

**COURSE NAME:** PNE237 Pathophysiology I

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Credit Value: 4  
Total Course Hours: 56  
Prerequisite Course(s): IAP100, IAP120  
Corequisite Course(s): None

## COURSE DESCRIPTION

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This course provides the learner with a general understanding and working knowledge of the structure and function of the human body experiencing a health challenge, including the basic concepts of disease and illness (inflammation, infection, healing, stress, pain neoplasm). The learner will examine changes that occur in the human body and explore how the body compensates for those challenges.

## LAND ACKNOWLEDGEMENT

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Canadore College resides on the traditional territory of the Anishinaabeg and within lands protected by the Robinson Huron Treaty of 1850. This land is occupied by the people of Nipissing First Nation since time immemorial.

## PLAR INFORMATION

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This course is eligible for Prior Learning Assessment and Recognition. Students are advised to discuss options with their program coordinator.

## COURSE LEARNING OUTCOMES

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Upon completion of this course, the student will have reliably demonstrated the ability to:

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|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| 1.0 Describe how the human body compensates for a health challenge.                | bacteria, viruses, fungi, and parasites.                                                                         |
| 1.1 Explain the role of pathophysiology in the diagnosis and treatment of disease. | 2.2.3 Define resident flora.                                                                                     |
| 1.2 Review normal defenses in the body.                                            | 2.2.4 Describe the transmission of infectious agents.                                                            |
| 1.3 Identify specific and non-specific mechanical defenses.                        | 2.2.5 Describe the chain of infection.                                                                           |
| 2.0 Explain the basic pathophysiological concepts of a health challenge.           | 2.2.6 List factors contributing to host resistance to infection.                                                 |
| 2.1 Inflammation:                                                                  | 2.2.7 List interventions to prevent spread of infection (guideline for standard transmission-based precautions). |
| 2.1.1 Define inflammation.                                                         | 2.2.8 Describe the progression of infection.                                                                     |
| 2.1.2 Explain the steps of the inflammatory process.                               | 2.2.9 Identify common health care acquired infection (bacterial, viral, VRE, MRSA, Clostridium Difficile).       |
| 2.1.3 Identify causes of inflammation.                                             | 2.2.10 Explain diagnostic used to diagnose and monitor infection.                                                |
| 2.1.4 Describe the signs and symptoms of inflammation (local and systemic).        | 2.2.11 Examine the effect of microbes of the human body.                                                         |
| 2.1.5 Describe the characteristics of exudate.                                     |                                                                                                                  |
| 2.1.6 Describe the diagnostic tests used to diagnose and monitor inflammation.     | 2.3 Healing:                                                                                                     |
| 2.2 Infection:                                                                     | 2.3.1 Describe the types of healing.                                                                             |
| 2.2.1 Define microbiology.                                                         | 2.3.2 Explain the healing process.                                                                               |
| 2.2.2 Describe the basic characteristics of                                        | 2.3.3 Identify factors that affect healing.                                                                      |
|                                                                                    | 2.4 Stress response:                                                                                             |

