

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ON

COURSE OUTLINE

COURSE TITLE: ANATOMY AND PHYSIOLOGY III

CODE NO.: BIO 207

SEMESTER: 3

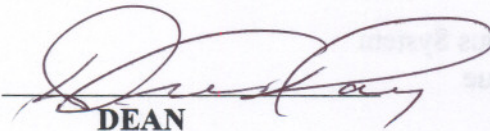
PROGRAM: MASSAGE THERAPY PROGRAM

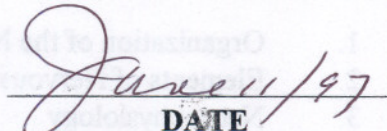
AUTHOR: RUTH WILSON

DATE: SEPT.97

PREVIOUS OUTLINE DATED: N/A

APPROVED:


DEAN


DATE

TOTAL CREDITS: 7

PREREQUISITE(S): BIO117

LENGTH OF COURSE: 7 HR/WK

TOTAL CREDIT HOURS: 112

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COURSE NAME

CODE NO.**I. COURSE DESCRIPTION:**

This course continues to study the healthy human body. Students will study the structure and function of the nervous system. A regional study of the head and neck 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 nervous system.
2. Describe major changes occurring during the aging process in the structure and function of the nervous system.
3. Describe the regional anatomy of the head and neck.
4. Demonstrate the ability to identify surface landmarks of the head and neck.
5. Use analytic thinking skills to explain normal anatomical/physiological situations.

III. TOPICS:**A. Introductory Concepts of the Nervous System**

1. Organization of the Nervous System
2. Elements of Nervous Tissue
3. Neurophysiology
 - resting membrane potential
 - membrane potential that act as signals
 - synapse physiology
 - neurotransmitters and their receptors
 - neuromuscular junction physiology (review)
4. Basic Concepts of Neural Integration

COURSE NAME

CODE NO.**III. TOPICS (Continued)****B. The Central Nervous System**

1. The Brain

- embryonic development
- regions and organization
- ventricles
- cerebral hemispheres (cerebrum)
- diencephalon
- brainstem (gross anatomy)
- cerebellum
- brain systems (limbic system and reticular formation)
- protection of brain (meninges/CSF/blood-brain barrier)

2. The Spinal Cord and Pathways

- gross anatomy
- embryonic development
- major spinal tracts (sensory and motor)

3. Developmental Aspects

C. Peripheral Nervous System

1. Overview of the Peripheral Nervous System

2. Cranial Nerves (name, function, general location)

3. Spinal Nerves

- spinal nerves
- dorsal and ventral nerve roots and associate rami and ganglia
- 3 major plexi
- post plexus nerves (brachial, lumbar, sacral)
- dermatomes

4. Reflex Activity

5. Pain

6. Developmental Aspects

D. Autonomic Nervous System

1. Overview of the Autonomic Nervous System

- comparison of somatic and Autonomic Nervous System
- divisions of Autonomic Nervous System

 COURSE NAME

 CODE NO.
III. TOPICS (Continued)

2. Anatomy of Autonomic Nervous System
 - parasympathetic
 - sympathetic
 - visceral sensory nerves
 3. Physiology of the Autonomic Nervous System
 - neurotransmitters and receptors (cholinergic and adrenergic)
 - effects of drugs
 - interactions of the autonomic divisions
 - control of autonomic functioning
 4. Developmental Aspects
- E. Neural Integration
1. Somatic Sensory Integration
 2. Motor Integration
 3. Higher Cortical Functioning
 4. Developmental Aspects
- F. The Special Senses
1. Taste
 2. Smell
 3. Vision
 4. Hearing and Balance
 5. Developmental Aspects
- G. Regional Anatomy of the Head and Neck
1. Review of Bones
 2. Review of Joints
 3. Detailed Description of Muscles
 4. Regional Relationships of Blood Vessels/Nerves/Muscles
 5. Lymphatic Drainage
 6. Surface Land Marking

COURSE NAME

CODE NO.**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. (1997 only)
3. Kapit and Elson. (1993). The Anatomy Coloring Book (2nd ed.). Harper & Row Publishers. (1997 only)
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).
6. Reflex hammer, pen light, skin scribe pen, pin wheel

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 notified your instructor you will receive a grade of 0 for the missed test.

COURSE NAME

CODE NO.**V. EVALUATION PROCESS/GRADING SYSTEM (Continued)**

4. Each student must write the final exam, the lab test 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, 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.