

Department of Practical Nurse & Health Care Aide

COURSE OUTLINE – Fall 2025

NP1500 (VA2) Anatomy & Physiology – 6 (6-0-0) 90 hours in 15 weeks

Northwestern Polytechnic acknowledges that our campuses are located on Treaty 8 territory, the ancestral and present-day home to many diverse First Nations, Metis, and Inuit people. We are grateful to work, live and learn on the traditional territory of Duncan's First Nation, Horse Lake First Nation and Sturgeon Lake Cree Nation, who are the original caretakers of this land.

We acknowledge the history of this land and we are thankful for the opportunity to walk together in friendship, where we will encourage and promote positive change for present and future generations.

INSTRUCTOR:	Tia Hudson	PHONE:	780 539 2056
OFFICE:	HEC 314	E-MAIL:	THudson@NWPolytech.ca
OFFICE HOURS:	By appointment		

CALENDAR DESCRIPTION: Introduction to the structure, organization, and functions of the human body.

PREREQUISITE(S): Biology 30 or equivalent

COREQUISITE(S): NP1205, NP1250 and NP1280

REQUIRED MATERIALS:

Patton, K. T., & Thibodeau, G. A. (2024). *Structure & Function of the Body*. (17th ed.).
Betts, J. G., Young, K. A., Wise, J. A., Johnson, E., Poe, B., Kruse, D. H., Korol, O., Johnson, J. E., Womble, M., & DeSaix, P. (2023). *Anatomy and physiology* (2nd ed.). OpenStax, Rice University. <https://openstax.org/books/anatomy-and-physiology-2e>

DELIVERY MODE(S): Hybrid: will contain both in person and synchronous lectures

LEARNING OUTCOMES:

1. Explain the structures and physiological processes of the human body, including key systems and their functions.
2. Apply critical thinking skills to analyze concepts in anatomy, physiology, and microbiology, and demonstrate their interconnections.
3. Identify and define medical terminology related to anatomy, physiology, and microbiology, and apply it correctly in context.
4. Apply knowledge of anatomy and physiology to support clinical decision-making and enhance patient care in future healthcare practice.

TRANSFERABILITY:

Please consult the Alberta Transfer Guide for more information. You may check the transferability of this course at the Alberta Transfer Guide main page <http://www.transferralberta.alberta.ca>.

**** For courses with alpha (letter) grading, a grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability.**

EVALUATIONS:

The final grade is based on the following assessments, and there are no additional assignments or marks provided in the course. All evaluation components must be completed to pass the course. All exams are to be completed individually, without the use of external technology or resources, and will assess comprehension, application, and critical thinking rather than rote memorization.

Assignment	Weight	Due Date
Weekly Reflection & Integration Journal	15%	Weekly during class time
Think Like a Nurse Assignment	20%	November 28, 2025 @1159PM
Exam 1	15%	September 26, 2025
Exam 2	20%	November 5, 2025
Final Exam	30%	Scheduled by Registrar's Office

1. Weekly Reflection and Integration Journal

Students will complete weekly reflection journals designed to reinforce key anatomy and physiology concepts while building reflective and professional thinking habits.

Each journal includes four short prompts that guide students to:

- Identify and summarize a key concept or mechanism learned that week; Reflect on how this knowledge applies to health or nursing practice; Respond to a weekly professional or ethical prompt that connects scientific understanding with human care; Self-assess engagement and identify one strategy to improve comprehension or participation.
- Each journal should demonstrate accurate integration of course material and thoughtful reflection. Journal 1 will be worth 1%; Journals 2–7 are each worth 2%, for a total of 15% of the final grade. A detailed rubric will be posted on D2L outlining expectations for conceptual accuracy, reflection depth, and professional communication.

2. Exam 1: Foundations of Anatomy and Physiology (Weeks 1–7)

The first exam evaluates foundational knowledge from Weeks 1–7, covering the *chemistry of life, homeostasis, cellular structure and function, tissue organization, and the integumentary, skeletal, muscular, and nervous systems (up to somatic reflexes)*. Students will demonstrate understanding of how structure supports function and how body systems maintain homeostasis at the cellular and tissue levels. The exam will include multiple-choice, multiple-select, labeling/diagram interpretation, and short-answer questions, designed to assess comprehension and application.

Emphasis will be placed on: Chemical and cellular foundations of human physiology, Structure/function relationships in tissues and systems and integration of early concepts such as feedback mechanisms, movement, and neural control.

3. Think Like a Nurse Assignment

The assignment consists of 10–12 structured, long-answer questions (150–250 words each) requiring students to:

- Explain the relevant anatomy and physiology underpinning a given patient presentation;

- Apply course knowledge to predict or explain physiological responses;
- Use correct medical and anatomical terminology throughout.
- Responses must be in the student's own words and demonstrate conceptual understanding, integration across systems, and clinical reasoning. A title page and reference list (APA 7) are required if external sources are used.

