



INSTRUCTIONAL PACKAGE

EMS 230
Advanced Emergency Care I

Effective Term
Fall 2025/Spring 2026/Summer 2026

INSTRUCTIONAL PACKAGE

Part I: Course Information

Effective Term: Fall 2025/Spring 2026/Summer 2026

COURSE PREFIX: EMS 230

COURSE TITLE: Advanced Emergency Care I

CONTACT HOURS: 4-3-5

CREDIT HOURS: 5

RATIONALE FOR THE COURSE:

Advanced Emergency Medical Care I will allow students to interpret ECG tracings rapidly and accurately in variable clinical settings, determine the presence of lethal arrhythmias, and demonstrate current treatment modalities of these arrhythmias. Students will be presented with steps for cardiac assessment and findings that may be present in clinical patients along with treatment modalities for potentially lethal conditions such as myocardial infarction, congestive heart failure, and serious electrolyte imbalance. Such conditions may be determined by ECG and require prompt medical care. Emphasis will be on proper operation of equipment for accurate ECG interpretation, defibrillation, synchronized cardioversion and troubleshooting electrical equipment. Additionally, this course studies concepts related to pharmacological actions of groups of drugs and includes the development of skills related to the administration of medications and intravenous therapy. Also includes physiology of systems affected drug action.

COURSE DESCRIPTION:

This course introduces pre-hospital pharmacology and cardiology as they relate specifically to patient care. Emphasis is placed on the appropriate methods for patient physical exams and solicitation of medical history to maximize patient outcomes.

PREREQUISITES/CO-REQUISITES:

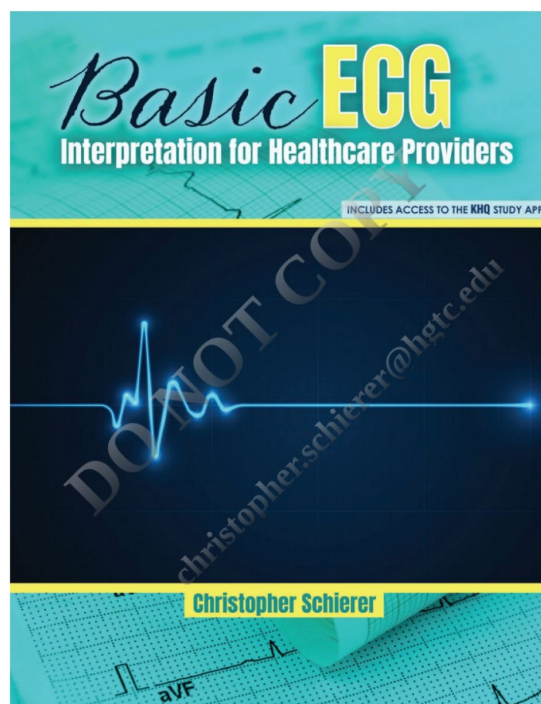
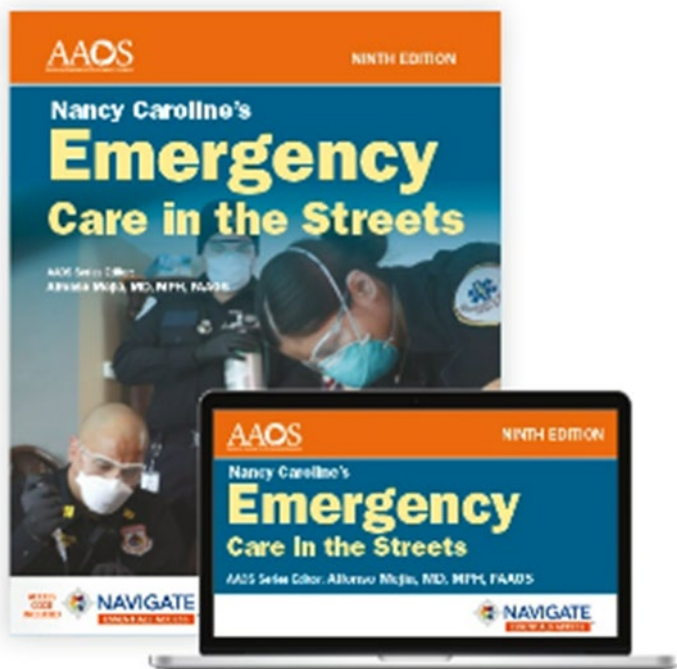
Prerequisites: BIO 112 (or BIO 211), EMS 119, EMS 113, EMS 150 and EMS 223

Co-requisites: EMS 116, EMS 224, and EMS 238

REQUIRED MATERIALS:

Please visit the [BOOKSTORE](#) online site for most current textbook information.

Enter the semester, course prefix, number and section when prompted and you will be linked to the correct textbook.



