



**I. COURSE DESCRIPTION:**

The learner will develop an understanding of chronic health challenges by examining how the body adapts to or compensates to maintain its optimal state. The study of the basic principles of microbiology will be continued.

**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 how normal physiological processes are altered by chronic health challenges (disease).
2. Explain the basic pathophysiological concepts of a chronic health challenge.
3. Describe how the human body compensates for a chronic health challenge.
4. Examine common chronic health challenges and their effect on the human body.
5. Examine diagnostic testing for common chronic health challenges.

Review the selected key terms (vocabulary) for each specific concept/system.

The requirements of the learning outcomes will be met by the following elements of performance:

**CONCEPTS OF DISEASE**

**1. Introduction to chronic disease**

- Discuss the concept of chronicity

**2. Pain**

- Define acute vs chronic pain
- Identify the causes and signs and symptoms of acute and chronic pain

**3. Neoplasms**

- Define neoplasia
- List the warning signs of cancer
- List the common carcinogens to humans
- Differentiate between benign and malignant neoplasms (tumors)
- Discuss tumor staging and grading
- Describe local and systemic adverse effects of tumors on the host (breast, prostate, lymphoma, skin, lung, colon brain)

## **CHRONIC ALTERATIONS IN SYSTEMS FUNCTIONING**

### **1. Integument**

- Describe common acute skin infections/infestations caused by bacteria, viruses, fungi and parasites
- Identify the etiology, contributing factors, signs and symptoms and complications of common chronic skin disorders (contact/ectopic dermatitis, psoriasis, eczema, candidiasis, herpes simplex/zoster)
- Examine diagnostic tests used to diagnose and monitor common chronic skin disorders

### **2. Respiratory**

- Identify the etiology, contributing factors, signs and symptoms and complications of common chronic respiratory disorders (COPD – emphysema, bronchitis, TB, cystic fibrosis, Adult Respiratory Distress Syndrome)
- Compare and contrast emphysema, asthma and bronchitis
- Examine diagnostic tests used to diagnose and monitor common chronic respiratory disorders

### **3. Cardiovascular**

- Identify the etiology, contributing factors, signs and symptoms and complications of chronic congestive heart failure
- Compare and contrast right and left-sided heart failure
- Examine diagnostic tests used to diagnose and monitor chronic cardiovascular disorders

### **4. Gastrointestinal**

- Identify the etiology, contributing factors, signs and symptoms and complications of common chronic gastrointestinal disorders ( periodontal disease, gingivitis, periodontitis, dysphagia, hiatal hernia, peptic/duodenal ulcer, Crohn's disease, ulcerative colitis, gastroenteritis, celiac disease, cirrhosis)
- Examine diagnostic tests used to diagnose and monitor chronic gastrointestinal disorders

### **5. Genitourinary**

- Identify the etiology, contributing factors, signs and symptoms and complications of common chronic genitourinary disorders ( incontinence, BPH, nephrotic syndrome, renal failure, endometriosis)
- Compare functional, stress, reflex and urge incontinence
- Compare acute and chronic renal failure
- Examine diagnostic tests used to diagnose and monitor common chronic gastrointestinal disorders
- Identify contributing factors, signs and symptoms and complications of infertility
- Examine diagnostic tests used to diagnose and monitor infertility

**6. Musculoskeletal**

- Identify the etiology, contributing factors, signs and symptoms and complications of common chronic musculoskeletal disorders (osteoporosis, osteoarthritis, rheumatoid arthritis, muscular dystrophy, gout)
- Examine diagnostic tests used to diagnose and monitor chronic musculoskeletal disorders

**7. Neurological**

- Identify the etiology, contributing factors, signs and symptoms and complications of common chronic neurologic alterations ( seizures, cerebral palsy, multiple sclerosis, Parkinson's disease, amyotrophic lateral sclerosis)
- Compare and contrast the various types of seizure disorders
- Examine the diagnostic tests used to diagnose and monitor common chronic neurologic alterations