4. Exam 2 – Midterm Examination: Control and Circulation (Weeks 7–10)

The midterm exam evaluates content from Weeks 7–10, focusing on the nervous, endocrine, lymphatic, immune, and cardiovascular systems.

Students will demonstrate understanding of system regulation, communication, and integration in maintaining physiological balance.

The exam will include a mix of multiple-choice, multiple-select, labeling, and short-answer questions that emphasize neural and hormonal regulation of body functions, interactions among the nervous, endocrine, and cardiovascular systems and physiological responses to stress, exercise, and environmental changes.

5. Final Examination – Comprehensive Systems Integration (Weeks 1–15)

The final examination is cumulative, with greater emphasis on Weeks 11–15, including the respiratory, urinary, digestive, reproductive, and developmental systems, as well as fluid, electrolyte, and acid–base balance. Students will integrate anatomical and physiological knowledge across multiple systems and apply this understanding to realistic health and clinical scenarios.

The exam will include multiple-choice, multiple-select, labeling, and written-response questions, assessing: System interrelationships and homeostatic regulation, physiological adaptations and disruptions and application of scientific reasoning to patient and health contexts

GRADING CRITERIA:

Please note that most institutions will not accept your course for transfer credit **IF** your grade is **less than C-**.

Grading Chart for courses with Alpha Grading:

Alpha Grade	4-point Equivalent	Percentage Guidelines	Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	95-100	C+	2.3	67-69
A	4.0	85-94	C	2.0	63-66
A-	3.7	80-84	C-	1.7	60-62
B+	3.3	77-79	D+	1.3	55-59
B	3.0	73-76	D	1.0	50-54
B-	2.7	70-72	F	0.0	00-49

COURSE SCHEDULE/TENTATIVE TIMELINE:

Week 1 -7	• Introduction to Anatomy and Physiology • Chemistry of Life • Homeostasis and Feedback Mechanism • Enzymes and Metabolism • Anatomy of the Cell and Histology • Membrane Transport • Cellular Function – Protein Synthesis and DNA Replication • The Integumentary System • Bone Tissue • The Axial and Appendicular Skeletal Systems • Selected Joints • The Muscular System • Muscle Tissue • The Spinal Cord and Spinal Nerves • Nervous Tissue • Somatic Reflexes • Exam #1
Week 8	• Nervous System • Sense Organs
Week 9	• The Endocrine System • The Lymphatic and Immune System

Week 10	• The Cardiovascular System • Blood • Exam #2
Week 11	FALL BREAK
Week 12	• The Respiratory System • The Urinary System
Week 13	• The Digestive System • Med Microbiology
Week 14	• Fluid & Electrolyte balance • Acid-base balance
Week 15	• The Female Reproductive System • The Male Reproductive System • Human Development

STUDENT RESPONSIBILITIES:

As a student at NWP, you have rights and responsibilities. It is your responsibility to be familiar with the information contained in this Course Outline and the PN student handbook and to clarify any areas of concern with the instructor. It is also your responsibility to be familiar with NWP policies. Please take the time to familiarize yourself with the policies that might impact you while you are here:

- [NWP Department of Practical Nurse & Health Care Aide: Practical Nurse Handbook](#)

STATEMENT ON ACADEMIC MISCONDUCT:

Academic Misconduct will not be tolerated. For a more precise definition of academic misconduct and its consequences, refer to the Student Rights and Responsibilities policy available <https://www.nwpolytech.ca/about/polytechnic-leadership/policies-directory>.

****Note:** all Academic and Administrative policies are available on the same page.

Additional Information:

LATE ASSIGNMENT POLICY:

To obtain credit in the course ALL evaluations methods must be completed. Students are expected to make every effort to complete assignments on time. Assignment submissions are expected on the date determined by faculty. If extensions are necessary, they may be requested up to 48 hours prior to the assignment due date and should be submitted in writing to the faculty member involved. Not all extensions will be granted. In exceptional situations, extension requests within the 48-hour period may be considered. Late assignments will have 5% of total marks (or one letter grade) for the assignment deducted for each day/ partial day (including weekend days) beyond the due time.

For example, a paper marked at B+ would receive an adjusted grade of B if handed in one day late. After 5 days, a grade of 0 will be awarded to the assignment. If the late penalty places the grade below the necessary pass grade, students will be unsuccessful in the course. When submitting assignments electronically, it is the student's responsibility to ensure the assignment has been received. Papers/ assignments may not be rewritten for a higher grade. Concerns regarding grading are to be discussed with the faculty member involved.

TURNITIN DISCLOSURE:

As part of NWP's commitment to academic integrity, all written assignments submitted by students will be reviewed using Turnitin software, an online plagiarism detection tool, to verify originality and ensure academic integrity. Turnitin compares student work to a vast database of academic sources, publications and previously submitted assignments to identify potential instances of plagiarism or improper citation(s). By enrolling in this course, students acknowledge and consent to the use of Turnitin for assignment submissions.