

DEPARTMENT OF KINESIOLOGY AND HEALTH SCIENCES

COURSE OUTLINE – Fall 2026

PE1015 A2/B2: ESSENTIALS OF HUMAN PHYSIOLOGY 3 (3-0-0) 45 Hours in 15 WKs

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:	Marilee Nugent	PHONE:	780-539-2917
OFFICE:	K219	E-MAIL:	mnugent@nwpolytech.ca
OFFICE HOURS:	Drop in or by appointment.		

CALENDAR DESCRIPTION: The main focus of this introductory course is on cellular functions in the human body, with special emphasis on systems that respond and adapt to exercise stress.

PREREQUISITE(S) / COREQUISITE(S): None

REQUIRED MATERIALS: Stanfield, Cindy L. (2017). Principles of Human Physiology. 6th Edition, San Francisco: Pearson.

DELIVERY MODE(S): Teaching and learning activities will include lectures, discussions, seminars, assigned readings, in-class activities, group and individual work. This course will be delivered **in class**. Students should bring their laptop or tablet, text, and notebook for in-class activities.

LEARNING OUTCOMES: Upon successful completion of this course, the student should be able to:

- Demonstrate an in-depth understanding of the main principles of the energy systems, cell metabolism, and the neuromuscular system;
- Demonstrate an understanding of human physiological behaviour under normal conditions, as well as, to a certain extent, pathologies and stress induced by exercise;
- Demonstrate the capacity to integrate information from different sources (biology, chemistry, and physics) and effectively communicate this verbally and in writing.

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.transferalberta.alberta.ca>.

Note: 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:

5%	Class activities participation
15%	Test 1
15%	Test 2
15%	Test 3
15%	Test 4
<u>35%</u>	<u>Final Exam</u>
100%	Total

Note: Tests 1-4 will each be allotted 40 minutes (half of the class time).

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:

SECTION A2 – Wednesdays and Fridays 13:00 – 14:20 **Room:** D202

This is a tentative schedule and may change based on class progression.

PE1015 Essentials of Human Physiology 2026 TENTATIVE COURSE SCHEDULE			
A2	Sep 2 to Dec 9 1:00 - 2:20 pm		
WED	TOPIC (Chapter)	FRI	TOPIC (Chapter)
02 Sep 2026	Course Overview	04 Sep 2026	Intro to Physiology (1)
09 Sep 2026	Intro to Physiology (1)	11 Sep 2026	Cell Structure & Function (2)
16 Sep 2026	Cell Structure & Function (2)	18 Sep 2026	Cell Metabolism (3)
23 Sep 2026	Cell Metabolism (3)	25 Sep 2026	TEST 1 / Cell Metabolism (3)
30 Sep 2026	NO CLASS	02 Oct 2026	Cell Membrane Transport (4)
07 Oct 2026	Cell Membrane Transport (4)	09 Oct 2026	Chemical Messengers (5)
14 Oct 2026	Chemical Messengers (5)	16 Oct 2026	Neuroendocrinology (6)
21 Oct 2026	TEST 2 / Review activities	23 Oct 2026	Nerve Cells & Signalling (7)
28 Oct 2026	Nerve Cells & Signalling (7)	30 Oct 2026	Synaptic transmission & Neural Integration (8)
04 Nov 2026	Nervous System: CNS (9)	06 Nov 2026	Nervous System: CNS (9)
11 Nov 2026	FALL BREAK	13 Nov 2026	FALL BREAK
18 Nov 2026	TEST 3 / Sensory Systems (10)	20 Nov 2026	Autonomic & Motor Systems (11)
25 Nov 2026	Autonomic & Motor Systems (11)	27 Nov 2026	Muscle Physiology (12)
02 Dec 2026	Muscle Physiology (12)	04 Dec 2026	Muscle Physiology (12) / TEST 4
09 Dec 2026	REVIEW ACTIVITY	11 Dec 2026	CLASSES FINISHED
16 Dec 2026	EXAM PERIOD	18 Dec 2026	EXAM PERIOD

Note: Numbers in brackets refer to the corresponding chapters of the required text.

COURSE SCHEDULE/TENTATIVE TIMELINE:

SECTION B2 Tuesdays and Thursdays – 11:30 – 12:50 **Room:** D208

This is a tentative schedule and may change based on class progression.

