

DEPARTMENT OF KINESIOLOGY AND HEALTH SCIENCES

COURSE OUTLINE – WINTER 2023

PE1030 (A3): Integrative Human Physiology– 3 (3-0-1) UT, 60H, 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: Fabio Minozzo

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OFFICE: K219

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OFFICE HOURS: upon student request

Lectures: Mondays - 11:30am-12:50pm/ Fridays - 10:00-11:20am

Labs: L1 – Fridays 8:30 – 9:20; L2 – Tuesdays 13:00- 13:50; L3 – Fridays 13:00 – 13:50

Note: The labs will be delivered by Gary Zuko: phone 780 539 2990 E-mail: GZuko@nwpolytech.ca

CALENDAR DESCRIPTION: The focus of this introductory physiology course is systemic functions in the human body with special emphasis on integration of these functions. Whenever possible, the responses and adaptations to exercise will be used as a foundation upon which the concept of integration will be discussed.

DELIVERY MODE(S): A variety of methodologies will be employed including lecture, discussion, lab activities, seminars group/ individual work.

This course will be mostly delivered **in class** (or in the lab) with some online components.

- For the remote delivery component: students **should have** a computer with a webcam and reliable internet connection. Technological support is available through helpdesk@nwpolytech.ca
- For the onsite component: students are also recommended to bring their own laptop or tablet besides book and notebook.

POLICY ON THE RECORDING OF TEACHING ACTIVITIES: Students may not record classroom activities (such as lectures, group activities, 3rd party presentations, etc.) without instructor's consent. This policy is set to protect the privacy and reputation of students, to uphold the copyrights of the instructor and other content creators, and to facilitate free and open discussion of ideas. The classroom is meant to be a psychologically safe environment, where students are free to explore and think through new and controversial ideas without fear of public repercussions. Recording lectures can undermine this goal. If permission to record an activity is granted, the recorded material can only be used for the student's own private use and is not to be posted online or otherwise distributed. Students will be notified in advance by the instructor when someone has been granted permission to record a classroom activity. Students will also be given the option of being excused from actively participating in recorded activities. In the case of student presentations, the recording student must show proof that the presenting student(s) have agreed to be recorded before the instructor will grant permission.

POLICY ON INSTRUCTIONAL RESOURCES AND MATERIALS: Any course resource/material should be properly used: the content created by your instructor is his/her intellectual property and is provided to you based upon your registration for this class; as such, the material is for your private use only. It is not to be distributed, publicly exhibited, or sold without the permission of the instructor. Third party materials (such as assigned readings, videos, et cetera) have either been licensed for use in this course or fall under an exception or limitation in Canadian Copyright law.

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

PREREQUISITE:

PE1015

REQUIRED TEXT/RESOURCE MATERIALS:

Stanfield, Cindy L. (2017). Principles of Human Physiology, 6th Edition.

COURSE OBJECTIVES

- To provide the student with a knowledge and understanding of the basic concepts of physiology in selected systems of the body.
- To examine the critical systems associated with health, exercise and sport.
- To provide the basic principles of the following systems: neural-endocrine systems, muscular systems, cardio-vascular system, respiratory system, digestive systems.

LEARNING OUTCOMES:

- Identify and explain the metabolic and physiological determinant of sports and athletic performance
- Explain the basic structure-function relationships that exist within the human body and the regulation of these physiological processes
- Explain the control and integration of cellular and systemic function in responses to the challenges of health and fitness and sport performance with reference to specific systems.

COURSE SCHEDULE TENTATIVE TIMELINE:

PE1030 INTEGRATIVE HUMAN PHYSIOLOGY SCHEDULE (Tentative)						
IN CLASS LECTURES				LABORATORY		
Monday	TOPIC	Friday	TOPIC	Tuesdays	Friday	TOPIC
2-Jan-23	No Classes	6-Jan-23	Intro to the course / Blood (Ch15)	3-Jan-23	6-Jan-23	No labs
9-Jan-23	Cardiac function (Ch13)	13-Jan-23	Cardiac function (Ch13)	10-Jan-23	13-Jan-23	Intro to the labs (L0)
16-Jan-23	Cardiac function (Ch13)	20-Jan-23	Cardiovascular System (Ch14)	17-Jan-23	20-Jan-23	Blood Pressure (L1)
23-Jan-23	Cardiovascular System (Ch14)	27-Jan-23	Cardiovascular System (Ch14)	24-Jan-23	27-Jan-23	Electrocardiogram (L2)
30-Jan-23	Respiratory System (Ch16)	3-Feb-23	Respiratory System (Ch16)	31-Jan-23	3-Feb-23	Electrocardiogram cont' (L3)
6-Feb-23	Review/ Seminar	10-Feb-23	TEST 1	7-Feb-23	10-Feb-23	Lab Quiz 1
13-Feb-23	Respiratory System (Ch16)	17-Feb-23	Gas Exchange (Ch17)	14-Feb-23	17-Feb-23	Pulmonary Function (L4)
20-Feb-23	<i>Winter Break</i>	24-Feb-23	<i>Winter Break</i>	21-Feb-23	24-Feb-23	<i>Winter Break</i>
27-Feb-23	Gas Exchange (Ch17)	3-Mar-23	Urinary System (Ch18)	28-Feb-23	3-Mar-23	Pulmonary Function cont' (L5)
6-Mar-23	Urinary System (Ch18)	10-Mar-23	Urinary System (Ch18)	7-Mar-23	10-Mar-23	Measuring Metabolism (L6)
13-Mar-23	Fluid and Electrolyte (Ch19)	17-Mar-23	Fluid and Electrolyte (Ch19)	14-Mar-23	17-Mar-23	Measuring Metabolism cont' (L7)
20-Mar-23	Review/ Seminar	24-Mar-23	TEST 2	21-Mar-23	24-Mar-23	Lab Quiz 2
27-Mar-23	Gastrointestinal System (Ch20)	31-Mar-23	Gastrointestinal System (Ch20)	28-Mar-23	31-Mar-23	Seminar on Hydration
3-Apr-23	Endocrine System (Ch23)	7-Apr-23	Easter (no Classes)	4-Apr-23	7-Apr-23	No labs
10-Apr-23	General Review	14-Apr-23	EXAM PERIOD	11-Apr-23	14-Apr-23	EXAM PERIOD

*Note: Some of these dates may vary to facilitate student learning

EVALUATION:

Lab Participation	5%
Lab Quiz 1	5%
Lab Quiz 2	5%
Test 1	20%
Test 2	25%
Final Exam	40%

100%

GRADING CRITERIA: (The following criteria may be changed to suite the course/instructor)

Alpha Grade	4-point Equivalent	Percentage Guidelines	Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	90-100	C+	2.3	67-69
A	4.0	85-89	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

STUDENT RESPONSIBILITIES:

Refer to the Polytechnic Policy on Student Rights and Responsibilities on the NWP website.

STATEMENT ON PLAGIARISM AND CHEATING:

Cheating and plagiarism will not be tolerated and there will be penalties. For a more precise definition of plagiarism and its consequences, refer to the Student Conduct section of the Northwestern Polytechnic Calendar at <https://www.nwpolytech.ca/programs/calendar/> or the Student Rights and Responsibilities policy which can be found at <https://www.nwpolytech.ca/about/administration/policies/index.html>

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

TRANSFERABILITY:

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

** 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**