

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

**SAULT STE. MARIE, ONTARIO**



COURSE OUTLINE

**COURSE TITLE:** NURSING PATHOPHYSIOLOGY  
**CODE NO. :** NURS 2107 **SEMESTER:** 4  
**PROGRAM:** Collaborative BScN  
**AUTHOR:** Debra Bakker, Marg Johns, Valerie Wilson, Barbara Thompson  
**DATE:** Jan. 2009 **PREVIOUS OUTLINE DATED:** Jan. 2008  
**APPROVED:** "Fran Rose"

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**CHAIR, HEALTH PROGRAMS**

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**DATE**

**TOTAL CREDITS:** 3  
**PREREQUISITE(S):** BIOL2105, BIOL2111, NURS1194, NURS2184  
**COREQUISITE(S):** NURS2144  
**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:**

The focus of this course is on the pathophysiology of episodic and complex health challenges. Emphasis will be placed on the nurse's role in health restoration. Using a conceptual approach, learners will explore a variety of episodic and complex health challenges from an individual, family and community perspective.

Pathophysiology is the study of functional changes in cells, tissues and organs altered by disease and/or injury. Using a case study approach the learner will explore how pathophysiology bridges basic sciences and clinical nursing practice. Emphasis will be placed on how understanding pathophysiology processes can explain clinical manifestations, guide client care, and inform nursing judgement.

**II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

Ends-in-view

Upon completion of the course, the learner will be able to:

- Describe and explain basic principles, concepts and processes of pathophysiology that include: cellular communication; forms of cell injury; fluid and electrolyte and acid-base imbalance; immunity and inflammation; mechanisms of infection; and tumor biology.
- Demonstrate knowledge of the pathophysiology of common diseases and injury by describing functional alterations within body systems.
- Use pathophysiology terminology to communicate clients' health status.
- Describe the pathophysiology underlying client conditions and the associated clinical manifestations.
- Describe how the pathophysiology underlying client conditions guides client care and informs nursing judgment.

## Process

Learning will be facilitated through the use of on-line resources and classroom presentations and discussion. Learners will be provided with opportunities to apply content gained from on-line learning activities and preparatory readings through classroom learning activities that include presentations, case studies and the sharing of experiential learning. Integration of content from NURS 2107 and previous and current nursing and science courses will demonstrate how nurses use knowledge of pathophysiology to understand clinical manifestations, guide client care and inform nursing judgment. Learning activities provide opportunities to become increasingly self-directed.

**III. TOPICS:**

## Week

1. Introduction & Alterations in Cells and Tissues
2. Immunity/Inflammation/Infection
3. Fluid, Electrolytes and Acid-Base Balance & Alterations of the Endocrine System
4. Alterations of Cardiovascular Function
5. Alterations of Pulmonary Function
6. Midterm
7. Study Week
8. Alterations of the Hematologic System
9. Alterations of Renal and Urinary Tract Function
10. Alterations of Neurologic Function
11. Alterations of Musculoskeletal Function and Disorders of the Integument
12. Alterations of Digestive Function
13. Cancer

- Sequencing of topics/assignments subject to change based on teaching/learning needs.

**IV. REQUIRED RESOURCES/TEXTS/MATERIALS:**

Huether, S. E. & McCance, K. L. (2008). *Understanding pathophysiology* (4<sup>th</sup> ed.). St. Louis, MO: Mosby.

Huether, S. E. & McCance, K. L. (2008). *Study guide and workbook for Understanding pathophysiology* (4<sup>th</sup> ed.). St. Louis, MO: Mosby.

User Guide, Access Code for on-line resources for Huether & McCance *Understanding pathophysiology* (4<sup>th</sup> ed.).

**Recommended Resources/ Additional Resources**

Selected case studies will be provided with selected learning activities. Other resources include:

- A medical/surgical nursing textbook
- A pharmacology textbook
- A physical examination and health assessment textbook
- A maternal/child textbook
- A medical/nursing dictionary
- A manual of laboratory and diagnostic tests
- An anatomy and physiology textbook

**V. EVALUATION PROCESS/GRADING SYSTEM:****1. Weekly quizzes** 20%

*On a weekly basis, all learners are required to complete the on-line preparatory learning activities and assigned readings. Weekly quizzes will be administered in class to assess learning and understanding of readings and preparatory work. A total of 10 quizzes will be administered over the semester. Marks from 8 quizzes will be used to calculate the learner's grade.*

**2. Group presentation of case study** 10%

*Learners will be assigned to a learning group. Each week one or two groups will be responsible for presenting a case study as well as posting 2 key questions on the WebCT Bulletin Board prior to their presentation. All learners in the course will be responsible for reviewing the weekly case studies and preparing answers to the questions posted by the learning groups.*

**3. Midterm Test** 30%  
(administered in class on Week 6, Monday February 9, 2009)**4. Final Exam** 40%  
(scheduled by the Registrar's Office during the final Exam Period)**100%**

- Please note that the School of Nursing guidelines regarding attendance policy will be followed. Punctual and regular attendance at the various academic exercises is required of all students. If there are extenuating circumstances bearing upon a student's absence, the professor should be notified prior to the start of class. Absences in excess of 20% may jeopardize receipt of credit for the course. **Attendance is essential to be successful in this course.**
- A passing grade of 60% is required for this course and all nursing courses
- Attendance at scheduled classes, tests, quizzes, and presentations is mandatory for all students.
- Missed quizzes, assignments, presentations, examinations will be graded "0".
- Students must complete all course requirements (presentations, quizzes, tests, and exams) to be eligible for a final grade in NURS 2107.

**Please Note:** This course requires independent reading, completion of on-line modules, preparation and class participation.

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

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
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.

All NURS courses require 60% for a passing grade.

All science courses, including BIOL2105, BIOL2111, CHMI2220 and elective courses require 50% for a passing grade.

**VI. SPECIAL NOTES:**Disability Services:

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 professor and/or the Disability Services office. Visit Room E1101 or call Extension 2703 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 post-secondary institutions.

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

Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Code of Conduct*. 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.

**VII. 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.