ADDITIONAL REQUIREMENTS:

Stethoscope

Paramedic Functional Job Analysis / Technical Standards / Paramedic Characteristics

The Paramedic must be a confident leader who can accept the challenge and high degree of responsibility entailed in the position. The Paramedic must have excellent judgement and be able to prioritize decisions and act quickly in the best interest of the patient, must be self-disciplined, able to develop patient rapport, interview hostile patients, maintain safe distance, and recognize and utilize communication unique to diverse multicultural groups and ages within those groups. Must be able to function independently at optimum level in a non-structured environment that is constantly changing. Even though the Paramedic is generally part of a two-person team generally working with a lower skill and knowledge level Basic EMT, it is the Paramedic who is held responsible for safe and therapeutic administration of drugs including narcotics. Therefore, the Paramedic must not only be knowledge about medications but must be able to apply this knowledge in a practical sense. Knowledge and practical application of medications include thoroughly knowing and understanding the general properties of all types of drugs including analgesics, anesthetics, anti-anxiety drugs, sedatives and hypnotics, anticonvulsants, central nervous stimulants, psychotherapeutics which include antidepressants, and other anti-psychotics, anticholinergics, cholinergics, muscle relaxants, anti-dysrhythmics, anti-hypertensives, anticoagulants, diuretics, bronchodilators, ophthalmic, pituitary drugs, gastro-intestinal drugs, hormones, antibiotics, antifungals, anti-inflammatories,

serums, vaccines, antiparasitic, and others. The Paramedic is personally responsible, legally, ethically, and morally for each drug administered, for using correct precautions and techniques, observing and documenting the effects of the drugs administered, keeping one's own pharmacological knowledge base current as to changes and trends in administration and use, keeping abreast of all contraindications to administration of specific drugs to patients based on their constitutional make-up, and using drug reference literature. The responsibility of the Paramedic includes obtaining a comprehensive drug history from the patient that includes names of drugs, strength, daily usage and dosage. The Paramedic must take into consideration that many factors, in relation to the history given, can affect the type of medication to be given. For example, some patients may be taking several medications prescribed by several different doctors and some may lose track of what they have or have not taken. Some may be using nonprescription/over the counter drugs. Awareness of drug reactions and the synergistic effects of drugs combined with other medicines and in some instances, food, is imperative. The Paramedic must also take into consideration the possible risks of medication administered to a pregnant mother and the fetus, keeping in mind that drugs may cross the placenta. The Paramedic must be cognizant of the impact of medications on pediatric patients based on size and weight, special concerns related to newborns, geriatric patients and the physiological effects of aging such as the way skin can tear in the geriatric population with relatively little to no pressure. There must be an awareness of the high abuse potential of controlled substances and the potential for addiction, therefore, the Paramedic must be thorough in report writing and able to justify why a particular narcotic was used and why a particular amount was given. The ability to measure and re-measure drip rates for controlled substances/medications is essential. Once medication is stopped or not used, the Paramedic must send back unused portions to proper inventory arena. The Paramedic must be able to apply basic principles of mathematics to the calculation of problems associated with medication dosages, perform conversion problems, differentiate temperature reading between centigrade and Fahrenheit scales, be able to use proper advanced life support equipment and supplies (i.e. proper size of intravenous needles) based on patient's age and condition of veins, and be able to locate sites for obtaining blood samples and perform this task, administer medication intravenously, administer medications by gastric tube, administer oral medications, administer rectal medications, and comply with universal pre-cautions and body substance isolation, disposing of contaminated items and equipment properly. The Paramedic must be able to apply knowledge and skills to assist overdosed patients to overcome trauma through antidotes and have knowledge of poisons and be able to administer treatment. The Paramedic must be knowledgeable as to the stages drugs/medications go through once they have entered the patient's system and be cognizant that route of administration is critical in relation to patient's needs and the effect that occurs. The Paramedic must also be capable of providing advanced life support emergency medical services to patients including conducting of and interpreting electrocardiograms (EKGs), electrical interventions to support the cardiac functions, performing advanced endotracheal intubations in airway management and relief of pneumothorax and administering of appropriate intravenous fluids and drugs under direction of off-site designated physician. The Paramedic is a person who must not only remain calm while working in difficult

and stressful circumstances but must be capable of staying focused while assuming the leadership role inherent in carrying out the functions of the position. Good judgement along with advanced knowledge and technical skills are essential in directing other team members to assist as needed. The Paramedic must be able to provide top quality care, concurrently handle high levels of stress, and be willing to take on the personal responsibility required of the position. This includes not only all legal ramifications for precise documentation, but also the responsibility for using the knowledge and skills acquired in real life threatening emergency situations. The Paramedic must be able to deal with adverse and often dangerous situations which include responding to calls in districts known to have high crime and mortality rates. Self-confidence is critical, as is a desire to work with people, solid emotional stability, a tolerance for high stress, and the ability to meet the physical, intellectual, and cognitive requirements demanded by this position.

Physical Demands

Aptitudes required for work of this nature are good physical stamina, endurance, and body condition that would not be adversely affected by frequently having to walk, stand, lift, carry, and balance at times, more than 125 pounds. Motor coordination is necessary because over uneven terrain, the patient's, the Paramedic's, and other workers' well-being must not be jeopardized.

Comments

The Paramedic provides the most extensive pre-hospital care and may work for fire departments, private ambulance services, police departments or hospitals. Response times for nature of work are dependent upon nature of call. For example, a Paramedic working for a private ambulance service that transports the elderly from nursing homes to routine medical appointments and check-ups may endure somewhat less stressful circumstances than the Paramedic who works primarily with 911 calls in districts known to have high crime rates. Thus, the stresses inherent in the role of the Paramedic can vary, depending on place and type of employment. However, in general, in the analyst's opinion, the Paramedic must be flexible to meet the demands of the everchanging emergency scene. When emergencies exist, the situation can be complex, and care of the patient must be started immediately. In essence, the Paramedic in the EMS system uses advanced training and equipment to extend emergency physician services to the ambulance. The Paramedic must be able to make accurate independent judgements while following oral directives. The ability to perform duties on time is essential, as it could mean the difference between life and death for the patient. Use of the telephone or radio dispatch for coordination of prompt emergency services is needed, as is a pager, depending on place of employment. Accurately discerning street names through map reading, and correctly distinguishing house numbers or business addresses are essential to task completion in the most expedient manner. Concisely and accurately describing orally to dispatcher and other concerned staff, one's impression of patient's condition, is critical as the

Paramedic works in emergency conditions where there may not be time for deliberation. The Paramedic must also be able to accurately report orally and in writing, all relevant patient data. At times, reporting may require a detailed narrative on extenuating circumstances or conditions that go beyond what is needed on a prescribed form. In some instances, the Paramedic must enter data on computer from a laptop in ambulance. Verbal skills and reasoning skills are used extensively.

