OLS Academy

Primary Care Paramedicine 2026-27
Term 1 | Block 1 & 2
PCP-114 Medical I
OLS. Academy
Course Outline
Cohort A

COURSE OVERVIEW

PCP-114 Medical I will be delivered in the classroom setting using an interactive, student-centered blend of lecture, group discussion, and group projects. *Medical I*, we will present the student with specific information regarding the recognition and management of chronic and acute medical conditions with which they may be faced when responding to emergencies.

Specific topics include overview of human body systems and anatomical positions, basic chemistry, cells and tissues, acid-base balance in the body, hypoperfusion, the body's self-defense mechanisms, respiratory emergencies and focused respiratory assessments, respiratory pharmacology, cardiovascular emergencies and focused assessments, cardiovascular pharmacology, emergencies involving coronary artery disease (assessment and management), emergencies involving congestive heart failure (assessment and management), emergencies involving cardiac tamponade (assessment and management), emergencies involving cardiogenic shock (assessment and management), aortic emergencies (assessment and management), hypertensive emergencies (assessment and management), introduction to ECG monitoring, 3-lead ECG interpretation, cardiac arrest management, 12-lead ECG acquisition and interpretation, neurologic emergencies (assessment and management), endocrine emergencies (assessment and management), and allergic reactions (assessment and management).

MEETING TIMES & INSTRUCTIONAL METHODS

In-class sessions (virtual when warranted)

Lecture/Group Discussion:	Tuesdays	10:15 – 12:00
	Thursdays	10:15 – 12:00
	Thursdays	13:00 – 14:45

Total hours: 52.5

REQUIRED MATERIALS, PREREQUISITES, & COREQUISITES

Textbooks

Caroline, N. (2021). *Emergency Care in the Streets, Canadian Edition 8th ed.* Burlington, MA, *Jones and Bartlett Learning.*

Class Materials
Students will be expected to be prepared to take notes and complete in-class activities. Instructors may also specify the use of mobile phones and laptops for some activities.

Supplemental materials to be posted on the Omni Life Support website. Materials related to *PCP-114* (such as in-class presentations and assignments) will be available for student access on this website. Academy faculty does not authorize the posting of *PCP-114* materials on other sites. Each student is responsible for his/her own learning which includes staying current with postings on the Omni Life Support website.

Prerequisites: None
Corequisites: PCP-101, PCP-105, PCP-107, PCP-113, PCP-117, PCP-119

INSTRUCTOR(S)

Instructor: Cheyenne Heath — E-mail: cheyenne.heath@omnilifesupport.com, Voice: (506) 830-4277

Instructor: Kailee Heath — E-mail: kailee.heath@omnilifesupport.com, Voice: (506) 830-4277

LEARNING OUTCOMES:

Upon successful completion of this course, it is expected that students will have gained sufficient knowledge and skills to safely and proficiently render patient care to patients suffering from medical emergencies. By the end of the course, the student will be able to:

- Identify and describe the function of the systems of the human body
- Describe standard anatomical position and related directional terminology.
- Explain how acid-base balance affects human physiology and how the body maintains optimal balance.
- Explain the deleterious consequences to hypoperfusion and list the steps a paramedic can take to render care to hypoperfused patients
- List the body's self-defense mechanisms that can affect normal physiology
- Explain how a patient suffering from a respiratory emergency may present, describe the focused respiratory assessment, describe respiratory pharmacology and treatment plans
- Explain how a patient suffering from a cardiovascular emergency may present, describe the focused cardiovascular assessment, describe cardiovascular pharmacology and treatment plans

- Explain how a patient suffering from congestive heart failure may present, describe the focused assessment, describe the pharmacology involved and subsequent treatment plans
- Explain how a patient suffering from a cardiac tamponade may present, describe the focused assessment and describe subsequent treatment plans
- Explain how a patient suffering from a cardiogenic shock may present, describe the focused assessment, and subsequent treatment plans
- Explain how a patient suffering from aortic emergencies may present, describe the focused assessment, and subsequent treatment plans
- Explain how a patient suffering from hypertensive emergencies may present, describe the focused assessment, and subsequent treatment plans
- Describe the fundamentals of ECG monitoring
- Interpret basic 3-lead ECG tracings
- Lead a cardiac arrest management team utilizing local protocols for cardiac arrest management,
- Acquire a 12-lead ECG and perform basic interpretation
- Explain how a patient suffering from a neurologic emergency may present, describe the focused assessment, and subsequent treatment plans
- Explain how a patient suffering from an endocrine emergency may present, describe the focused assessment, and subsequent treatment plans
- Explain how a patient suffering from an allergic reaction may present, describe the focused assessment, and subsequent treatment plans

