

	School of Arts & Science BIOLOGY DEPARTMENT BIOL 252 Pathophysiology for Nursing 1 Quarter or Semester/Year
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COURSE OUTLINE

The course description is online @ <http://camosun.ca/learn/calendar/current/web/biol.html>

Ω Please note: the College electronically stores this outline for five (5) years only.
It is **strongly recommended** you keep a copy of this outline with your academic records.
You will need this outline for any future application/s for transfer credit/s to other colleges/universities.

1. Instructor Information

(a)	Instructor:	Dr Ahmed Vawda		
(b)	Office Hours:	See D2L & office door		
(c)	Location:	F342D		
(d)	Phone:	250.370.3479	Alternative Phone:	
(e)	Email:	Vawda@camosun.bc.ca		
(f)	Website:			

2. Intended Learning Outcomes

(No changes are to be made to these Intended Learning Outcomes as approved by the Education Council of Camosun College.)

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

Hannon, R.A., Pooler, C. and Porth, C.M. (2010). Porth Pathophysiology, Concepts of Altered Health States. 1st Canadian edition. Wolters Kluwer Health / Lippincott Williams & Wilkins.

OPTIONAL TEXTBOOK

Study Guide for Pathophysiology, Concepts of Altered Health States. 8th edition. Lippincott Williams & Wilkins (2009).

4. Course Content and Schedule

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

Week	Date	Lecture Topic
1	September 4 – 7	Introduction & Foundational Concepts of Pathology
2	September 10 - 14	Foundational Concepts of Pathology
3	September 17 - 21	Foundational Concepts of Pathology

4	September 24 – 28	Foundational Concepts of Pathology
5	October 1 - 5 October 1	Cardiovascular Disorders Exam 1
6	October 8 October 9 – 12	Thanksgiving Day – College closed Cardiovascular Disorders
7	October 15 – 19	Cardiovascular Disorders
8	October 22 – 26	Cardiovascular Disorders
9	October 29 – November 2	Endocrine Disorders
10	November 5 – 9 November 5	Endocrine Disorders Exam 2
11	November 12 November 13 - 16	Remembrance Day – College closed Endocrine Disorders
12	November 19 – 23	Neurological Disorders
13	November 26 – 30	Neurological Disorders
14	December 3 – 7	Neurological Disorders
15	December 10 - 18	Final Examination

Final submission dates for self-study assignments (by 10 AM)	
Infection	September, 17 th
Hypovolemic shock	October, 4 th
Lymphoma	October, 15 th
Diabetes insipidus	October, 29 th
Myasthenia gravis	November, 9 th
Parkinson's disease	November, 19 th
Down syndrome	November 29 th

5. Basis of Student Assessment (Weighting)

(This section should be directly linked to the Intended Learning Outcomes.)

Self-study mini assignments (1% penalty for each incomplete assignment)	5 %
Exam 1 (October 1 st 17:30 [section 5 at 17:00])	25 %
Exam 2 (November 5 th 17:30 [section 5 at 17:00])	30 %
Comprehensive final exam (college exam period)	40 %

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

6. Grading System

(No changes are to be made to this section unless the Approved Course Description has been forwarded through the Education Council of Camosun College 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 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.
IP	<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 3rd course attempt or at the point of course completion.)</i>
CW	<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.

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 the College web site in the Policy Section.

COURSE CONTENT

Foundational Concepts of Pathology

Introductory terminology

(new terms will continuously be added as the course progresses)

Cellular injury, adaptation & death (**Review cell structure and function, Chapter 4**)

major mechanisms of injury

adaptations

atrophy

hypertrophy

hyperplasia

metaplasia

dysplasia

anaplasia

necrosis & apoptosis

Inflammation

acute and chronic

clinical signs

local

types of exudates

systemic

pathogenesis of fever

C reactive protein

Abnormal immune responses (**Review and understand the normal immune response**)

immunodeficiency

hypersensitivity (Types I, II, III & IV)

autoimmunity

Neoplasia

benign and malignant tumors

basic genetics of neoplasia

naming tumors

tumor growth, invasion & metastasis

introduction to grading and staging of tumors

cancer treatment (brief overview)

