



**I. COURSE DESCRIPTION:**

This course will provide the learner with a basic understanding of the human body. The learner will identify the basic structures and functions of cells, tissues, membranes, the integumentary system, the musculoskeletal system, the nervous system, and the senses. The learner will also examine how these systems maintain homeostasis and identify some age related changes.

**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 of the human body.
- Potential Elements of the Performance:
- a. List biologically significant elements, molecules, and compounds
  - b. Explain why these elements, molecules, and compounds are essential for the proper functioning of the human body
  - c. Define energy and describe the role of adenosine tri-phosphate (ATP) in energy transfer
3. Describe and identify the basic structure and function of cells, tissues, and membranes.

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

- Describe the structure of a typical cell and label a diagram
- List the function of each part of a typical cell
- Describe two types of cell division: mitosis and meiosis
- Describe cell death
- Describe the active and passive movement of substances across a cell membrane
- Compare isotonic, hypotonic and hypertonic solutions
- Define cellular metabolism
- Describe the basic breakdown of glucose by cells and differentiate between anaerobic and aerobic metabolism

**b. Tissues and Membranes**

- List the four basic types of tissues and describe their locations and functions
- State the locations and functions of epithelial and connective tissue membranes
- Differentiate between endocrine and exocrine glands
- Differentiate between mucous and serous membranes

4. Identify the basic structure, function, and age related changes of the human integumentary, musculoskeletal, nervous, and sensory systems.

Potential Elements of the Performance:**a. Integumentary System**

- Identify the basic structures of skin and its layers and describe their functions
- Identify the basic accessory structures of the skin and describe their functions
- Describe age related changes of the integumentary system

**b. Skeletal System**

- List the functions of the skeletal system
- Describe the basic composition of bone
- Explain the basic process of bone formation and resorption
- Name the two divisions of the skeleton
- Identify, locate, and label major bones and joints
- Describe age related changes of the skeletal system

**c. Muscular System**

- Identify three types of muscle tissue
- Explain the basic concept of muscle contraction
- Explain the relationship between muscle origin, insertion and action
- Identify, locate, and label the major superficial muscles of the body and describe their actions

- Describe age related changes of the muscular system

**d. Nervous System**

- Name and describe the divisions of the nervous system
- Compare neuroglia and neurons
- Explain the function of the myelin sheath
- Identify, locate, and label the four major areas of the brain and the four lobes of the cerebrum
- Describe the function of each area of the brain
- Describe the anatomy of the spinal cord
- List the functions of the spinal cord
- Explain how the central nervous system is protected
- List major spinal and cranial nerves and their functions
- Describe the functions of the autonomic nervous system
- Identify the two divisions of the autonomic nervous system
- Describe age related changes of the nervous system

**e. The Senses**

- State the functions of the sensory system
- State the five types of sensory receptors
- State the five general and special senses
- Identify, locate, and label structures of the sense organs and describe their functions
- Describe pupillary changes
- Explain how the ear maintains body equilibrium
- Describe age related changes to body senses

**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. Senses

**IV. REQUIRED RESOURCES/TEXTS/MATERIALS:**

The following resources are required for this course:

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

Sault College Learning Management System (D2L)

The following resource is recommended for students who want extra practice questions:

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

**V. EVALUATION PROCESS/GRADING SYSTEM:****Evaluation Methods:**

Written Tests (5 x 20%)	100%
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<b>Total</b>	<b>100%</b>
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1. To pass this course, students must complete all four written tests and achieve a minimum average of 60% (calculated as indicated above).
2. **Unit Quizzes/Assignments:** All unit quizzes/assignments are equally weighted. Students may be required to complete or submit these online using LMS.
3. **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".
4. All policies and procedures as outlined in the current Student Success Guide related to scholarly work/academic honesty, tests, and examinations will be followed.

5. 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%	3.00
B	70 - 79%	2.00
C	60 - 69%	1.00
D (Fail)	50 – 59%	0.00
F (Fail)	49% and below	
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.**

If a faculty member determines that a student is at risk of not being successful in their academic pursuits and has exhausted all strategies available to faculty, student contact information may be confidentially provided to Student Services in an effort to offer even more assistance with options for success. Any student wishing to restrict the sharing of such information should make their wishes known to the coordinator or faculty member.

**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 in D2L and on the portal form part of this course outline.