PE1015 Essentials of Human Physiology 2026 TENTATIVE COURSE SCHEDULE			
B2	Sep 3 to Dec 8 11:30 am - 12:50 pm		
TUE	TOPIC (Chapter)	THU	TOPIC (Chapter)
01 Sep 2026	NO CLASS	03 Sep 2026	Course Overview
08 Sep 2026	Intro to Physiology (1)	10 Sep 2026	Intro to Physiology (1)
15 Sep 2026	Cell Structure & Function (2)	17 Sep 2026	Cell Structure & Function (2)
22 Sep 2026	Cell Metabolism (3)	24 Sep 2026	Cell Metabolism (3)
29 Sep 2026	Test 1 / Cell Metabolism (3)	01 Oct 2026	Cell Membrane Transport (4)
06 Oct 2026	Cell Membrane Transport (4)	08 Oct 2026	Chemical Messengers (5)
13 Oct 2026	Chemical Messengers (5)	15 Oct 2026	Neuroendocrinology (6)
20 Oct 2026	Test 2 / Review activities	22 Oct 2026	Nerve Cells & Signalling (7)
27 Oct 2026	Nerve Cells & Signalling (7)	29 Oct 2026	Synaptic transmission & Neural Integration (8)
03 Nov 2026	Nervous System: CNS (9)	05 Nov 2026	Nervous System: CNS (9)
10 Nov 2026	FALL BREAK	12 Nov 2026	FALL BREAK
17 Nov 2026	Test 3 / Sensory Systems (10)	19 Nov 2026	Autonomic & Motor Systems (11)
24 Nov 2026	Autonomic & Motor Systems (11)	26 Nov 2026	Muscle Physiology (12)
01 Dec 2026	Muscle Physiology (12)	03 Dec 2026	Muscle Physiology (12) / Test 4
08 Dec 2026	REVIEW ACTIVITY	10 Dec 2026	CLASSES FINISHED
15 Dec 2026	EXAM PERIOD	17 Dec 2026	EXAM PERIOD

Note: Numbers in brackets refer to the corresponding chapters of the required text.

STUDENT RESPONSIBILITIES: For general NWP policy, refer to the NW Polytechnic document *Policy on Student Rights and Responsibilities* available on the NWP website.

BE PREPARED: Assigned readings and exercises for each class should be completed before attending that class. As this course includes discussion and other active learning exercises, attendance at all sessions is required and is critical to the student's success in the course. If you have difficulty in this course, please contact me immediately for assistance.

ILLNESS/EMERGENCY: Notify the instructor as soon as possible by email, prior to class (ideally with 24 hours' notice).

MISSING CLASSES: You are accountable for delivered lectures, assigned readings, and any announcements that will be made in class. Lectures will not always cover all the assigned reading materials. As well, lectures may include topics and information not covered in reading materials. Therefore, it is imperative that you attend every class as your exams may include materials from the lectures that are not covered by the reading materials.

LATE ASSIGNMENTS: Late assignments will be deducted 10% per day (including weekends) up to 4 days late. After 4 days late, assignments will not be accepted. Some evaluations will occur partially or all in class and cannot be made up if missed. See guidelines for each evaluation on myClass for specific details. Exceptions may be made for extenuating circumstances, discuss any concerns with the instructor as soon as possible.

EXAMS: If you are unable to write a test or exam at the scheduled time due to illness or emergency, notify me immediately, preferably one day in advance. Failure to notify the instructor will result in a grade of zero for the missed tests. Extenuating circumstances may be assessed on a case-by-case basis; documentation may be required. Instructors reserve the right to administer exams using screen monitoring software, such as AB Tutor.

ASKING FOR HELP: Please talk to me if you have concerns or if you are experiencing difficulties that may have a negative impact on your academic performance in the course. You can see me after class, drop by my office or email me to set up an appointment.

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.

POLICY ON THE USE OF ARTIFICIAL INTELLIGENCE (AI): The intent of this policy is not to prohibit their use entirely, but to guide usage to ensure original work product by students, prevent plagiarism, and support development of higher cognitive skills and critical thinking necessary for

mastery in the knowledge domain of the course. This policy applies only to this course; other instructors may have different policies, and students should not assume these rules apply elsewhere.

When no specific rules are established for a given task, the following defaults will apply:

- i. For Assignments, Reports, and Presentations – AI tools may be used to assist in drafting but may not be used to generate the complete work from a single prompt; AI may be used to refine language, and all prompts must be disclosed. For greater transparency, students may be asked to submit their prompt history and AI outputs as an appendix or additional file. ***Make sure you save this information in case you are asked to provide it to the instructor.***
 - If references used have been produced by an AI, students must review these sources to verify their existence, accuracy and relevance;
 - Any information generated by AI must be independently verified using credible sources;
 - Students must be able to demonstrate they can understand and converse intelligently on the material they submit. The instructor may assess a student's understanding through an interview, and failure to demonstrate knowledge of what has been submitted will be treated as probable academic misconduct.
- ii. **For Tests, Exams, and Quizzes** – the use of AI tools, search engines, communication devices, or any feature enabling communication with external entities is strictly prohibited. Any breach of the applicable rules will be addressed under the institution's academic misconduct procedures.

Note: AI-generated content may contain errors, biases or hallucinations. Students are responsible for verifying information and may consult their instructor for guidance on its accuracy, appropriateness, or permitted use. For general knowledge inquiries, students are encouraged to consult and support the same human-generated authoritative sources that AIs exploit, such as Wikipedia, health authorities, research databases.

POLICY ON THE RECORDING OF TEACHING ACTIVITIES: Students may not video record any part of a class teaching and learning activity without express advance permission from the instructor (except in cases of previously arranged accommodations). This is to respect educational processes as well as student and instructor privacy.

Note: posting instructional notes or slides before or after classes is at the discretion of your instructor.

POLICY ON ATTENDANCE: Regular class attendance in this course is strongly recommended, as the material selected from the text for exams and tests will be and reinforced in class participation activities. In any disputes about marks, class attendance will be strongly considered.

If a student misses more than 25% of the course (7 lectures), they will be barred from writing the final exam. For exceptional circumstances, the instructor will evaluate on a case-by-case basis.