



**I. COURSE DESCRIPTION:**

This course is a continuation of Body Structure and Function I (PSW108) in which the learner will examine the remaining body systems and how they maintain homeostasis. The learner will identify the basic structures and functions of the endocrine, circulatory, lymphatic, immune, respiratory, digestive, and urinary systems. Reproduction and human growth and development will also be studied.

**II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

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

1. Identify the basic structures, functions, and age related changes of the endocrine, circulatory, lymphatic, immune, respiratory, digestive, urinary, and reproductive systems.

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

- List the functions of the endocrine system
- Define hormone
- Identify the major endocrine glands and their hormones
- Describe age related changes of the endocrine system

**b. Circulatory System****Blood**

- List three functions of blood
- Describe the composition of blood
- Describe the three types of blood cells and their function
- Explain the breakdown of red blood cells and the formation of bilirubin
- Identify the four blood types
- Explain Rh factor

**Heart**

- Describe the location of the heart and its function
- Name the three layers and covering of the heart
- Identify the four chambers and four valves of the heart and their function
- Trace the flow of blood through the heart
- List the blood vessels that move blood to and from the heart
- Define pulse, blood pressure, systole and diastole
- Describe age related changes to the heart

### Blood Vessels

- Describe the structure and function of arteries, capillaries and veins
- Describe the factors that determine blood pressure
- Describe edema formation

### **c. Lymphatic and Immune System**

- Locate, identify, and label lymphoid organs and tissues and describe their functions
- Differentiate between specific and nonspecific immunity
- Describe the process of phagocytosis
- Explain the causes of the signs of inflammation
- Explain the role of fever in fighting infection
- Differentiate between genetic immunity and acquired immunity
- Differentiate naturally and artificially acquired active and passive immunity
- Identify the steps in the development of anaphylaxis

### **d. Respiratory System**

- Locate, identify, and label structures of the respiratory system and describe their functions
- Describe the mechanism of breathing
- Explain how breathing is controlled
- Trace the movement of air from the nostrils to the alveoli
- Describe the role of pulmonary surfactants
- List three conditions that make the alveoli well suited for the exchange of oxygen and carbon dioxide

### **e. Digestive System and Metabolism**

- Locate, identify, and label structures of the digestive system and describe their functions
- Define digestion and absorption
- Compare mechanical and chemical digestion
- Describe the role of digestive enzymes
- Describe the role of bile in the digestion of fats
- Describe five categories of nutrients

### **f. Urinary System**

- Locate, identify, and label structures of the urinary system and describe their functions
- Identify the specific structures of the kidney and their basic functions
- Describe the blood supply of the kidney
- Explain the three processes involved in the formation of urine
- List the normal constituents of urine

Water, Electrolyte and Acid-Based Imbalance

- Describe the two main fluid compartments
- Define intake and output

**g. Reproductive System and Human Development**

- Locate, identify, and label structures of the male reproductive system and describe their functions
- Locate, identify, and label structures of the female reproductive system and describe their functions
- Explain the hormonal control of reproduction in males and females
- Describe the process of fertilization
- State two functions of the placenta
- Identify hormonal changes during pregnancy and labour
- Describe the stages of labour
- Describe stages of prenatal and postnatal development

**III. TOPICS:**

1. Endocrine System
2. Cardiovascular System
3. Lymphatic and Immune Systems
4. Respiratory System
5. Digestive System and Metabolism
6. Urinary System
7. Water, Electrolyte and Acid-Base Imbalance
8. Reproductive System
9. Growth and Development

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

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:**

Unit Quizzes	15%
Course Assignment	5%
Written Tests (4 x 20%)	80%
<b>Total</b>	<b>100%</b>

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:** All unit quizzes 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%	
B	70 - 79%	3.00
C	60 - 69%	2.00
D	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.	
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.	
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.