of pharmacokinetics and pharmacodynamics to client clinical context and the integration of client social context (age, health status, gender, concomitant therapies, cultural beliefs, financial status, etc) to the selection of drugs of choice;
11. integrate knowledge of adverse drug reactions and interactions in safe prescribing and appropriately report adverse drug reactions

Evaluation


The assessment structure for NURS 516 is based on the following course activities, with the percentage weighting of each activity as indicated below. Your final grade for the course will be a composite mark based on your performance in these course activities.

Activity	Weight
Problem-Based Learning Exercises	20%
Virtual Grand Rounds (Rounds Presentation: 15%) (7-day online discussion activities: 5%)	20%

Activity	Weight
Instructor-Led Case Studies	Pass/fail
Test 1	20%
Test 2	20%
Test 3	20%
Total	100%

In order to pass NURS 516, you must achieve a minimum mark of 70% (14/20) on conference participation (PBL exercises), a minimum mark of 70% (14/20) on your VGR presentation and discussion activities, and a minimum combined mark of 70% (42/60) on the three tests, and a Pass in the ILCS.

If the minimum mark is not achieved for any element of the assessment structure (conference participation, written assignments, or tests), then a failing grade will be assigned for NURS 516. If the student re-registers in NURS 516, then all elements of the course must be repeated (conference participation, written assignments, and tests).

NP course tests are closed book and must be written independently; failure to do so can be interpreted as an academic offence and subject to the [Student Academic Misconduct Policy](#) .

Materials

Digital course materials

Links to the following course materials will be made available in the course:

McCance, K. & Huether, S. (2023). *Pathophysiology: The biologic basis for disease in adults and children* (9th ed.). St. Louis: Elsevier Mosby.

Technical Requirements

Computer System

In order to successfully complete this course, the student must own or have ready access to certain computer hardware and software programs. For complete and up-to-date information on the minimum computer requirements required to complete the graduate nursing courses, visit the **Faculty of Health Disciplines** [↗](#) technical site.

Students are expected to connect to an Internet Service Provider at their own expense and to secure audio speaker or headphones for the required Clinical Forum events in the course.

Important links

- › [Student services in FHD](#) [↗](#)
- › [Support services at AU](#) [↗](#)
- › [Faculty of Graduate Studies](#) [↗](#)

- > [Faculty of Health Disciplines](#) 
- > [Graduate Calendar](#) 

Athabasca University reserves the right to amend course outlines occasionally and without notice. Courses offered by other delivery modes may vary from their individualized study counterparts.

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View [previous revision](#) 