INTENDED LEARNING OBJECTIVES:

Learning objectives for *PCP-114 Medical I* are guided by the *National Occupational Competency Profiles (NOCP)* for paramedics. Each objective, indicated by the prefix "O", is linked to the corresponding *NOCP* sub-competency with the matching alpha-numerical code (e.g., O1.1.a is the learning objective tied to sub-competency 1.1.a of the *NOCP* for paramedics). As per the *NOCP* guidelines for paramedics, to succeed in this course, you must demonstrate competence in the following areas:

Learning Objectives	Embedded Knowledge and Skills
O4.3.c	By the end of the course, the student will be able to: ○ **4.3.c.1 - Explain** the pathophysiology of specific cardiovascular illnesses and injuries. ○ **4.3.c.2 - Apply** assessment techniques, specific to the cardiovascular system. ○ **4.3.c.3 - Evaluate** findings related to the etiology, pathophysiology, and manifestations of cardiovascular system illnesses and injuries. ○ **4.3.c.4 - Perform** assessment techniques, for cardiovascular illnesses and injuries. ○ **4.3.c.5 - Adapt** assessment techniques, to cardiovascular history findings.
O4.3.d	By the end of the course, the student will be able to: ○ **4.3.d.1 - Explain** the pathophysiology of specific neurological illnesses and injuries. ○ **4.3.d.2 - Apply** assessment techniques, specific to the neurological system. ○ **4.3.d.3 - Evaluate** findings related to the etiology, pathophysiology, and manifestations of neurological system illnesses and injuries. ○ **4.3.d.4 - Perform** assessment techniques, for neurological illnesses and injuries. ○ **4.3.d.5 - Adapt** assessment techniques, to neurological history findings.
O4.3.e	By the end of the course, the student will be able to: ○ **4.3.e.1 - Explain** the pathophysiology of specific respiratory illnesses and injuries. ○ **4.3.e.2 - Apply** assessment techniques, specific to the respiratory system. ○ **4.3.e.3 - Evaluate** findings related to the etiology, pathophysiology, and manifestations of respiratory system illnesses and injuries. ○ **4.3.e.4 - Perform** assessment techniques, for respiratory illnesses and injuries. ○ **4.3.e.5 - Adapt** assessment techniques, to respiratory history findings.

Learning Objectives	Embedded Knowledge and Skills
O4.5.m	By the end of the course, the student will be able to: ○ **4.5.m.1 - Explain** the electrophysiological principles of the heart, and cardiac conduction. ○ **4.5.m.2 - Explain** the indications for ECG monitoring. ○ **4.5.m.3 - Perform** the technique of obtaining an ECG. ○ **4.5.m.4 - Adapt** the technique of obtaining a 3-lead ECG, to patient age and gender. ○ **4.5.m.5 - Describe** the principles of interpretation of cardiac rhythms. ○ **4.5.m.6 - List** possible causes of abnormal cardiac rhythms. ○ **4.5.m.7 - Analyze** cardiac rhythms. ○ **4.5.m.8 - Identify** potentially lethal cardiac rhythms.
O4.5.n	By the end of the course, the student will be able to: ○ **4.5.n.1 - Explain** the difference between a 3-lead ECG and a 12-lead ECG. ○ **4.5.n.2 - Identify** indications for use of a 12-lead ECG. ○ **4.5.n.3 - Perform** the technique of obtaining a 12-lead ECG. ○ **4.5.n.4 - Adapt** the technique of obtaining a 12-lead ECG, to the patient age and gender. ○ **4.5.n.5 - Identify** the steps involved in interpreting 12-lead ECGs and ECGs obtained with additional leads.
O5.5.a	By the end of the course, the student will be able to: ○ **5.5.a.1 - Identify** the purposes of and indications for CPR. ○ **5.5.a.2 - List** the steps for CPR administration in a variety of presentations. ○ **5.5.a.3 - Perform** CPR on various age groups. ○ **5.5.a.4 - Perform** CPR while moving a patient from site of collapse. ○ **5.5.a.5 - Discuss** potential complications of CPR. ○ **5.5.a.6 - Adapt** to changes in patient presentation.

