

I. COURSE DESCRIPTION:

This course will provide the learner with a general understanding of the structure and function of the human body. The learner will begin to examine body systems to obtain knowledge of how the structures and functions are related to maintain homeostasis.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will demonstrate the ability to:

1. Use the appropriate terminology related to the organization, structure and function of the human body.

Potential Elements of the Performance:

- a. Define anatomy and physiology
 - b. Name the following:
 - Levels of organization of the human body
 - Major organs for each body system
 - Common terms used for relative positions of the body
 - Regions of the body
 - Body cavities and the major organs found in them
 - Major planes of the body
 - c. Define homeostasis
2. Examine the chemical composition and chemical interactions (life processes of the human body.

Potential Elements of the Performance:

- a. Define the terms matter and elements
 - b. List the four elements that compose 96% of body weight
 - c. List five reasons why water is essential to life
 - d. Define energy and describe the role of adenosine tri-phosphate (ATP) in energy transfer
3. Describe the location, structure and function of cells, tissues and organs of stated body systems.

Potential Elements of the Performance:**a. The Cell**

- Describe the structure of a typical cell
- List the function of each part of a typical cell
- List the two processes of cell division: mitosis and meiosis
- Differentiate between mitosis and meiosis
- Label a diagram of the main parts of a typical cell
- Describe the active and passive movement of substances across a cell membrane: diffusion osmosis
- Define tonicity
- Compare isotonic, hypotonic and hypertonic solutions

- Explain cell division
- Define metabolism, anabolism and catabolism
- Differentiate between anaerobic and aerobic metabolism
- Describe the roles of DNA and RNA

b. Tissues and Membranes

- List the four basic types of tissues
- Describe the location and function of the four basic types of tissues
- Differentiate between endocrine and exocrine glands
- Differentiate between mucous and serous membranes

c. Systems**i. Integumentary System**

- Describe the basic structure of the skin and its layers
- List and describe the basic functions of the skin and its layers
- Describe how skin colour is determined
- Identify the basic accessory structures of the skin

ii. Skeletal System

- List the functions of the skeletal system
- Identify the composition of bone structure
- Explain the basic process of bone formation
- Name the two divisions of the skeleton
- Label selected important landmarks for bones on the skeleton
- Compare cervical, thoracic, lumbar and sacral vertebrae
- List the main types and functions of joints

iii. Muscle System

- Identify three types of muscle tissue
- Explain the basic concept of muscle contraction
- Explain the relationship between muscle origin, insertion and action
- Label a diagram of the major muscles of the body
- Describe action of the major muscles of the body

iv. Nervous System

- Name the anatomical divisions of the nervous system
- Name the functional divisions of the nervous system
- Compare neuroglia and neuron
- Explain the function of the myelin sheath
- Label a diagram of the four major areas of the brain and the four lobes of the cerebrum
- Describe the function of the four major areas of the brain
- Describe the anatomy of the spinal cord
- List the three functions of the spinal cord
- Explain how the central nervous system is protected from injury

v. Autonomic Nervous System

- Describe the function of the autonomic nervous system
- Identify the two divisions of the autonomic nervous system

vi. The Special Senses

- State the functions of the sensory system
- Define the five types of sensory receptors
- Describe the five general and special senses
- Label a diagram and describe the structure of the ear and eye
- Describe pupillary changes
- Describe the functions of the parts of the ear and eye involved in hearing and sight
- Explain how the ear maintains body equilibrium

III. TOPICS:

1. Introduction to the Human Body
2. Basic Chemistry
3. The Cell
4. Cell Metabolism
5. Tissues and Membranes
6. Integumentary System
7. Skeletal System
8. Muscular System
9. Nervous System
10. Special Senses

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

The following resources are **required** for this course:

Herlihy, Barbara (2014). *The human body in health and illness* (5th ed.). Elsevier W. B. Saunders. ISBN: 978-1-4557-7234-6

Sault College Learning Management System (LMS)

The following resources are required for other PSW courses and will occasionally be used for reference:

Sorrentino, S. et al (2013). *Mosby's Canadian textbook for the personal support worker*. (3rd Canadian ed.). Elsevier Mosby. ISBN: 978-1-926648-39-2

Creason, C. (2011). *Stedman's medical terminology: Steps to success in medical language*. Lippincott Williams & Wilkins. ISBN: 978-1-58255-816-5

The following resources are **recommended** for students who want supplemental study materials:

Herlihy, Barbara (2014). *Study Guide for the human body in health and illness* (5th ed.). Elsevier W. B. Saunders. ISBN: 978-1-4557-7459-3

Herlihy, Barbara (2014). *The human body in health and illness* (5th ed.) – Pageburst E-Book on VitalSource. Elsevier W. B. Saunders. ISBN: 978-1-4557-5638-4

V. EVALUATION PROCESS/GRADING SYSTEM:

Evaluation Methods:

Introduction to the Human Body Quiz	5%
Unit Quizzes/Assignments	15%
Written Tests (4 x 20%)	80%

Total	100%
--------------	-------------

- To pass this course, students must complete all four written tests **and** achieve a minimum average of 60% (calculated as indicated above).
- Unit Quizzes/Assignments:** All unit quizzes/assignments are equally weighted. Students may be required to complete or submit these online using LMS.
- Supplemental Exam:** A supplemental exam may, at the discretion of the professor, be provided for students who obtain a final calculated average of 56- 59%. To be eligible for a supplemental exam, a student must have attended at least 80% of classes and completed **ALL** course components as indicated above. Supplemental exams cover content from the entire course and a mark of at least 60% must be obtained to be successful. A student who is successful on the supplemental exam will obtain a final grade of "C".
- All policies and procedures as outlined in the current Student Success Guide related to scholarly work/academic honesty, tests, and examinations will be followed.
- Students missing a test because of illness or other serious reason must contact the professor **before** the test begins (by phone, email, or personal note). Those students who have provided notification, according to policy, will be eligible to write the missed test for full credit upon their return to school. A student who does not follow the notification policy, misses a test for a non-serious reason, or does not complete the missed test within a reasonable timeframe may (at the professor's discretion) be allowed to write for reduced credit. The professor reserves the right to request supportive documentation (ex. doctor's note) for an absence before allowing a student to write a missed test.

The following semester grades will be assigned to students:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 – 100%	4.00
A	80 – 89%	
B	70 - 79%	3.00
C	60 - 69%	2.00
D (Fail)	50 – 59%	1.00
F (Fail)	49% and below	0.00

CR (Credit)	Credit for diploma requirements has been awarded.
S	Satisfactory achievement in field /clinical placement or non-graded subject area.
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.
<u>X</u>	<u>A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.</u>
NR	Grade not reported to Registrar's office.
W	Student has withdrawn from the course without academic penalty.

A minimum of a “C” grade is required to be successful in all PSW coded courses.

VI. SPECIAL NOTES:

Attendance:

Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.

VII. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located on the portal form part of this course outline.