SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

Sault College

COURSE OUTLINE

COURSE TITLE: Anatomy and Physiology II

CODE NO. : PNG121 **SEMESTER:** 2

PROGRAM: Practical Nursing

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DATE: Jan/04 **PREVIOUS OUTLINE DATED:** Jan/03

APPROVED:

_____ _____

DEAN **DATE**

TOTAL CREDITS: 3

PREREQUISITE(S): PNG111

HOURS/WEEK: 3

I. COURSE DESCRIPTION:

This course is a continuation of Anatomy and Physiology I and will further examine the relationship of body structures and their functions. Understanding of the remaining individual body systems will provide the learner with knowledge on how these systems work together to carry on complex functions of the human body.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Use the appropriate terminology related to organization, structure and function of the human body.
   Potential Elements of the Performance:
   - review the selected key terms (vocabulary)for each specific area of study/systems

2. Describe the location, development, structure and function of cells, tissues and organs of stated body systems.
   Potential Elements of the Performance:

   Lymphatic System/Immune System:
   - Compare non-specific resistance and specific resistance against disease
   - Explain the mechanism of cell-mediated immunity
   - Explain the mechanism of antibody-mediated immunity
   - Compare primary and secondary immune responses

   Respiratory System:
   - List the parts of the respiratory system and identify their functions
   - Describe the mechanism of breathing
   - Explain how breathing is controlled
   - Describe the basic respiratory volumes and the significance of each
   - Identify the factors that influence breathing and their effect
   - Describe the mechanism of gas exchange in the lungs and body tissues
   - Explain how oxygen and carbon dioxide are transported by the blood

   Nervous System
   - Name the anatomical divisions of the nervous system, their components and functions
   - Name the functional divisions of the nervous system, their components and functions
   - Identify the 2 types of cells that make-up nerve tissue
   - Describe the formation and conduction of a nerve impulse
   - Describe how impulses are transmitted across a synapse
   - Explain how the central nervous system is protected from injury

The Special Senses:
- Describe the basic function of sensory receptors, neurons, nerves and the cerebral cortex
- Describe the location of receptors for heat, cold, touch, pressure and pain
- Describe the location, structure and function of olfactory and taste receptors, receptors involved in hearing, receptors involved in equilibrium and sight

Endocrine System:
- Distinguish between endocrine and exocrine glands and their functions
- Distinguish between hormones and prostaglandins and their functions
- Describe the basic control and actions of the hypothalamus, pituitary, thyroid and parathyroid, adrenal, pancreatic and male and female gonadal hormones

Digestive System
- Compare mechanical and chemical digestion
- Describe the role of digestive enzymes
- Identify the structures of the digestive system and their function
- Explain how the end products of digestion are absorbed
- Identify the sources and uses of carbohydrates, lipids, proteins, vitamins and major minerals and electrolytes

Urinary System:
- name and describe the structure and function of each of the organs of the urinary system
- Name and describe the specific structures of the kidney and their basic functions
- Describe the structure and function of blood supply of the kidney
- Explain how urine is formed
- Name the normal components of urine
- Explain how the kidneys maintain blood plasma composition

Reproductive System:
- Identify and describe the structure and function of the organs of the male reproductive system
- Describe spermatogenesis
- Identify and describe the structure and function of the organs of the female reproductive system
- Describe oogenesis
- Explain the hormonal control of reproduction in males and females
- Describe the structure and function of mammary glands

Genetics/Inheritance:
- Explain the roles of DNA, genes and chromosomes
- Describe the basic patterns of inheritance

III. TOPICS:

1. Immune System
2. Respiratory System
3. Nervous System
4. Special Senses
5. Endocrine System
6. Digestive System
7. Urinary System
8. Reproductive System
9. Genetics/Inheritance

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Thibodeau, G.A. and Patton, K.T. (2000). *Structure and function of the body*. (11th ed.). Mosby.

Swisher, Linda Student Study Guide: *Structure and function of the body*. (11th ed.). Mosby.

V. EVALUATION PROCESS/GRADING SYSTEM:

1. The pass mark for this course is 60%. It is composed of term quizzes, a mid-term exam and a final exam.

2. Evaluation Methods:

Quizzes (6 in total, 5 are counted)	30%
Mid-Term Exam (multiple choice & diagrams)	35%
Final Exam (multiple choice & diagrams)	35%
TOTAL	100%

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

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

There will be NO supplemental exam for this course.

4. Students missing the quizzes for any reason will **not** be able to write them at any other date.

5. Students missing the mid-term exam or final exam because of illness or other serious reason must phone the professor **before** the exam to inform her/him (759-2554, Ext. 635). Those students who have notified the professor of their absence, according to policy, will be eligible to arrange an opportunity as soon as possible to write the exam at another time. Those students who **do not notify** the professor will receive a zero for that exam.

6. Students receiving borderline marks (59, 69, 79, 89) will have their mark advanced to the next category if they have attended at least 80% of the classes.

7. Course Grading Scheme:

The following semester grades will be assigned to students in post-secondary courses:

Grade	Definition	Grade Point Equivalent
A+	90 – 100%	4.00
A	80 – 89%	
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F (Fail)	49% and below	0.00

CR (Credit)	Credit for diploma requirements has been awarded.
S	Satisfactory achievement in field /clinical placement or non-graded subject area.
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.
NR	Grade not reported to Registrar's office.
W	Student has withdrawn from the course without academic penalty.

Note: For such reasons as program certification or program articulation, certain courses require minimums of greater than 50% and/or have mandatory components to achieve a passing grade.

It is also important to note, that the minimum overall GPA required in order to graduate from a Sault College program remains 2.0.

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 the Special Needs office, Room E1101, 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.

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.

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.