TECHNICAL REQUIREMENTS:

Access to Desire2Learn (D2L), HGTC's learning management system (LMS) used for course materials.

Access to myHGTC portal for student self-services.

College email access – this is the college's primary official form of communication.

STUDENT IDENTIFICATION VERIFICATION

Students enrolled in online courses will be required to complete identity verification. Please refer to your Instructor Information Sheet for information regarding this requirement.

CLASSROOM ETIQUETTE:

As a matter of courtesy to other students and your professor, please turn off cell phones and other communication/entertainment devices before class begins. If you are monitoring an emergency, please notify your professor prior to class and switch cell phone ringers to vibrate.

NETIQUETTE: is the term commonly used to refer to conventions adopted by Internet users on the web, mailing lists, public forums, and in live chat focused on online communications etiquette. For more information regarding Netiquette expectations for distance learning courses, please visit [Online Netiquette](#).

Part II: Student Learning Outcomes

COURSE LEARNING OUTCOMES and ASSESSMENTS*:

Module #1 - Respiratory

Material Covered:

Chapter 17 (and 16 covered the previous semester)

Assessments:

Online quizzes located in Desire2Learn
Module #1 Test

Platinum Planner EMS Testing High-stakes exam

Learning Outcomes:

1. Discuss the morbidity and mortality of respiratory illness in the United States. (p 1140)
2. Recall the primary structures of the respiratory system and the role of the respiratory system in breathing, cardiovascular regulation, and renal function. (pp 1095–1100)
3. Define hypoventilation and hyperventilation, including examples of conditions associated with each. (pp 1100–1102)
4. Describe the proper measures to ensure scene safety when called to care for a patient with dyspnea. (p 1102–1103)
5. Describe factors that contribute to a general impression of the patient's condition and an accurate estimation of the degree of respiratory distress. (pp 1117–1118)
6. Explain the typical presentation of a patient with dyspnea and the signs and symptoms that indicate a high level of respiratory distress. (pp 1104–1105)
7. Identify breathing alterations that may indicate respiratory distress and the signs of increased work of breathing. (pp 1105–1106)
8. Identify the signs of lung consolidation, including abnormal breath sounds associated with excessive fluid in the lungs. (pp 1107–1108)
9. Explain how to assess the adequacy of the circulation of a patient with dyspnea. (p 1113)
10. Describe the abnormal breathing patterns associated with neurologic insults that depress the respiratory center in the brain. (pp 1112–1113)
11. Discuss how transport decisions are made for patients with respiratory distress. (p 1114)
12. Describe how to investigate the chief complaint of a patient who is having trouble breathing. (pp 1114–1115)
13. Identify each component of the SAMPLE history as it applies to patients with dyspnea. (pp 1115–1117)
14. Describe the components of the physical examination of a patient with dyspnea. (pp 1117–1118)
15. Describe the devices used to monitor patients with respiratory complaints. (pp 1118–1121)
16. Describe interventions available for treating patients with dyspnea. (pp 1121–1128)
17. Explain the pathophysiology, assessment, and management of upper airway inflammation caused by infection. (pp 1131–1133)
18. Explain the pathophysiology, assessment, and management of an obstructive lower airway disease. (pp 1133–1134)
19. Explain the three features that characterize asthma and how each is treated. (pp 1135–1136)
20. Compare the signs and symptoms of asthma, emphysema, chronic bronchitis, and restrictive lung diseases. (pp 1134–1135, 1137)
21. Discuss complications that can cause a patient with chronic obstructive pulmonary disease (COPD) to decompensate. (pp 1137–1139)

22. Explain the concepts of hypoxic drive and auto-PEEP (positive end-expiratory pressure) as they relate to COPD. (pp 1139–1140)

23. Explain the pathophysiology, assessment, and management of pulmonary infections, atelectasis, cancer, toxic inhalations, pulmonary edema, and acute respiratory distress syndrome. (pp 1140–1145)

24. Explain the pathophysiology, assessment, and management of pneumothorax, pleural effusion, and pulmonary embolism. (pp 1145–1147)

Skills Objectives

1. Demonstrate the process of history taking for a patient with dyspnea. (pp 1114–1117)

2. Demonstrate the application of a CPAP/BPAP unit. (pp 1128–1130)

Module #2 - EKG Analysis and Interpretation

Material Covered:

Chapter 18, pages 1175-1250

Basic ECG Interpretation for Healthcare Providers by Christopher Schierer

Assessments:

Complete classroom EKG Analysis & Interpretation

Module #2 Test

Learning Outcomes:

- Give the uses and limitations of cardiac arrhythmia monitoring.
- Explain how cardiac impulses are formed.
- Describe the heart's electrical conduction system.
- Explain the influence of the nervous system on rate of cardiac impulse formation.
- Describe the monitoring equipment used to detect cardiac electrical activity.
- Cite specifications of the graph paper used to display cardiac electrical activity.
- Relate the components of a single cardiac cycle to the electrophysiological events that created them.
- Differentiate between a single cardiac cycle and an EKG rhythm strip.
- Relate the use of a systematic analysis format to the eventual interpretation of an arrhythmia.
- Outline the five components of an organized approach to rhythm strip analysis.
- Describe the characteristic of a sinus pacemaker.
- Outline the identifying features specific to the arrhythmia's origination in the sinus node.
- Describe the characteristics of an atrial pacemaker.

