



# Nursing (NURS) 517

## Pharmacotherapeutics and Pathophysiology for Nurse Practitioners II (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

**Prerequisites:** [NURS 516](#)

**Precluded:** NURS 517 cannot be taken for credit if credit has been obtained for NURS 519 or NURS 521

**Faculty:****Faculty of Health Disciplines** [↗](#)

## Overview

NURS 517 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 for NURS 517. NURS 517 is a prerequisite course for NURS 522, NURS 524, NURS 526, NURS 527, NURS 528, NURS 530 and NURS 531. NURS 517 can be taken as an elective course by other Master of Nursing or Master of Health Studies students and by non-program students provided they have taken NURS 516.

NURS 517 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 which integrate the pathophysiology of body systems 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 517 covers the remainder of the systems not addressed in NURS 516. Together these courses provide foundational knowledge of pharmacology and pathophysiology that will be used to support clinical decision making. The content of NURS 517 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 517 consists of the following units:

- Unit 1: Neurological System (Week 1,2)
- Unit 2: Endocrine System (Week 3)
- Unit 3: Stress (Week 4)
- Unit 4: Musculoskeletal System (Week 5)
- Unit 5: Women's Health (Weeks 6)
- Unit 6: Men's Health (Week 7)
- Unit 7: HEENT (Weeks 8)
- Unit 8: Anti-infectives (Week 9)
- Unit 9: Virology and Vaccinology (Week 10)
- Unit 10: Population Health (Week 11)
- Unit 11: Polypharmacy (Week 12)

- Consolidation (Week 13)

## Learning outcomes

By the end of NURS 517, you will be able to:

1. Understand 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. Understand the role(s) of diagnostic tests.
4. List the drugs and substances for which nurse practitioners (NPs) have the legislative authority to prescribe, as per the CRNA Scope of Practice for Nurse Practitioners (<https://nurses.ab.ca/media/y4yjvita/scope-of-practice-for-nurse-practitioners-2022.pdf>).
5. Understand the mechanisms of action, contraindications, and interactions of the aforementioned drugs.
6. In collaboration with clients, monitor responses to therapeutic interventions.

## 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%
Instructor-Led Case Studies	Pass/Fail
Test 1	20%
Test 2	20%
Test 3	20%
<b>Total</b>	<b>100%</b>

In order to pass NURS 517, 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 517. If the

student re-registers in NURS 517, 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.

*Opened in Revision 2, May 8, 2024*

*Updated April 27, 2026*

View [previous revision](#) 

---