

DEPARTMENT OF KINESIOLOGY AND HEALTH SCIENCES

COURSE OUTLINE – Fall 2026

PE2000 (A2/L1/L2): Exercise Physiology – 3 (3-0-2), 75H, 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:	Marilee Nugent	PHONE:	780-539-2917
OFFICE:	K219	E-MAIL:	mnugent@nwpolytech.ca
OFFICE HOURS:	Drop in or by appointment		

CALENDAR DESCRIPTION: The lecture, laboratory experience and supplementary readings are designed to promote an understanding of the physiological responses to acute and chronic exercise. Successful completion of the course requirements will enable one to understand the basic function of various physiological systems; describe the various physiological changes that occur during acute exercise and the various adaptations to different forms of exercise training and environmental influence; understand the basic ergometry and other laboratory instrumentation for evaluating physiological responses to exercise; and experience exercise stress in a laboratory setting as a participant and tester.

PREREQUISITE: PE1015

REQUIRED MATERIALS: McArdle, W.D., Katch, F.T., and Katch, V.L. (2016). Essentials of Exercise Physiology: 5th e. Philadelphia: Wolters Kluwer.

DELIVERY MODE(S): Teaching and learning activities will include lectures, assigned readings, in-class activities, discussion seminars, group and individual work, and laboratory activities. This course will be delivered in-person in both class and laboratory sessions. Students should bring their laptop or tablet, text book, and notebook for classes and labs. Student attire for labs should be exercise ready.

LEARNING OUTCOMES: Students who successfully complete this course should be able to:

- Integrate their knowledge on human physiology to exercise physiology;
- Identify a few of the most common training methods in relation to the three major energy systems and how they apply to exercise physiology;

- Explain a few of the most common types and protocols of exercise training and the adaptations induced by these;
- Name, describe and implement a variety of physiological tests that may be used on humans of various abilities;
- Understand research and being able to execute a few of the common exercise tests and assessments;
- Analyze research and apply the appropriate concepts to class sessions.

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>.

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:

Lab Reports	15%	45%
Short writing assignments	15%	
Lab Exam	15%	
Midterm Exam	20%	55%
Final Exam	35%	
Total	100%	

Note: 45% of final grade will be based only on the lab component (attendance is mandatory). The remaining 55% will be based on the entire content, including labs.

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:

LECTURES: Tuesdays AND Thursdays 10:00 – 11:20 **Room:** D208

LAB SESSIONS: L1 Fridays OR L2 Wednesdays 15:00 – 16:50 **Room:** L123

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

PE2000 Exercise Physiology 2026 TENTATIVE COURSE SCHEDULE			
A2	LECTURES 10:00 - 11:20 am		
TUE	TOPIC (Chapter)	THU	TOPIC (Chapter)
01 Sep	NO CLASS	03 Sep	Course presentation
08 Sep	Intro to Exercise Physiology	10 Sep	Macro and Micronutrients (2)
15 Sep	Macro & Micronutrients (2) Lit reviewing	17 Sep	Food and Energy (3)
22 Sep	Performance aids (4)	24 Sep	Intro to Energy Transfer (5)
29 Sep	Human Energy Transfer (6)	01 Oct	Measuring Energy Capacity (7)
06 Oct	Energy Expenditure (8)	08 Oct	Respiratory System (9)
13 Oct	REVIEW ACTIVITY	15 Oct	MIDTERM
20 Oct	Cardiovascular System (Ch10)	22 Oct	Neuromuscular System (Ch11)
27 Oct	Neuromuscular System (Ch11)	29 Oct	Hormonal Response (Ch12)
03 Nov	Endurance Training (Ch13)	05 Nov	Endurance Training (Ch13)
10 Nov	FALL BREAK	12 Nov	FALL BREAK
17 Nov	Strength Training (Ch14)	19 Nov	Strength Training (Ch14)
24 Nov	Exercise in Diff conditions (Ch15)	26 Nov	Body Composition & Obesity (16)
01 Dec	Exercise and Aging (Ch17)	03 Dec	REVIEW / SEMINAR
08 Dec	LAB EXAM	10 Dec	CLASSES FINISHED
15 Dec	EXAM PERIOD	17 Dec	EXAM PERIOD

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

LAB SCHEDULE

PE2000 Exercise Physiology 2026 <i>TENTATIVE COURSE SCHEDULE</i>		
L2	L1	LABS 3:00 - 4:50 pm
WED	FRI	TOPIC
02 Sep	04 Sep	NO LABS
09 Sep	11 Sep	Intro to human performance testing & research / Basic Ergometry (Lab Report)
16 Sep	18 Sep	Peer review of 1st lab report & edits. (Submit)
23 Sep	25 Sep	Anaerobic Tests
30 Sep	02 Oct	Wingate (Lab Report)
07 Oct	09 Oct	Working on Wingate
14 Oct	16 Oct	Working on Wingate
21 Oct	23 Oct	CPET Part 1 (Lab report)
28 Oct	30 Oct	CPET Part 2 (Lab report)
04 Nov	06 Nov	Electromyography demo lab (TBC)
11 Nov	13 Nov	FALL BREAK
18 Nov	20 Nov	Force-Velocity (Lab Report)
25 Nov	27 Nov	Working on Force Velocity
02 Dec	04 Dec	Critical Power
09 Dec	11 Dec	NO LABS
16 Dec	18 Dec	EXAM PERIOD

STUDENT RESPONSIBILITIES:

For general NWP policy, refer to the Polytechnic Policy on Student Rights and Responsibilities 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.

LAB ATTIRE: Wear exercise clothes, running shoes/sneakers and secure long hair. Bring water bottles.

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

INFORMED CONSENT FOR PARTICIPATION IN PHYSICAL ACTIVITY: This course includes physical activity, exercise, and/or fitness assessments as part of its learning and evaluation components. By enrolling in this course, you acknowledge and accept the following:

- You may be asked to participate in physical activity sessions, which include aerobics and/or musculoskeletal training.
- While the risk is minimal, physical activity may involve potential adverse effects such as episodes of transient lightheadedness, loss of consciousness, abnormal heart rate and/or blood pressure, chest discomfort, leg cramps, nausea). You voluntarily assume these risks.

- You are responsible for promptly informing your instructor(s) of any pain, discomfort, fatigue, or other symptoms experienced during or within 48 hours of the course session.
- You must disclose any health conditions that could be affected by physical activity. The instructor(s) will make reasonable modifications, where appropriate, and may request documentation from a qualified health professional.

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:

- 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.
- 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 or 3 labs), they will be barred from writing the final exam. For exceptional circumstances, the instructor will evaluate on a case-by-case basis.