Learning Objectives	Embedded Knowledge and Skills
O5.5.i	By the end of the course, the student will be able to: ○ **5.5.i.1 - Explain** defibrillation. ○ **5.5.i.2 - Explain** the purposes of automated external defibrillation. ○ **5.5.i.3 - Discuss** the indications for automated external defibrillation. ○ **5.5.i.4 - Discuss** the various types of automated external defibrillator. ○ **5.5.i.5 - Explain** complications to the use of automated external defibrillation. ○ **5.5.i.6 - Apply** the established standards of automated external defibrillation equipment maintenance. ○ **5.5.i.7 - Operate** an automated external defibrillator. ○ **5.5.i.8 - Integrate** CPR procedures and automated external defibrillation procedures. ○ **5.5.i.9 - Integrate** procedures to patient presentation.
O5.5.j	By the end of the course, the student will be able to: ○ **5.5.j.1 - Distinguish** between automated external defibrillation and manual defibrillation. ○ **5.5.j.2 - Describe** the purposes of manual defibrillation. ○ **5.5.j.3 - Identify** the indications for manual defibrillation. ○ **5.5.j.4 - Identify** the various types of manual defibrillators. ○ **5.5.j.5 - Identify** complications to the use of manual defibrillation.
O5.5.k	By the end of the course, the student will be able to: ○ **5.5.k.1 - Describe** cardioversion. ○ **5.5.k.2 - Identify** the medical conditions that require cardioversion. ○ **5.5.k.3 - Identify** equipment required for cardioversion. ○ **5.5.k.4 - Identify** complications of cardioversion.
O5.5.l	By the end of the course, the student will be able to: ○ **5.5.l.1 - Describe** transcutaneous pacing. ○ **5.5.l.2 - Identify** situations where transcutaneous pacing is indicated. ○ **5.5.l.3 - Identify** equipment for transcutaneous pacing. ○ **5.5.l.4 - Identify** complications of transcutaneous pacing.

Learning Objectives	Embedded Knowledge and Skills
O6.1.a	By the end of the course, the student will be able to: ○ **6.1.a.1 - Explain** the pathophysiology of specific cardiovascular conditions. ○ **6.1.a.2 - Explain** the approach to a patient presenting with cardiovascular conditions. ○ **6.1.a.3 - Explain** how patient history relates to a patient with cardiovascular conditions. ○ **6.1.a.4 - Explain** how age, gender and health status relate to a patient presenting with cardiovascular conditions. ○ **6.1.a.5 - Infer** a differential diagnosis for a patient with cardiovascular conditions. ○ **6.1.a.6 - Discuss** potential complications of cardiovascular conditions. ○ **6.1.a.7 - Adapt** care based on a patient presenting with cardiovascular conditions. ○ **6.1.a.8 - Integrate** the approach, assessment, treatment and transport of a patient with cardiovascular conditions. ○ **6.1.a.9 - Justify** approach, assessment, care and transport decisions for a patient with cardiovascular conditions.
O6.1.b	By the end of the course, the student will be able to: ○ **6.1.b.1 - Explain** the pathophysiology of specific neurological conditions. ○ **6.1.b.2 - Explain** the approach to a patient presenting with neurological conditions. ○ **6.1.b.3 - Explain** how patient history relates to a patient presenting with neurological conditions. ○ **6.1.b.4 - Explain** how age, gender and health status relate to a patient with neurological conditions. ○ **6.1.b.5 - Infer** a differential diagnosis for a patient with neurological conditions. ○ **6.1.b.6 - Discuss** potential complications of neurological conditions. ○ **6.1.b.7 - Adapt** care based on a patient presenting with neurological conditions. ○ **6.1.b.8 - Integrate** the approach, assessment, treatment and transport of a patient with neurological conditions. ○ **6.1.b.9 - Justify** approach, assessment, care and transport decisions for patients with neurological conditions.