- 2.4.1 Describe the stress response.
- 2.4.2 Explain how the stress response is related to disease.
- 2.5 Pain:
  - 2.5.1 Define acute and chronic pain.
  - 2.5.2 Identify the causes of pain.
  - 2.5.3 Describe the pain pathway.
  - 2.5.4 Relate the methods of pain control to the gate control theory.
  - 2.5.5 Describe the signs and symptoms of pain.
  - 2.5.6 Explain factors that may alter pain perception.
  - 2.5.7 Compare acute and chronic pain.
- 2.6 Neoplasm:
  - 2.6.1 Discuss the etiology of neoplastic conditions.
  - 2.6.2 Differentiate between benign and malignant tumors.
  - 2.6.3 Describe the spread of neoplasms/carcinogenesis.
  - 2.6.4 Describe the stages of neoplastic growths.
  - 2.6.5 Describe signs and symptoms and complications common to different types of cancer.
  - 2.6.6 Explain diagnostic tests used to diagnose and monitor neoplastic conditions.
- 3.0 Examine common health challenges, as listed in subsequent outcomes, and their effect on the human body (adult and child).
  - 3.1 Define common conditions.
  - 3.2 Discuss the etiology of common conditions.
  - 3.3 Describe the development of common conditions.
  - 3.4 Describe signs and symptoms and complications of common conditions.
  - 3.5 Explain diagnostic tests used to diagnose and monitor common conditions.
- 4.0 Fluid and electrolyte balance, acid/base imbalance:
  - 4.1 Fluid volume excess and deficit.
    - 4.1.1 Identify functions and regulatory mechanisms that maintain water and electrolyte balance in the body.
    - 4.1.2 Compare and contrast the effect of fluid volume excess and fluid volume deficits.
  - 4.2 Electrolyte imbalances.
    - 4.2.1 Hypo/hyponatremia.
    - 4.2.2 Hypo/hyperkalemia.
    - 4.2.3 Hypo/hypercalcemia.
  - 4.3 Acidosis and alkalosis (metabolic and respiratory).
- 5.0 Alteration in Psychosocial Functioning.
  - 5.1 Examine common psychosocial conditions including a discussion of the biological and psychosocial theories about the etiology:
    - 5.1.1 Major depression
    - 5.1.2 Bipolar disorders
    - 5.1.3 Suicide
    - 5.1.4 Anxiety (panic/phobias/post traumatic stress disorders/generalized anxiety disorder)
    - 5.1.5 Substance abuse (drug/alcohol)
    - 5.1.6 Personality Disorders (borderline/antisocial)
    - 5.1.7 Schizophrenia
    - 5.1.8 Eating disorders (anorexia nervosa/bulimianervosa/obesity)
- 6.0 Pregnancy.
  - 6.1 Examine potential antepartum, intrapartum and postpartum complications:
    - 6.1.1 Ectopic pregnancy
    - 6.1.2 Hypertensive disorders of pregnancy
    - 6.1.3 Hyperemesis gravidarum
    - 6.1.4 Antepartum, intrapartum, and postpartum hemorrhage
    - 6.1.5 Abortions
    - 6.1.6 Gestational Diabetes
    - 6.1.7 Blood incompatibilities
    - 6.1.8 Infections
    - 6.1.9 Anemias
    - 6.1.10 Substance abuse in pregnancy
    - 6.1.11 Postpartum complications
    - 6.1.12 Postpartum mood disorders
- 7.0 Respiratory.
  - 7.1 Examine common respiratory conditions:
    - 7.1.1 Croup
    - 7.1.2 Epiglottitis
    - 7.1.3 Pneumonia

- 7.1.4 RSV
- 7.1.5 Asthma
- 7.1.6 Hemothorax/pneumothorax
- 7.1.7 COPD (emphysema/chronic bronchitis)
- 7.1.8 Tuberculosis
- 7.1.9 Cystic Fibrosis
- 7.1.10 Influenza
- 7.1.11 Lung Cancer

- 8.1.6 Periheral venous disease (DVT)
- 8.1.7 Pulmonary edema
- 8.1.8 Shock  
(hypovolemia/anaphylactic/cardiogenic/septic/neurogenic)
- 8.1.9 CHF ( right and left sided in adults and children)

8.2 Examine modifiable and non-modifiable risk factors for cardiovascular disease.

## 8.0 Cardiovascular.

8.1 Examine common cardiovascular conditions:

- 8.1.1 Hypertension (primary /secondary)
- 8.1.2 Coronary Artery Disease
- 8.1.3 Angina
- 8.1.4 Myocardial Infarction
- 8.1.5 Peripheral arterial disease

## 9.0 Endocrine

9.1 Examine common endocrine condition:

- 9.1.1 Diabetes mellitus (Type 1 and type 2)
- 9.1.2 Hypothyroidism/hyperthyroidism
- 9.1.3 Cushing's syndrome
- 9.1.4 Addison's disease

## GENERAL EDUCATION

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This is not a General Education course.