- Outline the identifying features specific to each of the arrhythmias originating within the atrium.
- Describe the characteristics of a junctional pacemaker.
- Outline the identifying features specific to each of the arrhythmias originating in the AV junction.
- Describe the characteristics of the category of arrhythmias known as AV heart blocks.
- Outline the identifying features specific to each of the arrhythmias included in the heart block category.
- Describe the characteristics of a ventricular pacemaker.
- Outline the identifying features specific to each of the arrhythmias originating in the ventricles.
- Describe the heart's location and structure.
- Identify the four internal chambers of the heart.
- Describe the four ventricles of the heart.
- Describe the heart walls and the pericardial sac.
- Explain the heart's valves.
- Identify the four heart sounds.
- Explain systole and diastole.
- Explain coronary circulation.
- Identify the heart's surfaces.
- Describe the clinical effects of arrhythmias.
- Explain the general principles of treating arrhythmias.
- Explain the advantages of a 12-lead EKG tracing.
- State the fundamental rules of electrocardiology.
- Explain leads and electrodes placement.
- Explain the vectors and axis of electrical flow through the heart.
- Describe the standardized format for printing 12 lead EKG's.
- State the limitations of 12-lead EKG's.
- Explain interpreting myocardial damage on the EKG.
- Explain interpreting chambers enlargement on the EKG.
- Explain interpreting bundle branch block on the EKG.
- Explain interpreting other abnormalities on the EKG.
- Explain the format for analyzing the EKG.
- Describe pacemakers.
- Name the chambers of the heart that a pacemaker can initiate impulses.
- Describe a "smart" pacemaker.
- Explain the two basic ways in which pacemakers can initiate impulses.

- Explain the three-letter code system used to classify pacemakers.
- Explain assessment of pacemaker function.
- Name and describe four common types of pacemaker's malfunctions.
- Explain how pacemakers malfunction is treated.

Module #3 – Cardiology

Material Covered:

Chapter 18

Assessments:

Online quizzes located in Desire2Learn.

Skills Verification check sheets (during ACLS)

Module #3 Test

Platinum Planner EMS Testing High-stakes exam

Learning Outcomes:

1. Review the main structures and functions of the cardiovascular system's anatomy and physiology. (pp 1160–1162)
2. Summarize the general assessment of a patient with a cardiovascular emergency. (pp 1162–1167)
3. Explain the phases that comprise the cardiac action potential. (pp 1169–1171)
4. Identify the structure and course of all divisions and subdivisions of the cardiac conduction system. (pp 1171–1173)
5. Explain the significance of accessory conduction pathways. (pp 1172–1173)
6. Recall how the autonomic nervous system influences blood pressure. (pp 1173–1174)
7. Describe the limitations of 3-lead ECG monitoring. (pp 1175–1176)
8. Indicate the placement of 12-lead ECG electrodes. (p 1183)
9. Define contiguous leads and precordial leads; include examples of each. (pp 1180–1181)
10. Indicate the placement of right-side precordial leads and posterior lead electrodes. (pp 1181, 1183)
11. Indicate the placement of 15- and 18-lead ECG electrodes. (pp 1181–1182)
12. Identify the components of an ECG rhythm strip. (pp 1184–1188)
13. Outline a systematic approach to the analysis and interpretation of cardiac dysrhythmias. (pp 1188–1191)
14. Explain normal sinus rhythm and the ECG characteristics, possible causes, signs and symptoms, and initial emergency care of dysrhythmias originating in the sinoatrial node. (pp 1191–1197)

15. Explain the emergency medical care for the symptomatic adult patient with bradycardia. (pp 1192–1193)
16. Explain the ECG characteristics, possible causes, signs and symptoms, and initial emergency medical care for dysrhythmias originating in the atria. (pp 1197–1207)
17. Explain the emergency medical care for the symptomatic adult patient with tachycardia. (pp 1199–1202)
18. Explain the ECG characteristics, possible causes, signs and symptoms, and initial emergency care for dysrhythmias originating in the atrioventricular (AV) junction. (pp 1207–1208)
19. Explain the ECG characteristics, possible causes, signs and symptoms, and initial emergency care for dysrhythmias originating in the ventricles. (pp 1208–1214)
20. Evaluate the dysrhythmias seen in cardiac arrest. (p 1213)
21. Compare the indications and procedure for manual defibrillation with the indications and procedure for operating an automated external defibrillator (AED). (pp 1213–1220)
22. Explain the emergency medical care of the adult patient with cardiac arrest (pp 1221–1225)
23. Describe the components of post–cardiac arrest care. (pp 1225–1228)
24. Explain the ECG characteristics, possible causes, signs and symptoms, and initial emergency care for AV blocks. (pp 1228–1231)
25. Describe the ECG characteristics of artificial pacemaker rhythms. (pp 1231–1232)
26. Give examples of indications for using a 12-lead ECG. (pp 1232–1233)
27. Explain a systematic approach to the interpretation of the 12-lead ECG. (pp 1233–1241)
28. Recognize the characteristic ECG changes associated with myocardial ischemia, injury, and infarction. (pp 1240–1246)
29. Explain the etiology, history, physical findings, and management of acute coronary syndromes. (pp 1250–1251)
30. Describe risk factors related to cardiovascular disease. (p 1252)
31. Explain angina pectoris, including its causes and types. (pp 1252–1253)
32. Explain patient assessment procedures for patients with cardiovascular issues. (pp 1253–1256)
33. Summarize preparation for reperfusion therapy in patients with ST-segment elevation myocardial infarction. (pp 1258–1260)
34. Discuss the pathophysiology of heart failure and its signs, symptoms, and treatment. (pp 1262–1269)
35. Discuss the pathophysiology of cardiac tamponade and its signs, symptoms, and treatment. (pp 1269–1271)
36. Discuss the pathophysiology of cardiogenic shock and its signs, symptoms, and treatment. (pp 1271–1272)
37. Discuss the pathophysiology of a hypertensive emergency and its signs, symptoms, and treatment. (pp 1272–1275)
38. Explain the etiology, history, physical findings, and management of endocarditis, pericarditis, and myocarditis, and other infectious diseases of the heart. (pp 1250–1251,