**8. Endocrine**

- Identify the etiology, contributing factors, signs and symptoms and complications of common chronic endocrine disorders (diabetes mellitus, hypo/hyper thyroidism, Cushing's disease, Addison's disease)
- Compare Type 1 and Type 2 diabetes
- Compare and contrast hyperglycemia and ketoacidosis
- Compare hyper and hypo thyroidism
- Define gigantism and dwarfism
- Compare the effects of an excess and deficit of growth hormone in a child and adult
- Examine the diagnostic tests used to diagnose and monitor chronic endocrine disorders

**9. Sensory – Eyes**

- Identify the contributing factors, signs and symptoms and complications of common acute & chronic eye disorders (chalazion, entropion, presbycusis, myopia, hyperopia, cataracts, glaucoma, blindness)
- Compare myopia, hyperopia and presbyopia
- Discuss the difference between open and narrow angle glaucoma
- Examine the diagnostic tests used to diagnose and monitor acute & chronic eye disorders

**10. Sensory – Ears**

- Identify the etiology, contributing factors, signs and symptoms and complications of common acute & chronic ear disorders ( otitis media, otitis externa, deafness)
- Examine diagnostic tests used to diagnose and monitor acute & chronic ear disorders

**11. Hematological**

- Identify the etiology, contributing factors, signs & symptoms of the chronic blood disorders (anemias)

**12. Immunological**

- Identify the etiology, contributing factors, signs and symptoms, complications of common chronic immune disorders (HIV, SLE, allergic/herpersensitivity reactions)
- Examine diagnostic tests used to diagnose and monitor chronic immune disorders

**III. TOPICS:**

1. Introduction to Chronic Disease
2. Pain
3. Neoplasms
4. Integument Disorders
5. Respiratory Disorders
6. Cardiovascular Disorders
7. Gastrointestinal Disorders
8. Genitourinary Disorders
9. Musculoskeletal Disorders
10. Neurological Disorders
11. Endocrine Disorders
12. Eye Disorders (acute and chronic)
13. Ear Disorders (acute and chronic)
14. Hematological Disorders
15. Immunological Disorders

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

Marieb, E. N. (2006). *Essentials of human anatomy and physiology* (8<sup>th</sup> ed.). Toronto, ON: Benjamin Cummings.

Marieb, E. N. (2006). *Revised anatomy physiology colouring workbook: A complete study guide* (8<sup>th</sup> ed.). Toronto, ON: Benjamin Cummings.

Gould, B. E., (2006). *Pathophysiology for the health professions* (3<sup>rd</sup> ed.). Elsevier W. B. Saunders.

**USEFUL:**

Pathophysiology made Incredibly Easy (2<sup>nd</sup> ed.) (2002) Lippincott, William and Wilkins.

V. EVALUATION PROCESS/GRADING SYSTEM:

1. **The pass mark for this course is 60%.** It is composed of term quizzes, mid-term exam and a final exam.
2. Evaluation Methods:  

Quizzes (4)	60%
Case Study	5%
Final Exam (multiple choice)	<u>35%</u>
TOTAL	100%

There will be 5 % bonus from online quizzes.  
Final exam will consist of material covering the entire course.
3. Students missing the quizzes for any reason will **not** be able to write them at any other date.
4. Students missing the mid-term exam or final exam because of illness or other serious reason must phone the professor **before** the exam to inform her/him (759-2554, Ext. 635). Those students who have notified the professor of their absence, according to policy, will be eligible to arrange an opportunity as soon as possible to write the exam at another time. Those students who **do not notify** the professor will receive a zero for that exam.
5. Students receiving borderline marks (59, 69, 79, 89) will have their mark advanced to the next category if they have attended at least 80% of the classes.

The following semester grades will be assigned to students in postsecondary courses:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 – 100%	4.00
A	80 – 89%	3.00
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:** 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.

#### 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 instructor 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 postsecondary institutions.

Plagiarism:

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

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