

**SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY**

**SAULT STE. MARIE, ONTARIO**



**COURSE OUTLINE**

**COURSE TITLE:** Structure and Function IV

**CODE NO. :** BIO2200 **SEMESTER:** 4

**PROGRAM:** Massage Therapy

**AUTHOR:** Lise St. Hilaire

**DATE:** Jan/03 **PREVIOUS OUTLINE DATED:**

**APPROVED:**

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**DEAN**

\_\_\_\_\_  
**DATE**

**TOTAL CREDITS:** 5

**PREREQUISITE(S):** BIO2100

**HOURS/WEEK:** 5

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*For additional information, please contact, Dean*  
*School of Health and Human Services*  
*(705) 759-2554, Ext. 603/689*

**I. COURSE DESCRIPTION:**

This course continues to explore the structure and function of the healthy human body. The cardiovascular system, lymphatic system, body defences, immunity, urinary system, reproductive system and human development and maturation are studied in depth. Students are expected to apply knowledge from previous structure and function courses.

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

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

1. Describe the structure and function of the cardiovascular system.  
Potential Elements of the Performance:
  - a) Describe the structure and function of the heart.
  - b) Describe the structure and mechanisms of contraction of cardiac muscle.
  - c) Describe the electrical and mechanical events of the heart.
  - d) Describe the homeostatic mechanisms involved with heart contraction.
  - e) Describe coronary circulation.
  - f) Describe the structure and function of the blood vessels.
  - g) Describe the processes and regulation of blood flow and blood pressure.
  - h) Describe fluid movement through the body.
  - i) Describe the structure and function of all the components of blood and not bone marrow.
  - j) Describe the process of blood clotting.
  - k) Explain the factors affecting blood transfusions and replacement therapy.
  - l) Discuss blood supply of the brain.
2. Describe the structure and function of the lymphatic system.
3. Describe the processes and the cells involved in non-specific body defences and immunity.
3. Describe the structure, function and location of the organs of the urinary system.  
Potential Elements of the Performance:
  - a) Label and describe the function of the macroscopic and the microscopic parts of the urinary system.
  - b) Explain the mechanisms of urine formation and elimination.
  - c) Describe the processes involved in fluid, electrolyte and acid-base balance.
4. Describe the structure, function and location of the organs of the reproductive system.  
Potential Elements of the Performance:
  - a) Label and describe the function of the macroscopic and microscopic parts of the male reproductive system.
  - b) Describe the hormonal regulation of the male reproductive system.
  - c) Label and describe the function of the macroscopic and the microscopic parts of the female reproductive system.
  - d) Describe the ovarian and the uterine cycles and the hormonal regulation of each.
  - e) Describe the process of meiosis and oogenesis.

5. Describe the stages of human development and maturation.  
Potential Elements of the Performance:
  - a) Describe the events of fertilization, preembryonic development, embryonic development, fetal development and adjustments of the infant to extrauterine life.
  - b) Describe the effects of pregnancy on the mother.
  - c) Describe the stages of parturition.
  - d) Describe the process of lactation.
  - e) Describe the changes occurring during puberty and menopause.

### III. TOPICS:

1. Cardiovascular System
2. Lymphatic System  
Nonspecific Defences and Immunity
3. Urinary System
4. Reproductive System
5. Human Development and Maturation

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

Marieb, Elaine. (2001). Human Anatomy and Physiology (5<sup>th</sup> ed.). Benjamin Cummings.

Stedman's Concise Medical Dictionary for the Health Professions (4<sup>th</sup> ed.). Lippincott, Williams & Wilkins.

### V. EVALUATION PROCESS/GRADING SYSTEM:

#### Evaluation Methods:

The evaluation methods and procedures for missed exams will be discussed and a written copy will be given to students during the first two weeks of class.

#### Supplemental Exam:

One opportunity for a supplemental exam will be offered to students who meet the following criteria:

- a) have a grade of 50 – 59% in the course
- b) have attended at least 80% of the scheduled class time

The final grade for the semester will be based solely on the supplemental exam. The grade achieved will not be higher than a "C".

***The following semester grades will be assigned to students in postsecondary courses:***

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 - 100%	4.00
A	80 - 89%	3.75
B	70 - 79%	3.00
C	60 - 69%	2.00
R (Repeat)	59% or below	0.00
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field placement or non-graded subject areas.	
U	Unsatisfactory achievement in field placement or non-graded subject areas.	
X	A temporary grade. This is used in limited situations with extenuating circumstances giving a student additional time to complete the requirements for a course (see <i>Policies &amp; Procedures Manual – Deferred Grades and Make-up</i> ).	
NR	Grade not reported to Registrar's office. This is used to facilitate transcript preparation when, for extenuating circumstances, it has not been possible for the faculty member to report grades.	

## VI. SPECIAL NOTES:

### Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your instructor and/or the Special Needs office. Visit Room E1204 or call Extension 493, 717, or 491 so that support services can be arranged for you.

### Retention of course outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

### Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Rights and Responsibilities*. Students who engage in “academic dishonesty” will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Course outline amendments:

The Professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

**VII. PRIOR LEARNING ASSESSMENT:**

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

**VIII. DIRECT CREDIT TRANSFERS:**

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.