

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ON

COURSE OUTLINE

COURSE TITLE: ANATOMY & PHYSIOLOGY II

CODE NO.: BIO 117

SEMESTER: 2

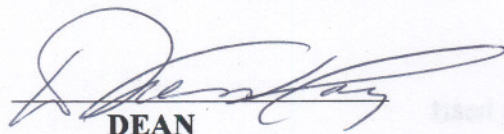
PROGRAM: MASSAGE THERAPY PROGRAM

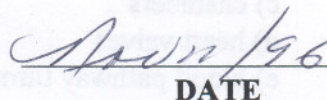
AUTHOR: RUTH WILSON

DATE: SEPT./96

PREVIOUS OUTLINE DATED: N/A

APPROVED:


DEAN


DATE

TOTAL CREDITS: 7

PREREQUISITE(S): BIO 107

LENGTH OF COURSE: 7 HR/WEEK

TOTAL CREDIT HOURS: 112

ANATOMY & PHYSIOLOGY II

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I. COURSE DESCRIPTION: This course is a continuation of the study of the healthy human body. This course will study the structure and function of the circulatory and lymphatic systems. A regional study of the upper limb and back completes the course.

II. LEARNING OUTCOMES:

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

1. Describe the structure, function and location of the organs of the circulatory, lymphatic and immune systems.
2. Describe the regional anatomy of the upper limb and back.
3. Describe major changes occurring during the aging process in the structure and function of musculoskeletal, circulatory, lymphatic and immune systems.

III. TOPICS:

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)
 - c) cardiac cycle
 - d) heart sounds

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III. TOPICS (continued)

- e) cardiac output
- f) regulation of heart rate

5. **Developmental Aspects of the Heart**

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. LYMPHATIC SYSTEM

1. **Lymphatic Vessels**
 - distribution and structure
 - lymph transport
2. **Lymph Cells, Tissues and Organs**
3. **Lymph Nodes**

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III TOPICS (Continued)

- location of superficial nodes (applied)
- structure and function
- 4. Other Lymph Organs
 - structure and function of spleen, thymus, tonsils

D. IMMUNE SYSTEM

1. Non-Specific Body Defences
 - a) surface membrane barriers
 - b) non-specific cellular and chemical defences
 - phagocytosis
 - inflammatory process
 - body's antimicrobial substances
 - fever
2. Specific Body Defences: Immunity
 - a) antigens
 - b) cells of the immune system
 - c) humoral immune responses
 - definition
 - structure and function of components and cells
 - active and passive immunity
 - vaccination protocol in Canada
 - d) cell mediated immune response
 - definition
 - structure and function of components and cells
 - e) homeostatic imbalances
3. Developmental Aspects of Immunity

E. REGIONAL ANATOMY OF UPPER LIMB

1. Detailed Description of Bones
2. Detailed Description of Joints
3. Detailed Description of Muscles
4. Major Blood Supply
5. Lymphatic Drainage
6. Palpable Surface Landmarks

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III. TOPICS (Continued)

F. REGIONAL ANATOMY OF THE BACK

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

1. Marieb, Elaine (1995). Human Anatomy & Physiology (3rd ed.). The Benjamin/Cummings Publishing Co. Inc.
2. Marieb, Elaine. (1995). Study Guide to Accompany Anatomy & Physiology (3rd ed.). The Benjamin/Cummings Publishing Co. Inc.
3. Kapit and Elson. (1993). The Anatomy Coloring Book (2nd ed.). Harper & Row Publishers.
4. Stone, R. And Stone J. (1990). Atlas of the Skeletal Muscles. WM. C. Brown Publishers. (ISBN-0-697-10618-7).
5. Snell, R.S. (1995). Clinical Anatomy for Medical Students (5th ed.). Little, Brown & Co. (ISBN-0-316-80435-6).

V. EVALUATION PROCESS/GRADING SYSTEM

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. The evaluation methods will be determined and discussed with students within the first two weeks of the course.
3. Students are eligible for one rewrite in this course. Please refer to Student Resource Guide for details.

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VI. 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.

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

VII. PRIOR LEARNING ASSESSMENT

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