

## SAULT COLLEGE OF APPLIED ARTS &amp; TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE: ANATOMY &amp; PHYSIOLOGY I

CODE NO: BIO107

SEMESTER: I

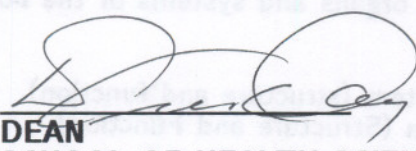
PROGRAM: MASSAGE THERAPY PROGRAM

AUTHOR: RUTH WILSON

DATE: SEPT/97

PREVIOUS OUTLINE DATED: SEPT/96

APPROVED:

  
DEAN  
SCHOOL OF HEALTH SCIENCES

DATE

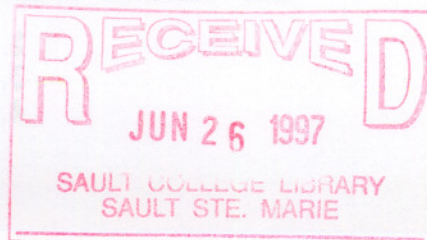
June 9/97

TOTAL CREDITS: 7

PREREQUISITES: NONE

LENGTH OF COURSE: 7 HOURS/WEEK

TOTAL CREDIT HOURS: 112





**ANATOMY & PHYSIOLOGY I**

**BIO107**

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**I COURSE DESCRIPTION:**

This course provides an overview of all the systems of the human body including the basic terminology used in describing the body. The cells, the tissue and the integumentary system are explored in depth. The structure and function of the skeletal system is explored as well as muscle anatomy and physiology.

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

Upon successful completion of this course the student will be able to:

1. Utilize specified terminology related to the structure and function of the human body.
2. Outline the basic location, structure and function of the major organs and systems of the body.
3. Describe the structural and functional organizations of the human body at the cellular and tissue level.
4. Describe the structure and function of the integumentary system.
5. Describe the structure, function and location of the organs of the circulatory system.
6. Discuss the structure, the function and the location of the bones and joints of the human body.
7. Discuss muscle physiology and muscle anatomy.

**III TOPICS**

1. Overview of the major organs and systems of the body
2. Terminology
3. The cells and tissues
4. The integumentary system (structure and function)
5. The Circulatory System (Structure and Function)

**A THE HEART**

1. Heart Anatomy
  - a) position, size
  - b) coverings/layers
  - c) chambers
  - d) heart valves
  - e) blood pathway through heart
2. Coronary Circulation
3. Properties of Cardiac Muscle Fiber
4. Heart Physiology
  - a) conduction system
  - b) electrocardiogram (knowledge level)



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**III TOPICS (Continued)**

- c) cardiac cycle
- d) heart sounds

**B BLOOD VESSELS**

1. structure and function of arteries, veins and capillaries
2. Physiology of Circulation
  - arterial blood pressure
  - capillary blood pressure
  - venous blood pressure
  - blood pressure regulation
  - alterations in blood pressure
  - assessing blood pressure and all palpable pulse points
  - blood flow through body tissues
  - capillary dynamics
3. Circulatory Pathways
  - a) pulmonary circuit
  - b) systemic
    - major branches of aorta
    - major limb arteries
    - major arteries of head and neck
    - major branch of superior vena cava
    - major limb veins
  - c) portal circulation
4. Development Aspects of Blood Vessels

**C THE BLOOD**

- a) function and composition of plasma
- b) structure, production and function of formed elements:
  - platelets
  - erythrocytes
  - leukocytes
- c) homeostasis

**6. Skeletal system**

**a) Bones**

- histology
- classification
- function
- structure
- identification

**b) Joints**

- histology
- classification
- structure/supports
- identification
- functional movement



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**III TOPICS (Continued)**

7. Muscular Physiology
  - a) Skeletal muscle
    - structure of skeletal muscle and skeletal muscle fibre
    - contraction of a skeletal muscle and skeletal muscle fibre
    - muscle metabolism
  - b) Smooth muscle
    - structure
    - contraction
    - types
8. Muscle Anatomy
  - overview of all muscles of body
  - detailed description of all palpable muscles

**IV REQUIRED RESOURCES:**

1. Marieb, Elaine. (1995). Human Anatomy and Physiology (3rd ed.). The Benjamin/Cummings Publishing Co. Inc.
2. Lumley, John (1996). Surface Anatomy. Churchill Livingstone.
3. Stone, R. and Stone J. (1990). Atlas of Skeletal Muscles. Wm. C. Brown Publishers.
4. Skin Scrib Pen (Campus Shop)



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**V EVALUATION PROCESS/GRADING SYSTEM**

**A. Evaluation Methods**

The evaluation methods will be determined and discussed with students the first two weeks of class.

**B. Grading**

1. The pass mark for the course is 60%. The letter grades for this course will be assigned in accordance with those established by Sault College.
2. Students who miss scheduled tests during the semester will not be allowed to write on another day.
3. If the instructor has been appropriately notified of your absence for the test, the test you missed will count for the same percentage as you receive on the final exam. If you have not notified your instructor you will receive a grade of 0 for the missed test.
4. Each student must write the final exam and do any required assignments.
5. All students must pass the practical lab test in order to receive a pass in this course.

**C. Supplemental Exam**

1. A supplemental examination which tests the entire semester's course material may be offered in this course at the discretion of the instructor.
2. A supplemental exam will only be offered to students who have failed the Biology course.
3. The final grade for the semester will be based solely on the supplemental exam. The grade achieved will not be higher than a "C".
4. Supplemental exams will not be repeated.

**VI SPECIAL NOTES**

Students with special needs (eg. physical limitations, learning disabilities, visual/hearing impairments) are encouraged to discuss required accommodations with the instructor and/or contact the Special Needs Office.

The instructor reserves the right to modify the course as deemed necessary to meet the needs of students.



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**VII PRIOR LEARNING ASSESSMENT/ADVANCED CREDIT**

Students who wish to apply for advanced credit in the course should consult the Instructor/Coordinator.

There will be a prior learning challenge exam in this course. Details will be provided the first week of class.