



**School of Arts & Science  
BIOLOGY DEPARTMENT**

**BIOL 252-section  
Pathophysiology for Nursing 1  
Semester/Year, eg, 2007F or 2007Q1**

## **COURSE OUTLINE**

The Approved Course Description is available on the web @ \_\_\_\_\_

Ω Please note: this outline will be electronically stored for five (5) years only.  
It is strongly recommended students keep this outline for your records.

### **1. Instructor Information**

(a)	Instructor:	Dr Ahmed Vawda		
(b)	Office Hours:	Posted on office door		
(c)	Location:	F342D		
(d)	Phone:	3703479	Alternative Phone:	
(e)	Email:	vawda@camosun		
(f)	Website:			

### **2. Intended Learning Outcomes**

*(No changes are to be made to this section, unless the Approved Course Description has been forwarded through EDCO for approval.)*

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

1. Explain basic concepts of disease processes.
2. With reference to endocrine, cardiovascular, and respiratory disorders, explain how and why normal physiology is altered in the pathogenesis of specific diseases.
3. Correlate disease with treatment and nursing management in one's patients.
4. Explain in lay terms the major features of a patient's disease to the patient.

### **3. Required Materials**

(a) Porth, C.M. (2008). *Pathophysiology. Concepts of Altered Health States*. 8<sup>th</sup> ed. Lippincott Williams & Wilkins.

(b) Other

Course website: <http://vawda.disted.camosun.bc.ca>

### **4. Course Content and Schedule**

(Can include: class hours, lab hours, out of class requirements and/or dates for quizzes, exams, lectures, labs, seminars, practicums, etc.)

This is a tentative schedule of lectures. Changes may become necessary depending on progress in class.

<b>Week</b>	<b>Date</b>	<b>Lecture Topic</b>
1	September 2 - 5	Foundational Concepts of Pathology
2	September 8 - 12	Foundational Concepts of Pathology
3	September 15 – 19	Foundational Concepts of Pathology
4	September 22 - 26	Cardiovascular Disorders
5	September 29 – October 3	Cardiovascular Disorders
	<b>September 29 (16:30 – 17:30)</b>	<b>Exam 1</b>
6	October 6 - 10	Cardiovascular Disorders
7	October 13	Thanksgiving Day
	October 14 – 17	Cardiovascular Disorders
8	October 20 – 24	Endocrine Disorders
9	October 27 – 31	Endocrine Disorders
	<b>October 27 (16:30 – 17:45)</b>	<b>Exam 2</b>
10	November 3 – 7	Endocrine Disorders
11	November 10 - 14	Endocrine Disorders
		Neurological Disorders
	November 11	Remembrance Day
12	November 17 - 21	Neurological Disorders
13	November 24 – 28	Neurological Disorders
14	December 1 - 5	Neurological Disorders
15	December 8 - 16	Final Examination

## COURSE CONTENT

### Foundational Concepts of Pathology

Introductory terminology (see list of introductory terms on course website)

Cell injury

Inflammation

Abnormal immune responses

Neoplasia

Congenital and genetic disorders

Fluid-electrolyte and acid-base imbalances

#### **Review from year 1:**

fluid compartments & distribution within each compartment

electrolytes & their functions

transcapillary exchange

### Cardiovascular Disorders

Disorders of blood vessels and pressure

atherosclerosis

peripheral vascular disease

Shock

concepts) septic and anaphylactic shock (covered under foundational

cardiogenic shock (covered with congestive heart failure)

neurogenic shock (covered under neurologic disorders)

obstructive shock (see cardiac tamponade and pulmonary

embolism)

hypovolemic shock (**self study**)

Diseases of the heart

angina pectoris

myocardial infarction

cardiomyopathy

arrythmias

valvular disease

Infectious, inflammatory and immunologic disorders

endocarditis

rheumatic heart disease

Congestive heart failure

Pericardial disorders

pericarditis

cardiac tamponade

Leukemia

Lymphoma (**self study**)

Anemia

## Endocrine Disorders

### Pancreas

- Diabetes mellitus (Type 1 & 2)
  - Acute complications
    - diabetic ketoacidosis
    - hyperosmolar hyperglycemic state
    - hypoglycemia
  - Chronic complications
    - vascular damage
    - atherosclerosis, myocardial infarction, cerebrovascular
- accident
  - nephropathy
  - neuropathy
  - retinopathy
  - infections

### Thyroid gland

- Hyperthyroidism
  - Grave's disease
  - thyrotoxicosis
- Hypothyroidism
  - myxedema
  - cretinism

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### Hashimoto's thyroiditis

### Adrenal gland

- Adrenocortical hyperfunction
  - Cushing's syndrome
  - Conn syndrome
- Adrenocortical insufficiency
  - Addison's disease

### Pituitary gland

- Hyperpituitarism
  - SIADH
- Hypopituitarism
  - diabetes insipidus

## Neurological Disorders

### Degenerative Disorders

- Alzheimer's disease
- Multiple sclerosis
- Parkinson's disease (**self study**)
- Amyotrophic lateral sclerosis
- Myasthenia gravis (**self study**)

## Neoplasia

- Brain tumors
- Tumors of supporting structures

## Infections

- Meningitis (bacterial, viral)
- Encephalitis

## Seizure disorders

- Seizure and epilepsy

## Brain Injury

- Increased intracranial pressure
- Hemorrhage & hematomas

## Cerebrovascular disorders

- CVA (stroke)
  - Ischemic
  - Hemorrhagic
  - Transient ischemic attack

## Neurogenic shock

## Inflammatory / Paralytic Disorders

- Guillan Barre syndrome

## Congenital Malformations (**self study**)

- Myelomeningocele
- Hydrocephalus

## Genetic disorders (**self study**)

- Down syndrome

\*\* Information on self-study topics can be found in your textbooks. Guidance on how to approach each self-study topic will be posted on the course website.

