SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ON

COURSE OUTLINE

COURSE TITLE: BIOLOGY

CODE NO.: RSP 100 SEMESTER: 1

PROGRAM: REHABILITATION ASSISTANT PROGRAM

AUTHOR: MARGARET HURTUBISE/DONNA MCCORD

DATE: JAN./97 PREVIOUS OUTLINE DATED: N/A

APPROVED: _____ _____
DEAN **DATE**

TOTAL CREDITS: 5

PREREQUISITE(S): N/A

LENGTH OF COURSE: 4 HOURS/WEEK TOTAL CREDIT HOURS: 60

I. PHILOSOPHY/GOALS:

This course is designed to introduce the student to the structures and the functions of the human body with special attention to the neuromusculoskeletal systems, as is appropriate for this program. Emphasis will be placed on approaching anatomy and physiology as foundations for the study of the biomechanics of movement and of therapeutic interventions. The format will involve a combination of seminars, lectures and labs.

H. LEARNING OUTCOMES:

Upon successful completion of this course, the student will:

1. Name and describe the major muscle groups, bones and joints and understand their relationships in sufficient detail to comprehend their functions.

2. Describe basic anatomy and physiology of the nervous system sufficiently to comprehend its role in controlling movement.

3. Identify major surface landmarks and develop adequ. e palpatory skills to demonstrate their location.

4. Describe the basic structure of connective and muscle tissue and define its role as it responds to mobility and activity.

5. Understand the basic structure and function of other tissues, organs and systems and their integral role in maintaining homeostasis.

TOPICS:

1. Structural Organization
2. Overview of Body Systems
3. Homeostasis
4. Important Terms
5. Cells and Tissue (Connective and Muscle Tissue Emphasized)
6. Skin (Integumentary System)
7. Bones
8. Joints
9. Muscles
10. Surface Landmarking/Palpation Skills
11. Nervous System

m. TOPICS (Continued)

12. Special Senses
13. Endocrine System (GH, TSH and Thyroxine, Calcitonin, PTH)
14. Other Systems (Circulatory, Lymphatic, Respiratory, Digestive, Urinary, Reproductive)

IV. LEARNING **ACTIVITIES:**

1. Structural Organization
   a) Define anatomy and physiology.
   b) Explain the levels of structural organization.

2. Overview of the Body Systems
   a) Name the systems of the body anbd briefly state the major functions of each system.
   b) List the functions for humans to maintain life.
   c) List the survival needs of humans.

3. Homeostasis
   a) Explain homeostasis and give at least three examples.

4. Important Terms
   a) Describe anatomical position and explain why it is important to know.
   b) Use anatomical terminology to describe body directions, surfaces and planes.
   c) Locate major body cavities and state the major organs in each one.

5. Cells and Tissues
   a) State the four types of cells.
   b) State the function of the major organelles in cells.
   c) State the four types of tissues and their major subclassifications.
   d) Explain the major structural and functional differences of the tissue types.

6. Skin
   a) State the different membrane types and where they are located.
   b) Explain the importance and function of the synovial membrane.

IV. LEARNING ACTIVITIES (Continued)

c) Explain the functions of the integumentary system.
d) State the function of major structures in the skin.

7. Bones
   a) Identify the subdivisons of the skeleton.
   b) List the functions of the skeletal system.
   c) State the four major kinds of bones.
   d) Describe a long bone.
   e) Explain how compact and cancellous bone is nourished.
   f) Explain the processes of bone formation, growth healing and remodeling
   g) Name and describe the various types of fractures,
   h) Identify and name the bones of the skeleton.
   i) Name the normal curvatures of the vertebral column and state when they form,
   j) State the importance of the intervertebral disks,
   k) Explain the difference between scoliosis, lordosis and kyphosis.
   1) Name the three categories of joints, the amount of movement at each and examples of each type.

REQUIRED RESOURCES/TESTS/MATERIALS:

1. Marieb, Elaine N., (i997). Essentials of Human Anatomy and Physiology t>th ed). Addison Wesley Longman, Inc., Menlo Park, California.

2. Marieb, Elaine N., (1997). Anatomy and Physiology Coloring Workbook. A Complete Study Guide (5th ed.). Addison Wesley Longman, Inc., Menlo Park California.

3. Thompson, C.W., and Floyd, R.T., (1994). Manual of Structural Kinesiology (12th ed.). Mosby Year Book, Inc., Toronto, ON.

4. Additional resource materials can be found in the College Library and handouts may be offered during class.

VI. EVALUATION PROCESS/GRADING SYSTEM:

1. A combination of tests and assignments will be used to evaluate student achievement of the course objectives. A description of the evaluation methods will be provided and discussed b[v] the teacher within the first two weeks of class.

2. All tests/exams are the property of Sault College.

3. Grading symbols used are those established by the College.

A+	=	90 - 100%
A	=	80 - 89%
B	=	70 - 79%
C	=	60 - 69%

4. Evaluation Methods:

Quizzes (5 in total, top 4 are counted)	- 20%
Muscle Assignment	- 20%
Landmark Assignment	- 20%
Mid-term Exam	- 20%
Final Exam	- 20%
TOTAL	100%

5. The mid-term exam will consist of material from the beginning of the course until the mid-term date.

   The final exam will consist of material from the mid-term exam to the end of the course.

6. Students missing the 5 quizzes for any reason will **NOT** be able to write them at a later date.

7. Students missing the mid-term or final exam because of illness or other serious reason must phone the professor before the exam to inform her/him. The teacher will give vou the phone number (_____) to call.

VI. EVALUATION PROCESS/GRADING SYSTEM (Continued)

Those students who have notified the professor of their absence that day will be eligible to arrange an opoortunity as soon as possible to write the exam at another time. Those students wno **DO NOT NOTIFY** the professor will receive a zero for that exam.

VH. SPECIAL NOTES:

Students with special needs (eg. physical limitations, visual impairments, hearing impairments, learning disabilities) are encouraged to discuss required accommodations with the instructor and/or contact the Special Needs Office so that support services can be arranged for you.

- Disclaimer
  Your instructor reserves the right to modify the course as he/she deems necessary to meet the needs of students.

- 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 post-secondary institutions.

- Plagiarism
  Students should refer to the definition of "academic dishonesty" in the "Statement of Students Rights and Responsibilities".

  Students who engage in "academic dishonesty" will receive an automatic failure for the submission and/or such other penalty, up to and including expulsion from the course, as may be decided by the professor.

  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 this department to employ the documentation format for referencing source material used by the English Department of Sault College.

  Substitute Course Information is available at the Registrar's Office.

VH. SPECIAL NOTES (Continued)

- Attendance
  Students are expected to attend all classes. Various handouts may be given out during class and students are responsible for keeping up with the material missed. The easiest way to do this, is to attend classes.

Vm. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the instructor.