

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



COURSE OUTLINE

COURSE TITLE: Anatomy and Physiology II

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

PROGRAM: Practical Nursing

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DATE: Jan/10 **PREVIOUS OUTLINE DATED:** Jan/09

APPROVED: "Marilyn King" Jan. 2010

	CHAIR, HEALTH PROGRAMS	DATE
TOTAL CREDITS:	3	
PREREQUISITE(S):		
HOURS/WEEK:	3	

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For additional information, please contact the Chair, Health Programs
School of Health and Community Services
(705) 759-2554, Ext. 2689

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.

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

Cardiovascular system:

- Describe the general characteristics of blood
- Identify the functions of the components of blood eg. red blood cells, white blood cells, platelets, plasma
- Explain the basis of blood typing and why it is important
- Describe the sequence of events in hemostasis
- Identify the structures of the heart and blood vessels and their functions
- Describe the basic mechanism of circulation within the body
- Identify the major veins and arteries and the organs/body regions they supply
- Trace the flow of blood through the heart
- Describe the events of the cardiac cycle
- Identify parts of the heart conduction system and their functions
- Define pulse and blood pressure
- Explain how heart rate and blood pressure are regulated

Lymphatic System/Immune System:

- Explain the source of lymph
- Identify the lymphatic capillaries and vessels
- Describe the lymphatic pathway
- Identify the location and function of lymph nodes, spleen and thymus gland
- 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

Digestive System and Metabolism

- 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
- Explain cellular respiration and its importance

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. Endocrine System
2. Cardiovascular System
3. Lymphatic and Immune Systems
4. Respiratory System
5. Digestive System and Metabolism
6. Urinary System
7. Reproductive System
8. Genetics/Inheritance

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Marieb, Elaine N. (2009) *Essentials of Human Anatomy & Physiology*, 9th ed. Benjamin Cummings. NY, NY.

Marieb, Elaine N. (2009) *Anatomy & Physiology Coloring Workbook – A Complete Study Guide*, 9th ed. Benjamin Cummings. NY, NY.

V. EVALUATION PROCESS/GRADING SYSTEM:

1. The pass mark for this course is **60% for PN (50% for FH)**. It is composed of online quizzes, term tests, and a final exam.

2. Evaluation Methods:

Semester tests (2) – multiple choice & diagrams	45%
Online quizzes	25%
Final Exam - multiple choice & diagrams	<u>30%</u>
TOTAL	100%

Online quizzes: two attempts for each quiz, highest mark will be recorded

Final exam will consist of course material from the entire course.

3. Students missing the quizzes for any reason will **not** be able to write them after the due date.
4. Students missing the tests or final exam because of illness or other serious reason must phone the professor **before** the exam to inform her/him (759-2554, Ext. 2635). Those students who have notified the professor of their absence, according to policy, will be eligible to arrange an opportunity to write the exam at another time. Students must contact the teacher on their first day back at school or clinical following a missed test or exam. Those students who **do not follow the above procedures** will receive a zero for that test or exam.

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

6. Course Grading Scheme:

The following semester grades will be assigned to students:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 – 100%	
A	80 – 89%	4.00
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: Mid Term grades are provided in theory classes and clinical/field placement experiences. Students are notified that the midterm grade is an interim grade and is subject to change.

VI. SPECIAL NOTES:

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.

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.

Prior Learning Assessment:

Students who wish to apply for advance credit transfer (advanced standing) should obtain an Application for Advance Credit from the program coordinator (or the course coordinator regarding a general education transfer request) or academic assistant. Students will be required to provide an unofficial transcript and course outline related to the course in question. Please refer to the Student Academic Calendar of Events for the deadline date by which application must be made for advance standing.

Credit for prior learning will also be given upon successful completion of a challenge exam or portfolio.

Substitute course information is available in the Registrar's office.

Disability Services:

If you are a student with a disability (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Disability Services office. Visit Room E1101 or call Extension 2703 so that support services can be arranged for you.

Communication:

The College considers **WebCT/LMS** as the primary channel of communication for each course. Regularly checking this software platform is critical as it will keep you directly connected with faculty and current course information. Success in this course may be directly related to your willingness to take advantage of the **Learning Management System** communication tool.

Student Portal:

The Sault College portal allows you to view all your student information in one place. **mysaultcollege** gives you personalized access to online resources seven days a week from your home or school computer. Single log-in access allows you to see your personal and financial information, timetable, grades, records of achievement, unofficial transcript, and outstanding obligations. Announcements, news, the academic calendar of events, class cancellations, your learning management system (LMS), and much more are also accessible through the student portal. Go to <https://my.saultcollege.ca>.

Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Code of Conduct*. A professor/instructor may assign a sanction as defined below, or make recommendations to the Academic Chair for disposition of the matter. The professor/instructor may:

- (i) issue a verbal reprimand,
- (ii) make an assignment of a lower grade with explanation,
- (iii) require additional academic assignments and issue a lower grade upon completion to the maximum grade “C”,
- (iv) make an automatic assignment of a failing grade,
- (v) recommend to the Chair dismissal from the course with the assignment of a failing grade.

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.

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Electronic Devices in the Classroom:

Students who wish to use electronic devices in the classroom will seek permission of the faculty member before proceeding to record instruction. With the exception of issues related to accommodations of disability, the decision to approve or refuse the request is the responsibility of the faculty member. Recorded classroom instruction will be used only for personal use and will not be used for any other purpose. Recorded classroom instruction will be destroyed at the end of the course. To ensure this, the student is required to return all copies of recorded material to the faculty member by the last day of class in the semester. Where the use of an electronic device has been approved, the student agrees that materials recorded are for his/her use only, are not for distribution, and are the sole property of the College.

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.

Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.