1275–1278)

39. Explain the etiology, history, physical findings, and management of aortic aneurysm, acute arterial occlusion, acute deep vein thrombosis, and other vascular disorders. (pp 1250–1251, 1268–1282)

Skills Objectives

1. Demonstrate how to perform cardiac monitoring. (pp 1177–1178, Skill Drill 18-1)
2. Demonstrate how to provide emergency medical care for the symptomatic adult patient with bradycardia. (p 1192)
3. Demonstrate how to perform transcutaneous pacing (TCP). (pp 1194–1195, Skill Drill 18-2)
4. Demonstrate how to provide emergency medical care for the symptomatic adult patient with tachycardia. (pp 1199–1200)
5. Demonstrate how to perform synchronized cardioversion. (pp 1202–1203, Skill Drill 18-3)
6. Demonstrate how to perform manual defibrillation. (pp 1216–1218, Skill Drill 18-4)
7. Demonstrate how to manage an adult cardiac arrest. (pp 1221–1224)
8. Demonstrate how to perform defibrillation with an AED. (pp 1219–1220, Skill Drill 18-5)
9. Demonstrate how to perform immediate post-cardiac arrest care. (pp 1225–1226)
10. Demonstrate how to acquire a 12-lead ECG. (pp 1234–1235, Skill Drill 18-6)
11. Demonstrate how to assess and provide emergency medical care for a patient with an acute coronary syndrome. (p 1257)

Module #4a – Neurologic Emergencies

Material Covered:

Chapter 19

Assessments:

Online quizzes located in Desire2Learn.

Skills Verification check sheets (during ACLS)

Module #4 Test

Learning Outcomes:

1. Describe the incidence, morbidity, and mortality of neurologic emergencies. (pp 1299–1300)
2. Review the anatomy and physiology of the organs and structures that make up the nervous system. (pp 1300–1302)
3. Explain the importance of taking standard precautions and ensuring scene safety when caring for a patient with a neurologic illness. (p 1304)
4. Describe how to determine level of consciousness (LOC) when assessing a patient with a neurologic illness. (p 1304)

5. Compare the characteristics of decorticate and decerebrate posturing, including the likely implications of each for the patient's outcome. (p 1305)
6. Identify the abnormal respiratory patterns associated with central nervous system illness. (pp 1306–1307)
7. List the signs of increased intracranial pressure. (p 1307)
8. Compare how to investigate a chief complaint in an unresponsive patient with how you would do so in a responsive patient. (pp 1308–1309)
9. Review the components of the physical exam that are unique to a patient with a neurologic illness. (pp 1314–1315)
10. Identify speech and movement difficulties that can reveal a diminished LOC. (pp 1313–1315)
11. Review the standard guidelines and interventions for treating a patient with a neurologic illness. (pp 1316–1318)
12. Describe the factors that influence the development of multifactorial neurologic conditions. (p 1318)
13. Explain the pathophysiology, assessment, and management of stroke. (pp 1318–1329)
14. Compare the causes, signs, and symptoms of vascular neurologic conditions that occur suddenly with those that develop gradually. (p 1319)
15. Compare the pathophysiology of ischemic (occlusive) stroke with that of hemorrhagic stroke. (pp 1319–1321)
16. Specify how the cranial vault contents interact to increase intracranial pressure and the major conditions that result. (pp 1319–1321)
17. Describe several tools used to screen for stroke. (pp 1325–1327)
18. Explain transient ischemic attack as it relates to stroke. (pp 1329–1330)
19. Explain the pathophysiology, assessment, and management of seizure, including how to differentiate stroke from seizure. (pp 1334–1338)
20. Explain the three features by which seizures are classified. (pp 1334–1336)
21. Compare generalized seizures with focal seizures (pp 1335–1336)
22. Explain the pathophysiology, assessment, and management of status epilepticus. (pp 1338–1339)
23. Explain the pathophysiology, assessment, and management of syncope. (pp 1339–1340)
24. Explain the pathophysiology, assessment, and management of the most common types of headaches. (pp 1340–1341)
25. Explain the pathophysiology, assessment, and management of dementia, including the causes, signs and symptoms, and typical course of several common types. (pp 1341–1343)
26. Identify the types of neoplasms that affect the nervous system. (p 1343)
27. Analyze the common features of demyelinating conditions. (p 1343)
28. Explain the pathophysiology, assessment, and management of multiple sclerosis. (pp 1343–1345)
29. Explain the pathophysiology, assessment, and management of Guillain-Barré syndrome. (p 1345)
30. Explain the pathophysiology, assessment, and management of Parkinson disease. (p 1345–1346)

