
COURSE NAME: PNE237 Pathophysiology I

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

COURSE DESCRIPTION

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. The learner will examine changes that occur in the human body and explore how the body compensates for those challenges. Included in this course is the study of basic principles of microbiology.

PLAR INFORMATION

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

COURSE LEARNING OUTCOMES

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

1.0 Describe how the human body compensates for a health challenge.

- 1.1 Explain the role of pathophysiology in the diagnosis and treatment of disease.
- 1.2 Review normal defenses in the body.
- 1.3 Identify specific and non-specific mechanical defenses.

2.0 Explain the basic pathophysiological concepts of a health challenge.

- 2.1 Inflammation:
 - 2.1.1 Define inflammation
 - 2.1.2 Explain the steps of the inflammatory process.
 - 2.1.3 Identify causes of inflammation
 - 2.1.4 Describe the signs and symptoms of inflammation (local and systemic)
 - 2.1.5 Describe the characteristics of exudates
 - 2.1.6 Describe the diagnostic tests used to diagnose and monitor inflammation
- 2.2 Infection:
 - 2.2.1 Define microbiology
 - 2.2.2 Describe the basic characteristics of bacteria, viruses, fungi, and parasites
 - 2.2.3 Define resident flora
 - 2.2.4 Describe the transmission of infectious agents

- 2.2.5 Describe the chain of infection
- 2.2.6 List factors contributing to host resistance to infection
- 2.2.7 List interventions to prevent spread of infection (guideline for standard transmission based precautions).
- 2.2.8 Describe the progression of infection
- 2.2.9 Identify common health care acquired infection (bacterial, viral, VRE, MRSA, Clostridium Difficile)
- 2.2.10 Explain diagnostic used to diagnose and monitor infection
- 2.2.11 Examine the effect of microbes of the human body

2.3 Healing:

- 2.3.1 Describe the types of healing
- 2.3.2 Explain the healing process
- 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 test 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/hypernatremia

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 common potential complications of pregnancy

6.1.1 Ectopic

6.1.2 Gestational Hypertension

6.1.3 Preeclampsia/ Eclampsia

6.1.4 Placental alterations (placenta previa/ placental abruptio)

6.1.5 Abortion

6.1.6 Gestational Diabetes

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

8.0 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
- 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.

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

This is not a General Education course.

PROGRAM VOCATIONAL OUTCOMES

This course contributes to the following Ministry of Training, Colleges and Universities approved program vocational learning outcomes (PVLO):

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

This course contributes to the following Ministry of Training, 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

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

Quizzes/Tests/Exams 100%

PROGRAM SPECIFIC GRADING

Successful completion of this course requires a minimum grade of C

GRADING SYSTEM

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

*For a complete detailed description please refer to the College website.

LEARNING RESOURCES

Required:

VanMeter, K.C. & Hubert, R.J. (2014). Gould's pathophysiology for the Health professions (5th Ed) Elsevier Saunders: Toronto.

Liefer, G. (2015). Introduction to Maternity & Pediatric Nursing (7th ed). W.B. Saunders Company :Toronto.

Videbeck, S. (2013). Psychiatric-Mental Health Nursing (6th ed). Walters Kluwer/ Lippincott, Williams & Wilkins: New York

Recommended:

VanMeter, K.C. & Hubert, R.J. (2014). Gould's pathophysiology for the Health professions (5th Ed) Study Guide , Elsevier Saunders: Toronto.

Liefer, G. (2015). Study Guide Introduction to Maternity & Pediatric Nursing (7th ed). W.B. Saunders Company :Toronto.

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.

LEARNING ACTIVITIES

In-class activities

DELIVERY MODE

4 hours per week in class

ACADEMIC POLICIES

- Academic Integrity

- Academic Appeal
- Academic Attendance
- Grading and Assessment

For academic policies please see: <http://www.canadorecollege.ca/about-us/corporate-policy-manual>.

COLLEGE POLICIES

- Protecting human rights in support of a respectful college community

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

STUDENT SUCCESS SERVICES

YOUR SUCCESS MATTERS!

We offer comprehensive, student-focused services designed to help you succeed. Canadore is committed to Student Success and offers CONFIDENTIAL services to help you in your studies. We offer:

- Study skills workshops
- Peer tutoring
- Career guidance
- Mental health and wellness tips and strategies
- Resource centre
- Assistive devices

The ultimate goal of Student Success Services is to support students so they can achieve success academically, in their career aspirations, and in their personal lives. Please don't hesitate to drop by C262 or to book an appointment please call 1-705-474-7600 ext. 5205.

FIRST PEOPLES' CENTRE:

We offer a culturally safe environment where our student focused services provide you with the following CONFIDENTIAL services:

- One on one counselling
- Elder in residence
- Peer tutoring
- Peer mentorship
- Lunch & learn workshops on study skills, self-care, life skills
- Resource Centre

Drop by our offices at C254 College Drive, E101 Commerce Court or call 705 474 7600 Ext. 5961 College Drive / 5647 Commerce Court.

WAIVER OF RESPONSIBILITY

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

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.