## PROGRAM OUTCOMES

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This course contributes to the following Ministry of Colleges and Universities approved program learning outcomes (PLO):

### Practical Nursing

3. plan safe and competent nursing care, based upon a thorough analysis of available data and evidence-informed practice guidelines.

## ESSENTIAL EMPLOYABILITY SKILLS OUTCOMES

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This course contributes to the following Ministry of Colleges and Universities approved essential employability skills (EES) outcomes:

- 7. Analyse, evaluate, and apply relevant information from a variety of sources.
- 9. Interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals.

## EXTERNAL COURSE ACCREDITATIONS AND CONDITIONS

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This course is a compulsory course within the Canadore College Practical Nursing program, as reviewed and approved by the College of Nurses of Ontario

## COURSE EVALUATION

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Evaluation Item	Weight
Quizzes	10%
Tests	90%

## COURSE PASS GRADE

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60

## GRADING SYSTEM

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A+:	90-100%	B+:	77-79%	C+:	65-69%	D:	50-54%	S - Satisfactory
A:	85-89%	B:	73-76%	C:	60-64%	F:	0-49%	I - Incomplete
A-:	80-84%	B-:	70-72%	D+:	55-59%			F- Repeat Course, included in GPA
								FS- Failure Supplemental
								FR- Repeat course, excluded from GPA

\*For a complete chart of grades and descriptions, please see the Grading Policy.

## LEARNING RESOURCES

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Course Textbooks:

Required:

Title: Psychiatric Mental Health Nursing  
 Author: Videbeck, S.  
 Publisher: Elsevier  
 Edition: 9th edition  
 Print ISBN: 9781975184773  
 eBook ISBN: 9780323872829

Recommended:

Title: Study Guide for Gould's Pathophysiology for the Health Professions  
 Author: VanMeter, K.  
 Publisher: Elsevier  
 Edition: 7th edition  
 Print ISBN: 9780323792936  
 eBook ISBN: 9780323792950

Additional Learning Resources:

Most of the required textbooks for the program are bundled into a Total Solution Package (TSP) through our publisher Elsevier. The TSP package includes eBooks as well as access to all the required online resources such as Sherpath, Clinical Skills videos, Shadow Health simulations, Adaptive Quizzing EAQ's, HESI preparatory

exams and software for this course and many others throughout the program. Textbooks and course resources that are not included in the TSP must be purchased independently, as listed in each course outline and syllabus. Resources listed on the course outline support the achievement of learning outcomes and may be used throughout the course/program to varying degrees depending on the instructor's teaching methodology and the nature of the resource. Faculty may, at their discretion, integrate TSP resources into class activities, graded assessments, or preparatory work for courses/labs/clinicals and the College of Nurses of Ontario registration exam.

The fee for this bundle will be charged to your student account as part of the semester program fees. The bundle fee is intended to be rolled into your Program Fees at the beginning of each academic year; however, the Administration reserves the right to post it as a separate charge later in the term or each semester. Please monitor your student account for any subsequent billing and direct any questions to the Admissions Office. For the fee structure please see <https://cdn.agilitycms.com/canadore-college/eText%20eResource%20Fees.pdf> Upon entry to the program students will have the option of accepting the full package or to "opt out" of the nonevaluative resources of the package. If they choose to "opt out", they will be required to meet with the program coordinator to discuss the TSP and sign a declaration prior to 4:00 pm on the first Friday of the first semester of the program/year. After this deadline, access for the entirety of the program is final and non-refundable. Full deployment of the resources will begin shortly after the opt-out window closes.

Please see the [Campus Bookstore](#) to verify the current textbook costs and your [program page](#) for additional program fees and/or learning material requirements (see the "Tuition Fees" and "What You Need" sections).

