



DOUGLAS COLLEGE

EFFECTIVE: MAY 2012
CURRICULUM GUIDELINES

A. Division: Academic Effective Date: May 2012

B. Department / Faculty of Science & Technology/ Revision New Course
 Program Area: Biology

If Revision, Section(s) Revised:
 Date of Previous Revision:
 Date of Current Revision:

C: BIOL 2200 **D:** Pathophysiology **E:** 3

Subject & Course No.	Descriptive Title	Semester Credits						
<p>F: Calendar Description:</p> <p>The course provides an overview of the functional changes in the body that result from disease processes. Building on the knowledge of normal human anatomy and physiology, students learn the biological basis of changes that occur after loss of normal structure and/or function, including variations due to stage of life. The course will cover the etiology, pathogenesis, diagnosis and principles guiding therapies of commonly occurring (as supported by Canada Health statistics/data) health conditions across several organ systems.</p>								
<p>G: Allocation of Contact Hours to Type of Instruction / Learning Settings</p> <p>Primary Methods of Instructional Delivery and/or Learning Settings:</p> <p>Lecture / Case Studies / Group Discussions</p> <p>Number of Contact Hours: (per week / semester for each descriptor)</p> <p>Lecture: 3 hours\per week</p> <p>Case Studies and Group discussions: 1 hour\per week</p> <p>Number of Weeks per Semester:</p> <p>15 weeks</p>	<p>H: Course Prerequisites:</p> <p>BIOL 1203 or BIOL 1209 with a C- or better</p>							
	<p>I: Course Corequisites:</p> <p>None</p>							
	<p>J: Course for which this Course is a Prerequisite:</p> <p>None</p>							
	<p>K: Maximum Class Size:</p> <p>35</p>							
<p>L: PLEASE INDICATE:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30px; text-align: center;"><input type="checkbox"/></td> <td>Non-Credit</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>College Credit Non-Transfer</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>College Credit Transfer</td> </tr> </table> <p style="text-align: center;">SEE BC TRANSFER GUIDE FOR TRANSFER DETAILS (www.bctransferguide.ca)</p>			<input type="checkbox"/>	Non-Credit	<input type="checkbox"/>	College Credit Non-Transfer	<input checked="" type="checkbox"/>	College Credit Transfer
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M: Course Objectives / Learning Outcomes:

Upon completion of BIOL 2200, the student will be able to:

- Explain the role of pathophysiology in the diagnosis and treatment of disease.
- Describe the common cellular changes underlying disease processes.
- Explain the mechanism, types and effects of inflammation.
- Describe the healing process.
- Describe the mechanism and clinical effects of the various types of hypersensitivity reactions.
- Discuss the mechanism of autoimmunity and provide examples of autoimmune disorders.
- Explain the causes and effects of immunodeficiency.
- Distinguish between benign and malignant tumours.
- Describe the stages of carcinogenesis.
- Discuss the signs and principles of therapies and prognosis of commonly occurring forms of cancer.
- Describe and compare the etiopathology, manifestations and treatment of various forms of anemia, polycythemia and coagulation disorders.
- Compare acute and chronic leukemia.
- Describe and compare the etiopathology, manifestations and treatment of various cardiovascular disorders.
- Discuss the causes, signs and effects of disorders of the respiratory tract and obstructive lung disorders.
- Discuss the causes, signs and effects of disorders of the gastrointestinal tract, liver and pancreas.
- Describe the etiopathology, manifestations and treatment of disorders of the urinary tract and kidneys.
- Explain some of the general signs (particularly those associated with increased intracranial pressure) and symptoms of neurological disorders.
- Describe and compare the etiopathology, manifestations and treatment of acute and chronic neurological disorders.
- Discuss the etiopathology, signs and effects of disruption in the functioning of selected endocrine glands.
- Compare the various types of fractures and describe the healing process in bone.
- Discuss the pathophysiology of osteoporosis.
- Describe and compare the etiopathology and manifestations of the various forms of arthritis.
- Discuss the pathophysiology of various disorders of the male and female reproductive system.
- Describe common sexually transmitted diseases.

N: Course Content:

1. Introduction, Inflammation and Healing
 - The Study of Pathophysiology
 - Cellular Changes
 - Mechanism of Inflammation
 - Acute and Chronic Inflammation
 - The Healing Process
2. Disorders of the Immune System
 - Hypersensitivity Reactions
 - Autoimmune Disorders
 - Immunodeficiency

3. Neoplasms
 - Benign and Malignant Tumors
 - Cancer: Pathophysiology, Etiology and Treatment
 - Examples of Malignant Tumors
4. Blood Disorders
 - The Anemias and Polycythemia
 - Blood-clotting Disorders
 - The Leukemias
5. Cardiovascular Disorders
 - Coronary Artery Disease and Myocardial Infarction
 - Heart Failure
 - Cardiac Dysrhythmias (including atrial fibrillation)
 - Arterial and Venous Disorders
6. Respiratory Disorders
 - Lung Obstruction
 - Respiratory Distress Syndrome
7. Digestive Disorders
 - Upper Gastrointestinal Disorders
 - Hepatic and Pancreatic Disorders
 - Lower Gastrointestinal Disorders
8. Urinary Disorders
 - Urinary Tract Obstructions
 - Renal Failure
9. Neurological Disorders
 - General Effects of Neurological Dysfunction
 - Acute Neurological Disorders
 - Chronic Neurological Disorders
10. Endocrine Disorders
 - Insulin and Diabetes Mellitus
 - Hypothalamus, Pituitary and Related Glands Dysfunctions
11. Musculoskeletal Disorders
 - Bone Disorders
 - Joint Disorders
12. Reproductive System Disorders
 - Disorders of the Male Reproductive system
 - Disorders of the Female Reproductive System
 - Sexually Transmitted Diseases

O: Methods of Instruction:

Learning activities include lecture and group discussion, case study analysis and group/individual projects.

P: Textbooks and Materials to be Purchased by Students:

Huether, S. and McCance, K. *Understanding Pathophysiology* (Current Edition). St. Louis, Missouri: Elsevier, or other equivalent textbooks to be considered.

Q: Means of Assessment:

Evaluation will be carried out in accordance with Douglas College policy. The instructor will present a written course outline with specific evaluation criteria at the beginning of the semester. Evaluation will be based on some of the following:

Quizzes	10% -15%
Midterm Exam I	20% - 30%
Midterm Exam II	20% - 30%
Term Project	10% - 15%
Final Exam	25% - 35%

R: Prior Learning Assessment and Recognition: specify whether course is open for PLAR

There is no provision for PLAR, other than by examining transcripts of biology courses taken within the last 5 years and comparing them to the course content of Biology 2200.

Course Designer(s): Dr. Cheryl Tautorus

Education Council / Curriculum Committee Representative

Dean / Director: Dr. Thor Borgford

Registrar