31. Explain the pathophysiology, assessment, and management of amyotrophic lateral sclerosis. (p 1346)
32. List several cranial nerve disorders, including the shared characteristics. (pp 1347–1348)
33. Explain the pathophysiology, assessment, and management of dystonia. (pp 1349–1350)
34. Describe the types of pathogenic organisms that can infect the nervous system, as well as the signs and symptoms of a nervous system infection. (pp 1350–1352)
35. Explain the pathophysiology, assessment, and management of an abscess. (p 1352)
36. Explain the pathophysiology, assessment, and management of poliomyelitis. (pp 1352–1353)
37. Explain the pathophysiology, assessment, and management of peripheral neuropathy. (p 1353)

Skills Objectives

1. Assess a patient's level of consciousness. (p 1304)
2. Apply several commonly used screening tools to screen a patient suspected of having had a stroke. (pp 1325–1327)

Module #4b Material covered:

Chapters 40-41

Assessments:

Online quizzes located in Desire2Learn

Skills Verification check sheets.

Module #4 Test

Chapter 40 Learning Outcomes:

1. Describe how paramedics, the field code team, and the emergency medical services agency can incorporate the latest Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiac Care from the American Heart Association and International Liaison Committee on Resuscitation into the management of field codes. (pp 2236–2237)
2. Discuss the importance of the six links of the out-of-hospital chain of survival during a successful field code. (p 2237)
3. Describe the management mnemonic SMART, including how communities can apply it to improve the survival rates of patients in out-of-hospital cardiac arrest. (pp 2238–2239)
4. Discuss the use of simulation technology in cardiopulmonary resuscitation (CPR) training. (p 2239)
5. Describe the resuscitation pyramid and how it relates to high-quality CPR. (p 2240)
6. Discuss some of the theories about blood flow during CPR that have shifted the focus of certain CPR techniques. (p 2241)
7. Summarize the steps of the Basic Life Support Healthcare Provider Adult Cardiac Arrest

- Algorithm and identify the key to a successful outcome in patients in cardiac arrest. (pp 2242–2244)
8. Explain how two-rescuer CPR can benefit the paramedic and the patient. (pp 2244–2245)
 9. Explain how to perform two-rescuer adult CPR, including the method for switching positions during the process. (p 2245)
 10. Define the five age groups for the purposes of resuscitation. (pp 2245–2248)
 11. Explain how to perform child and infant CPR, including the method for switching positions during the process. (pp 2248–2251)
 12. Discuss guidelines for circumstances that require the use of an automated external defibrillator in both adult and pediatric patients in cardiac arrest. (pp 2251–2253)
 13. Describe situations in which manual or automated defibrillation would be appropriate. (pp 2253–2254)
 14. Describe how to manage a witnessed cardiac arrest versus a nonwitnessed cardiac arrest. (p 2253)
 15. Summarize how to perform manual or automated defibrillation on an adult versus a child or infant. (pp 2253–2254)
 16. Explain special situations related to the use of defibrillation. (pp 2254–2256)
 17. Review the management of a cardiac arrest based on analysis of the electrocardiogram as either a shockable rhythm (ventricular fibrillation [VF] or pulseless ventricular tachycardia [pVT]) or a nonshockable rhythm (pulseless electrical activity [PEA] or asystole). (pp 2256–2258)
 18. Describe the possible causes and treatment of cardiac rhythms (the “Hs and Ts”), including how the management of these conditions begins in the field. (p 2257)
 19. Discuss the different mechanical adjuncts to circulation that are used to assist in delivering chest compressions during CPR. (pp 2258–2261)
 20. Describe the general steps of postresuscitative care and the importance of transporting the patient to the most appropriate facility. (p 2261)
 21. Describe the ethical issues related to patient resuscitation, including examples of when not to start CPR on a patient. (p 2261)
 22. Explain the various factors involved in the decision to stop CPR after it has been started on a patient. (p 2262)
 23. Discuss the value of scene choreography and crew resource management during a field code. (pp 2263–2265)
 24. Describe the typical roles of the code team leader and code team members during a field code. (pp 2264–2265)
 25. Describe the importance of debriefing after a field code. (pp 2263–2264)

SKILLS OBJECTIVES

1. Demonstrate how to perform one- and two-rescuer adult CPR. (pp 2246–2247, Skill Drill 40-1)
2. Demonstrate how to perform CPR in a child who is between age 1 year and the onset of puberty. (p 2249, Skill Drill 40-2)

3. Demonstrate how to perform CPR in an infant who is between ages 1 month and 1 year. (p 2250, Skill Drill 40-3)
4. Demonstrate how defibrillation is integrated into the field code for the adult or pediatric patient. (pp 2251–2256)
5. Demonstrate how to care for a patient in VF or pVT. (pp 2251–2253)
6. Demonstrate how to care for a patient in asystole or PEA. (pp 2257–2258)
7. Demonstrate the roles of the code team members and code team leader in a resuscitation. (pp 2264–2265)

Chapter 41 Learning Outcomes:

1. List examples of peri-arrest conditions that critical patients can present with in the field. (p 2275)
2. Describe the process of determining a differential diagnosis in the field assessment of a critical patient. (pp 2275–2277)
3. Discuss the rapid decision making involved in the assessment and management of a critical patient. (pp 2277–2280)
4. List examples of bias that can affect your critical decision making. (p 2278)
5. Describe the body's physiologic response to changes in perfusion. (pp 2281–2284)
6. Discuss the pathophysiology of shock and peri-arrest situations. (pp 2284–2286)
7. Describe the effects of decreased perfusion at the capillary level. (pp 2289–2290)
8. Define shock in relation to aerobic and anaerobic metabolism. (p 2288)
9. Predict shock based on mechanism of injury. (p 2294)
10. Relate pulse pressure changes to perfusion status. (pp 2294–2295)
11. Relate orthostatic vital sign changes to perfusion status. (pp 2286–2289)
12. Discuss the progression of shock. (pp 2294–2296)
13. Discuss the pathophysiologic changes associated with compensated shock. (pp 2294–2295)
14. Discuss the pathophysiologic changes associated with decompensated (hypotensive) shock. (p 2295)
15. Differentiate between compensated and decompensated shock. (pp 2294–2295)
16. Discuss the assessment findings associated with compensated shock. (pp 2296–2299)
17. Discuss the assessment findings associated with decompensated shock. (pp 2296–2299)
18. Discuss the assessment findings associated with shock and the peri-arrest situations. (pp 2296–2299)
19. Identify the need for intervention and transport of the patient with compensated shock. (pp 2300, 2313)
20. Identify the need for intervention and transport of the patient with decompensated shock. (pp 2300, 2313)
21. Identify the need for intervention and transport of the patient with shock or other peri-arrest situations. (pp 2300, 2313)
22. Discuss the treatment plan and management of compensated shock. (pp 2300–2302)

23. Discuss the treatment plan and management of decompensated shock. (pp 2300–2302)
24. Discuss the treatment plan and management of shock and other peri-arrest situations. (pp 2300–2302)
25. Describe the pathophysiology, assessment, and management of specific types of shock, including cardiogenic, obstructive, distributive, and hypovolemic shock. (pp 2302–2313)

Skills Objectives

1. Defend the importance of teamwork, experience, and practice in preparation to treat the critical patient. (pp 2274–2281)
2. Demonstrate rapid decision making based on the working diagnosis of the critical patient with a peri-arrest condition. (pp 2274–2281)

****Students – please refer to the Instructor’s Course Information sheet for specific information on assessments and due dates.***

Part III: Grading and Assessment

EVALUATION OF REQUIRED COURSE MEASURES/ARTIFACTS*:

Students’ performance will be assessed, and the weight associated with the various measures/artifacts are listed below.

EVALUATION*

Tests	20%
ChatGPT and Practice Quizzes	15%
Quizzes	15%
High-Stakes Exams	50%
Total	100%

****Students, for the specific number and type of evaluations, please refer to the Instructor’s Course Information Sheet.***

GRADING SYSTEM:

State the College’s or departmental grading system as delineated in the Catalog. Please note the College adheres to a 10-point grading scale A = 100 – 90, B = 89- 80, C = 79 – 70, D = 69 – 60, F = 59 and below. You must have your Dean’s approval if changes in the scale are made.

Grades earned in courses impact academic progression and financial aid status. Before withdrawing from a course, be sure to talk with your instructor and financial aid counselor about the implications of that course of action. Ds, Fs, Ws, WFs and Is also negatively impact academic progression and financial aid status.

The Add/Drop Period is the first 5 days of the semester for **full term** classes. Add/Drop periods are shorter for accelerated format courses. Please refer to the [academic calendar](#) for deadlines for add/drop. You must attend at least one meeting of all of your classes during that period. If you do not, you will be dropped from the course(s) and your Financial Aid will be reduced accordingly.

Part IV: Attendance

Horry-Georgetown Technical College maintains a general attendance policy requiring students to be present for a minimum of 80 percent (80%) of their classes in order to receive credit for any course. Due to the varied nature of courses taught at the college, some faculty may require up to 90 percent (90%) attendance. Pursuant to 34 Code of Federal Regulations 228.22 - Return to Title IV Funds, once a student has missed over 20% of the course or has missed two (2) consecutive weeks, the faculty is obligated to withdraw the student, and a student may not be permitted to reenroll. **Instructors define absentee limits for their class at the beginning of each term; please refer to the Instructor Course Information Sheet.**

For online and hybrid courses, check your Instructor's Course Information Sheet for any required on-site meeting times. Please note, instructors may require tests to be taken at approved testing sites, and if you use a testing center other than those provided by HGTC, the center may charge a fee for its services.

Part V: Student Resources



THE STUDENT SUCCESS AND TUTORING CENTER (SSTC):

The SSTC offers to all students the following **free** resources:

1. Academic tutors for most subject areas, Writing Center support, and Academic Coaching for college success skills.
2. Online tutoring and academic support resources.
3. Professional and interpersonal communication coaching in the EPIC Labs.

Visit the [Student Success & Tutoring Center](#) website for more information. To schedule tutoring or coaching, contact the SSTC at sstc@hgtc.edu or self-schedule in the Penji iOS/Android app or at www.penjiapp.com. Email sstc@hgtc.edu or call SSTC Conway, 349-7872; SSTC Grand Strand, 477-2113; and SSTC Georgetown, 520-1455, or go to the SSTC [Online Resource Center](#) to access on-demand resources.



STUDENT INFORMATION CENTER: TECH Central

TECH Central offers to all students the following free resources:

1. Getting around HGTC: General information and guidance for enrollment, financial aid, registration, and payment plan support!
2. In-person and remote assistance are available for Desire2Learn, Student Portal, Degree Works, and Office 365.
3. Chat with our staff on TECH Talk, our live chat service. TECH Talk can be accessed on the student portal and on TECH Central's website, or by texting questions to (843) 375-8552. Visit the Tech Central website for more information. Live Chat and Center locations are posted on the website. Or please call (843) 349 – TECH (8324), Option # 1.