Resources listed on the course outline support the achievement of learning outcomes, and may be used throughout the course to varying degrees depending on the instructor's teaching methodology and the nature of the resource.

Technology requirements - <https://www.canadorecollege.ca/BYOD>

The Harris Learning Library's staff can help you find resources to support your learning - [www.eclibrary.ca](http://www.eclibrary.ca)

## LEARNING ACTIVITIES

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In-class activities

## DELIVERY MODE

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This course may be delivered, in whole or in part, in a number of modalities, including In-Person, Remote (synchronous and/or asynchronous), hybrid, or Hyflex, as per accreditation and/or regulatory standards where appropriate. This information is identified on the course schedule (student and faculty).

## RECORDING GUIDELINES

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This class may be recorded by faculty of the College. Faculty will inform students when recording of the class

commences and ceases. 'Recorded' means that the audio-visual and chat portions of the class will be recorded and then be stored on the College or vendor provider server. They will be made available to students, but only for the express and sole use of those registered in this course. If you have any questions or concerns about this recording, please contact your instructor or the College's privacy officer at [privacy.officer@canadorecollege.ca](mailto:privacy.officer@canadorecollege.ca). Full recording guidelines can be found at: <https://cdn.agilitycms.com/canadore-college/academic-centre-of-excellence/Canadore%20Recording%20Guidelines.pdf>. Recordings are to be managed (or removed) as per the College's Recording Guidelines following the completion of the course.

## ACADEMIC POLICIES

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Canadore College is committed to the highest standards of academic integrity, and expects students to adhere to these standards as part of the learning process in all environments. The College's Academic Integrity policy seeks to ensure that all students understand their rights and responsibilities in upholding academic integrity and that students receive an accurate and fair assessment of their work. Please review the Academic Integrity policy (A-18) and other academic policies found on our website: <https://www.canadorecollege.ca/about/policies>.

## COLLEGE POLICIES

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- Protecting human rights in support of a respectful college community

For college policies please see: <http://www.canadorecollege.ca/about-us/college-policies>.

## Accessibility Learning Services for Students with Disabilities - Student Success Services

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Student Success Services provides comprehensive support to students. We aim to ensure that all students have equal access to educational opportunities and can succeed in their academic journey. Our services focus on reducing and eliminating barriers related to education through individualized accommodations and support. If you are a student with a disability, we encourage you to register with Accessible Learning by completing the Student Success – Accessible Learning Services Form ([https://canadorecollege-accommodate.symphlicity.com/public\\_accommodation/](https://canadorecollege-accommodate.symphlicity.com/public_accommodation/)).

For more detailed information about the services offered, please visit our webpage: <https://isucceed.canadorecollege.ca/students>. To connect with Student Success Services email [studentsuccessnow@canadorecollege.ca](mailto:studentsuccessnow@canadorecollege.ca) or call 705.474.7600 ext 5205.

## FIRST PEOPLES' CENTRE:

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A culturally supportive and comfortable environment where you can study, socialize, and access a wide range of resources and confidential student focused services.

- Counselling services

- Elders on Campus and Cultural Advisors
- Cultural and Spiritual Wellness
- Peer tutoring/Peer Mentorship
- wholistic support network
- Social events and workshops on study skills, self-care & life skills

Drop by our offices at C254 College Drive, W103 Commerce Court or Call 705-474-7600 Ext. 5961

<https://www.canadorecollege.ca/first-peoples-centre>

### **WAIVER OF RESPONSIBILITY**

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Every attempt is made to ensure the accuracy of this information as of the date of publication. The college reserves the right to modify, change, add, or delete content.

### **HISTORICAL COURSE OUTLINES**

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Students use course outlines to support their learning. Students are responsible for retaining course outlines for future use in applications for transfer of credit to other educational institutions.

### **ADDITIONAL DISCLAIMER NOTE**

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Students are expected to adhere to the policies and procedures as outlined in the Practical Nursing Student Success Guide 2025-2026. All previous guides will not apply.