Learning Objectives	Embedded Knowledge and Skills
O6.1.c	By the end of the course, the student will be able to: ○ **6.1.c.1 - Explain** the pathophysiology of specific respiratory conditions. ○ **6.1.c.2 - Explain** the approach to a patient presenting with respiratory conditions. ○ **6.1.c.3 - Explain** how patient history relates to a patient presenting with respiratory conditions. ○ **6.1.c.4 - Explain** how age, gender and health status relate to a patient presenting with respiratory conditions. ○ **6.1.c.5 - Infer** a differential diagnosis for a patient with respiratory conditions. ○ **6.1.c.6 - Discuss** potential complications of respiratory conditions. ○ **6.1.c.7 - Adapt** care based on a patient presenting with respiratory conditions. ○ **6.1.c.8 - Integrate** the approach, assessment, treatment and transport of a patient with respiratory conditions. ○ **6.1.c.9 - Justify** approach, assessment, care and transport decisions for a patient with respiratory conditions.
O6.1.h	By the end of the course, the student will be able to: ○ **6.1.h.1 - Explain** the pathophysiology of specific immunologic conditions. ○ **6.1.h.2 - Explain** the approach to a patient presenting with immunologic conditions. ○ **6.1.h.3 - Explain** how patient history relates to a patient presenting with immunologic conditions. ○ **6.1.h.4 - Explain** how age, gender and health status relate to a patient presenting with immunologic conditions. ○ **6.1.h.5 - Infer** a differential diagnosis for a patient presenting with immunologic conditions. ○ **6.1.h.6 - Discuss** potential complications of immunologic conditions. ○ **6.1.h.7 - Adapt** care based on a patient presenting with immunologic conditions. ○ **6.1.h.8 - Integrate** the approach, assessment, treatment, and transport of a patient experiencing immunologic conditions. ○ **6.1.h.9 - Justify** approach, assessment, care and transport decisions for a patient experiencing immunologic conditions.

Learning Objectives	Embedded Knowledge and Skills
O6.1.i	By the end of the course, the student will be able to: ○ **6.1.i.1 - Explain** the pathophysiology of specific endocrine system conditions. ○ **6.1.i.2 - Explain** the approach to a patient presenting with endocrine conditions. ○ **6.1.i.3 - Explain** how patient history relates to an endocrine patient presentation. ○ **6.1.i.4 - Explain** how age, gender, and health status relate to an endocrine patient presentation. ○ **6.1.i.5 - Infer** a differential diagnosis for the patient experiencing an issue related to the endocrine system. ○ **6.1.i.6 - Discuss** potential complications of endocrine conditions. ○ **6.1.i.7 - Adapt** care based on the patient experiencing an issue related to their endocrine system. ○ **6.1.i.8 - Integrate** the approach, assessment, treatment, and transport of a patient experiencing an issue related to their endocrine system. ○ **6.1.i.9 - Justify** approach, assessment, care and transport decisions for a patient experiencing an issue related to their endocrine system.

GRADING

Students will be evaluated through written examinations. A minimum of **70%** must be attained to receive a passing grade for *PCP-114 Medical I*.

Test I – Respiratory Medications	15%
Midterm Exam	25%
Test II	15%
Test III – Cardiac & ALOC Medications	15%
Final Exam	30%

EXPECTATIONS & TIPS FOR SUCCESS

Academic Standards and Workload: Appropriate professional tone is expected on all student submissions and examinations. This is to help build strong professional practice skills.

A typical PCP course should require 1-2 hours per week of out-of-class work. This time may vary depending on how quickly you read and comprehend assigned course materials.

Classroom Protocol: Students are expected to be courteous and respectful of others, and mindful that a classroom is a shared working space with the primary goal of learning course material.

Unnecessary distractions are to be minimized. This includes turning off cell phones and other distractors during lectures unless permission has been granted by the instructor.

Tardiness is strongly discouraged as it is in the paramedic workplace. If for some reason you arrive late, please wait and enter the class during the break.

Unless otherwise notified by the class instructor, attendance of all classes is mandatory. Absences will be dealt with on a case-by-case basis.

Deadlines and Late Penalties: Course deliverables submitted after the due date will be assigned a grade of zero (0). This penalty may be waived at the discretion of the instructor in the event of extraordinary or special circumstances (with supporting verification/documentation).

Absence Due to Special Circumstances or Illness: Let the Instructor know in advance if you need to be away due to special circumstances. If the event conflicts with class examinations, verification of the reason for absence will be required. **Total Amount of Absences Permitted** = 6 classes.

Academic Integrity: To maintain a culture of academic integrity, members of the OLS Academy community are expected to promote honesty, trust, fairness, respect and responsibility.

Communication Methods: Most communications regarding *PCP-114* will be done during class sessions. Special announcements will be posted on the OLS Academy website. Emails sent to students will be sent from academy@omnilifesupport.com. Students can email the instructor at Cheyenne.heath@omnilifesupport.com or Kailee.heath@omnilifesupport.com.

This outline is subject to change at the discretion of academy administrators.