### 5. Basis of Student Assessment (Weighting)

*(Should be linked directly to learning outcomes.)*

Exam 1	20%
Exam 2	25%
Care Plan assignment	5%
Client Profile assignment	15%
Comprehensive final exam (college exam period, see calendar)	35%

**Note that writing all exams and submission of completed assignments is compulsory. Even though a final course mark of 60% and above might be achieved, if all the above activities are not satisfactorily completed, an F grade will be assigned for the course.**

Tests and examinations will integrate both the pathophysiology and nursing applications components of the course. However, the overall weighting will reflect the disparity in number of lectures for each component, with nursing applications comprising approximately 33% of total evaluation. While some examination questions will require return of factual information, others will involve interpretation and assimilation of information sometimes based on clinical scenarios. If you wish to practice working through clinical scenarios, refer to your textbooks and the accompanying CDs.

Examinations, tests and quizzes must be written at the scheduled time, unless there is a medical or other emergency that prevents you from doing so. **You must notify the Instructor before the examination and submit a doctor's note that indicates the doctor's evaluation that you were unable to write the examination. Your attention is specifically drawn to the examination policy in the College calendar which states that exams must be written at the scheduled time except in cases of emergencies. Exams will NOT be deferred for holidays or scheduled flights.**

## 6. Grading System

*(No changes are to be made to this section, unless the Approved Course Description has been forwarded through EDCO for approval.)*

### Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+		3
60-64	C		2
50-59	D	Minimum level of achievement for which credit is granted; a course with a "D" grade cannot be used as a prerequisite.	1
0-49	F	Minimum level has not been achieved.	0

### Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy E-1.5 at [camosun.ca](http://camosun.ca) for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	<i>Incomplete:</i> A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.

<b>IP</b>	<i>In progress:</i> A temporary grade assigned for courses that, due to design may require a further enrollment in the same course. No more than two IP grades will be assigned for the same course. <i>(For these courses a final grade will be assigned to either the 3<sup>rd</sup> course attempt or at the point of course completion.)</i>
<b>CW</b>	<i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.

## 7. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

### LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College calendar, at Student Services or the College web site at [camosun.ca](http://camosun.ca).

### STUDENT CONDUCT POLICY

There is a Student Conduct Policy **which includes plagiarism**. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services and on the College web site in the Policy Section.

### ADDITIONAL COMMENTS AS APPROPRIATE OR AS REQUIRED

#### INTRODUCTION

Welcome to your first pathophysiology course in the nursing program. This document contains important information specifically on the pathology part of the course. Read through it carefully and take note of directives and other advisory information. The second component of the course is nursing applications, for which you will receive a separate course package. The course is taught jointly by Faculty from Biology and Nursing.

Biology 252 is the first of two pathophysiology courses for students in the second year of the Collaborative Curriculum for the Bachelor of Science in Nursing Program. The course focuses on the basic concepts of pathophysiology that are used to define dysfunction of the major organ systems.

Biology 252 integrates both pathophysiology and nursing applications. The intent is to enable students to apply the theoretical knowledge to nursing practice. Use of diagnostic tests, some pharmacology and treatment regimes will be included with each unit of study.

***A good prior understanding of the physiology and associated anatomy of the organ systems being discussed is essential for success in this course, as this forms the basis for studying pathophysiology. There will be no time to review or re-teach physiology and anatomy in class. You must review this information on your own before commencement of lectures on the appropriate organ system. While this is important for all students in class, it is particularly so for students who might have completed anatomy and physiology more than a year or two ago.***

During this course, you will obtain information from several sources including lectures, class discussions, textbooks, websites, client profiles, current journal articles and clinical practice. Do not rely exclusively on any one, or only some, of these sources. Attending lectures regularly is essential for success in this course. Relying on class notes obtained from a colleague or through other means, will generally **NOT** ensure success in this course because important discussion occurs in class to supplement the notes. This course outline lists the various topics that will be studied in the pathophysiology part of the course. You are encouraged to review these topics in the textbook before classes and to consolidate information obtained in lectures with that in the textbook after each class. **Some of the topics involve self-study (indicated in the outline) and will not be covered in lectures. Self-study topics are the student's responsibility and are examinable.** All required information on self-study topics is available in your textbooks and guidelines on how to approach each topic will be posted on the course website.

Students often find the course challenging because it is both content and concept driven. There is also a large volume of information to deal with. In addition, the course involves skills that some may not be adequately experienced in e.g. critical thinking, problem solving, integrating and assimilating information, and working with clinical scenarios. Since these skills develop with experience, applying them regularly to course content is important. Your text books are good resources for clinical scenarios. Refer to the CD ROM and websites accompanying the books.

*Biology 252 is a “cell phone-free” class.*

Wherever possible, establish the following standard format for each disease that you study:

- a brief introduction to the disease (i.e. type of disease, e.g. inflammatory, degenerative)
- etiology
- pathophysiology
- major manifestations (not an exhaustive list; where possible try to explain why these occur)
- diagnosis
- treatment / management