

I. COURSE DESCRIPTION:

This course is a continuation of Anatomy and Physiology I and will further examine the relationship of body structures and their functions. Understanding of the remaining individual body systems will provide the learner with knowledge on how these systems work together to carry on complex functions of the human body.

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 organization, structure and function of the human body.
 - 1.1 review the selected key terms (vocabulary) for each specific area of study/systems
2. Describe the location, development, structure and function of cells, tissues and organs of stated body systems

Potential Elements of the Performance:**2.1 The Special Senses:**

- 2.1.1 Describe the basic function of sensory receptors, neurons, nerves and the cerebral cortex
- 2.1.2 Describe the location of receptors for heat, cold, touch, pressure and pain
- 2.1.3 Describe the location, structure and function of olfactory and taste receptors, receptors involved in hearing, receptors involved in equilibrium and sight

2.2 Endocrine System:

- 2.2.1 Distinguish between endocrine and exocrine glands and their functions
- 2.2.2 Distinguish between hormones and prostaglandins and their functions
- 2.2.3 Describe the basic control and actions of the hypothalamus, pituitary, thyroid and parathyroid, adrenal, pancreatic and male and female gonadal hormones

2.3 Cardiovascular system:

- 2.3.1 Describe the general characteristics of blood
- 2.3.2 Identify the functions of the components of blood eg. red blood cells, white blood cells, platelets, plasma
- 2.3.3 Explain the basis of blood typing and why it is important
- 2.3.4 Describe the sequence of events in hemostasis
- 2.3.5 Identify the structures of the heart and blood vessels and their functions

- 2.3.6 Describe the basic mechanism of circulation within the body
- 2.3.7 Identify the major veins and arteries and the organs/body regions they supply
- 2.3.8 Trace the flow of blood through the heart
- 2.3.9 Describe the events of the cardiac cycle
- 2.3.10 Identify parts of the heart conduction system and their functions
- 2.3.11 Define pulse and blood pressure
- 2.3.12 Explain how heart rate and blood pressure are regulated
- 2.4 Lymphatic System/Immune System:
 - 2.4.1 Explain the source of lymph
 - 2.4.2 Identify the lymphatic capillaries and vessels
 - 2.4.3 Describe the lymphatic pathway
 - 2.4.4 Identify the location and function of lymph nodes, spleen and thymus gland
 - 2.4.5 Compare non-specific resistance and specific resistance against disease
 - 2.4.6 Explain the mechanism of cell-mediated immunity
 - 2.4.7 Explain the mechanism of antibody-mediated immunity
 - 2.4.8 Compare primary and secondary immune responses
- 2.5 Respiratory System:
 - 2.5.1 List the parts of the respiratory system and identify their functions
 - 2.5.2 Describe the mechanism of breathing
 - 2.5.3 Explain how breathing is controlled
 - 2.5.4 Describe the basic respiratory volumes and the significance of each
 - 2.5.5 Identify the factors that influence breathing and their effect
 - 2.5.6 Describe the mechanism of gas exchange in the lungs and body tissues
 - 2.5.7 Explain how oxygen and carbon dioxide are transported by the blood
- 2.6 Digestive System and Metabolism
 - 2.6.1 Compare mechanical and chemical digestion
 - 2.6.2 Describe the role of digestive enzymes
 - 2.6.3 Identify the structures of the digestive system and their function
 - 2.6.4 Explain how the end products of digestion are absorbed
 - 2.6.5 Identify the sources and uses of carbohydrates, lipids, proteins, vitamins and major minerals and electrolytes
 - 2.6.6 Explain cellular respiration and its importance
- 2.7 Urinary System
 - 2.7.1 Name and describe the structure and function of each of the organs of the urinary system
 - 2.7.2 Name and describe the specific structures of the kidney and their basic functions
 - 2.7.3 Describe the structure and function of blood supply of the kidney
 - 2.7.4 Explain how urine is formed
 - 2.7.5 Name the normal components of urine
 - 2.7.6 Explain how the kidneys maintain blood plasma composition

2.8 Reproductive System

- 2.8.1 Identify and describe the structure and function of the organs of the male reproductive system
- 2.8.2 Describe spermatogenesis
- 2.8.3 Identify and describe the structure and function of the organs of the female reproductive system
- 2.8.4 Describe oogenesis
- 2.8.5 Explain the hormonal control of reproduction in males and females
- 2.8.6 Describe the structure and function of mammary glands

2.9 Genetics/Inheritance

- 2.9.1 Explain the roles of DNA, genes and chromosomes
- 2.9.2 Describe the basic patterns of inheritance

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. Reproductive System
8. Genetics/Inheritance

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Marieb, Elaine N. (2009) *Essentials of Human Anatomy & Physiology*, 9th ed. Benjamin Cummings. NY, NY.

Marieb, Elaine N. (2009) *Anatomy & Physiology Coloring Workbook – A Complete Study Guide*, 9th ed. Benjamin Cummings. NY, NY.

V. EVALUATION PROCESS/GRADING SYSTEM:

1. The pass mark for this course is **60% for PN (50% for FH)**. It is composed of 2 term tests, and a final exam.
2. Evaluation Methods:

Semester tests (2) – multiple choice, true and false, diagrams	60%
Final Exam - multiple choice, true and false, diagrams	<u>30%</u>
TOTAL	100%

Final exam will consist of course material from the entire course.

3. Students missing the quizzes for any reason will **not** be able to write them after the due date.

4. Students missing the tests or final exam because of illness or other serious reason must phone the professor **before** the exam to inform her/him (759-2554, Ext. 2635). Those students who have notified the professor of their absence, according to policy, will be eligible to arrange an opportunity to write the exam at another time. Students must contact the teacher on their first day back at school or clinical following a missed test or exam. Those students who **do not follow the above procedures** will receive a zero for that test or exam.

5. Course Grading Scheme:

The following semester grades will be assigned to students in post-secondary courses:

<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	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.	
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.	

NOTE:

Mid Term grades are provided in theory classes and clinical/field placement experiences. Students are notified that the midterm grade is an interim grade and is subject to change.

For such reasons as program certification or program articulation, certain courses require minimums of greater than 50% and/or have mandatory components to achieve a passing grade.

It is also important to note, that the minimum overall GPA required in order to graduate from a Sault College program remains 2.0.

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. *It is the departmental policy that once the classroom door has been closed, the learning process has begun. Late arrivers may not be granted admission to the room.*

VII. COURSE OUTLINE ADDENDUM:

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