Congenital and genetic disorders (**Review genetic principles from introductory Biology course**)

congenital: vulnerability, critical period and teratogens

genetic: single-gene, complex trait, mitochondrial gene and chromosomal disorders

Fluid-electrolyte and acid-base imbalances (**Review from year 1 physiology courses: fluid compartments, electrolyte composition &**

electrolyte functions, transcapillary exchange (very important for future class discussions, see pages 734-737)

dehydration (volume deficit)
edema
3rd spacing
acid-base imbalance (acidosis and alkalosis)

Cardiovascular Disorders

(Review anatomy & physiology of the cardiovascular system, chapter 1 & beginning of chapters 22, 23 & 25)

Disorders of blood vessels and blood pressure

atherosclerosis
peripheral arterial disease
arteriosclerotic occlusive disease

Shock

septic and anaphylactic shock (covered under foundational concepts)

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 2, see D2L for guidelines**)

Diseases of the heart

angina pectoris (stable, unstable and variant)

myocardial infarction (acute coronary syndrome)

cardiomyopathy (hypertrophic, dilated and restrictive)

arrhythmias

valvular disease

infectious, inflammatory and immunologic disorders

endocarditis

rheumatic heart disease

congestive heart failure

Pericardial disorders

pericarditis

cardiac tamponade

leukemia

lymphoma (**self-study 3, see D2L for guidelines**)

Anemia

iron deficiency

B₁₂ and folic acid deficiency

pernicious

aplastic

hemolytic

hemorrhagic

sickle cell

Endocrine Disorders

(Review chapter 40: glands, hormones, functions & regulation of secretion)

Hyposecretion and hypersecretion

Pancreas

- Diabetes mellitus (Type 1 & 2)
 - classification & etiology
 - prediabetes
 - metabolic syndrome
 - pathophysiology
 - acute complications
 - diabetic ketoacidosis (DKA)
 - hyperosmolar hyperglycemic state (HHS)
 - hypoglycemia
 - chronic complications
 - vascular damage
 - retinopathy
 - nephropathy
 - neuropathy
 - atherosclerosis, myocardial infarction, cerebrovascular accident
 - hypertension
 - infections

..... diagnosis
..... treatment

Thyroid gland

- goiter (endemic & toxic)
- hyperthyroidism
 - Grave's disease
 - thyrotoxicosis

- hypothyroidism
 - myxedema
 - cretinism

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Hashimoto's thyroiditis

Adrenal gland

- adrenocortical hypersecretion
 - Cushing's syndrome
 - Conn syndrome
- adrenocortical hyposecretion
 - Addison's disease

Pituitary gland

- diabetes insipidus (**self-study 4, see D2L for guidelines**)
- SIADH (syndrome of inappropriate antidiuretic hormone [secretion])

Neurological Disorders

(Review anatomy & physiology related to the topics below from year 1 and/or chapter 48)

Degenerative Disorders

Alzheimer's disease

multiple sclerosis

myasthenia gravis (**self-study 5, see D2L for guidelines**)

amyotrophic lateral sclerosis

Parkinson's disease (**self-study 6, see D2L for guidelines**)

Infections

meningitis (bacterial & viral)

encephalitis

Seizure disorders

seizure and epilepsy

Brain Injury

increased intracranial pressure

hemorrhage & hematomas

Cerebrovascular disorders

cerebrovascular accident (stroke)

ischemic

hemorrhagic

transient ischemic attack

Neurogenic shock

Inflammatory / Paralytic disorders

Guillan Barre syndrome

Congenital malformations

myelomeningocele

hydrocephalus

Genetic disorders

Down syndrome (**self-study 7, see D2L for guidelines**)