HGTC LIBRARY:

Each campus location has a library where HGTC students, faculty, and staff may check out materials with their HGTC ID. All three HGTC campus libraries have librarians and staff who can aid with research, computers to support academic research and related school-work, and individual/group study rooms. Printing is available as well at each location. Visit the [Library](#) website for more information or call (843) 349-5268.

STUDENT TESTING:

Testing in an **online/hybrid** course and in **make-up exam** situations may be accomplished in a variety of ways:

- Test administered within D2L.
- Test administered in writing on paper.
- Test administered through Publisher Platforms (which may have a fee associated with the usage)

Furthermore, tests may have time limits and/or require a proctor.

Testing candidates must make their appointments 24 hours in advance.

Students must bring a physical ID in order to take a test.

Proctoring can be accomplished either face-to-face at an approved site or online through our online proctoring service. To find out more about proctoring services, please visit the [Online](#)

[Testing](#) section of the HGTC's Testing Center webpage.

The **Instructor Information Sheet** will have more details on test requirements for your course.

DISABILITY SERVICES:

HGTC is committed to providing an accessible environment for students with disabilities. Students seeking accommodations are encouraged to visit HGTC's [Accessibility and Disability Service webpage](#) for detailed information.

It is the student's responsibility to self-identify as needing accommodations and to provide appropriate documentation. Once documentation is submitted, the student will participate in an interactive process with Accessibility and Disability Services staff to determine reasonable accommodations. Students may begin the accommodations process at any time; however, accommodations are **not retroactive** and will only be applied from the point at which they are approved. Students must contact the office **each semester** to renew their accommodations.

For assistance, please contact the Accessibility and Disability Services team at disabilityservices@hgtc.edu or 843-796-8818 (call or text).

COUNSELING SERVICES:

HGTC Counseling Services strives to optimize student success through managing personal and academic concerns that may interfere with achieving educational goals. Staff are available to every student for assistance and guidance on personal matters, academic concerns and other areas of concern. HGTC offers free in-person and telehealth counseling services to students. For more information about counseling services, please reach out to counseling@hgtc.edu or visit the website the [Counseling Services webpage](#).

STATEMENT OF EQUAL OPPORTUNITY/NON-DISCRIMINATION STATEMENT:

Our sincere commitment to both effective business management and equitable treatment of our employees requires that we present this Policy Statement as an embodiment of that commitment to the fullest.

Discrimination is conduct that includes unjust or prejudicial treatment based upon an individual's sex, race/color, religion, national origin, age, disability, service in the uniformed services (as defined in state and federal law), veteran status, political ideas, marital or family status, pregnancy, childbirth, or related medical conditions, including, but not limited to, lactation, genetic information, genetic identity, gender expression, or sexual orientation that excludes an individual from participation in, denies the individual the benefits of, treats the individual differently, or otherwise adversely affects a term or condition of a person's working or learning

environment. This includes failing to provide reasonable accommodation, consistent with state and federal law, to persons with disabilities.

INQUIRIES REGARDING THE NON-DISCRIMINATION/TITLE IX POLICIES:

Student and prospective student inquiries concerning Section 504, Title II, Title VII, and Title IX and their application to the College or any student decision may be directed to the Vice President for Student Affairs.

Dr. Melissa Batten, VP Student Affairs

Title IX, Section 504, and Title II Coordinator

Building 1100, Room 107A, Conway Campus

PO Box 261966, Conway, SC 29528-6066

843-349-5228

Melissa.Batten@hgtc.edu

Employee and applicant inquiries concerning Section 504, Title II, and Title IX and their application to the College may be directed to the Vice President for Human Resources.

Jacquelyne Snyder, VP Human Resources

Affirmative Action/Equal Opportunity Officer and Title IX Coordinator

Building 200, Room 205B, Conway Campus

PO Box 261966, Conway, SC 29528-6066

843-349-5212

Jacquelyne.Snyder@hgtc.edu

TITLE IX REQUIREMENTS:

Title IX of the Education Amendments of 1972 protects students, employees, applicants for admission and employment, and other persons from all forms of sex discrimination.

HGTC prohibits the offenses of domestic violence, dating violence, sexual assault, and stalking and will provide students, faculty, and staff with necessary information regarding prevention, policies, procedures, and resources.

Any student, or other member of the college community, who believes that they have been a victim of sexual harassment, domestic violence, dating violence, sexual assault, or stalking may file a report with the college's Title IX Coordinator or campus law enforcement*.

*Faculty and Staff are required to report these incidents to the Title IX Coordinator when involving students. The only HGTC employees exempt from mandatory reporting are licensed mental health professionals (only as part of their job description such as counseling services).

Student and prospective student inquiries concerning Title IX and its application to the College or any student decision may be directed to the Vice President for Student Affairs.

Dr. Melissa Batten, VP Student Affairs

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PREGNANCY ACCOMMODATIONS

Under Title IX, colleges must not exclude a pregnant student from participating in any part of an educational program. Horry-Georgetown Technical College is committed to ensuring that pregnant students receive reasonable accommodations to ensure access to our educational programs.

Students should advise the Title IX Coordinator of a potential need for accommodations as soon as they know they are pregnant. It is extremely important that communication between student, instructors, and the Title IX Coordinator begin as soon as possible. Each situation is unique and will be addressed individually.

Title IX accommodations DO NOT apply to Financial Aid. Financial Aid regulations do not give the College any discretion in terms of Financial Aid eligibility.

Certain educational programs may have strict certification requirements or requirements mandated by outside regulatory agencies. Therefore, in some programs, the application of Title IX accommodations may be limited.

To request pregnancy accommodations, please complete the *Pregnancy Intake Form* that can be found [here](#).