

Department(s):	Health Careers Academy
District Sites:	El Dorado High School
Board of Trustees COS Adoption Date:	6/14/2016
Textbooks / Instructional Materials:	Emergency Medical Responder Series Editor: Andrew N. Pollak Diversified Health Occupation - already have Essentials of Anatomy and Physiology- already have
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Board of Trustees Textbook Adoption Date:	

Definitions

CALPADS	California Longitudinal Pupil Achievement Data System
CTE Technical Prep	A course within a CTE technical career pathway or program that has been articulated with a postsecondary education or through an apprenticeship program of at least 2 years following secondary instruction.
Instructional Level Code	Represents a nonstandard instructional level at which the content of a specific course is either above or below a 'standard' course instructional level. These levels may be identified by the actual level of instruction or identified by equating the course content and level of instruction with a state or nationally recognized advanced course of study, such as IB or AP.
Instructional Level Honors, UC Certified	Includes all AP courses.
Instructional Level Honors, non UC Certified	Requires Board approval.
Instructional Level College	Includes ACE courses. Equivalent to college course and content, but not an AP course. Not related to section, but to course.

EDUCATIONAL SERVICES

Course Title: Medical Arts and Science 3 (#0285)

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NHFS

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8.11, 9.11, 10.11, 10.12

HSMTS

1.2, 2.1

NHFS

1.11, 1.12, 1.13, 1.32, 2.11,
2.21, 2.22, 2.31, 4.12, 4.21,
5.25, 6.11, 7.21, 7.31, 8.21,
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HSMTS

2.0, 2.2, 2.4

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EDUCATIONAL SERVICES

Department: **Health Careers Academy**

Course Title: **Medical Arts and Science 3**

Course Number: **#0285**

Unit Title: **Preparatory**

Content Area Standards (Please identify the source): List content standards students will master in this unit.

Source: National Emergency Medical Services Education Standards, Emergency Medical Responder Education Standards (NEMSES/EMRES), National Healthcare Foundations Standards (NHFS) and Health Science and Medical Technology Industry Sector (HSMTS)

EMRES

- 1.1 Uses simple knowledge of the Emergency Medical Services (EMS) system, safety/well-being of the Emergency Medical Responder (EMR), medical/legal issues at the scene of an emergency while awaiting a higher level of care.
- 1.4 Uses simple knowledge of the anatomy and function of the upper airway, heart, vessels, blood, lungs, skin, muscles, and bones as the foundation of emergency care.

NHFS

- 1.11 Classify basic structural and functional organization of the human body.
- 1.13 Analyze basic structure and function of the human body
- 2.11 Interpret verbal and nonverbal communication
- 3.11 Understand healthcare delivery system (public, private, government, and non-profit)
- 5.11 Analyze legal responsibilities and limitations
- 5.12 Explain practices that could result in malpractice, liability, and/or negligence
- 5.13 Apply procedures for accurate documentation and record keeping
- 6.11 Differentiate between ethical and legal issues impacting healthcare
- 6.31 Understand religious and cultural values as they impact healthcare
- 6.32 Demonstrate respectful and empathetic interactions with diverse age, cultural, economic, ethnic, and religious groups
- 7.11 Explain principles of infection control
- 7.21 Apply personal safety procedures based on Occupational Safety and Health Administration (OSHA) and Centers for Disease Control (CDC) regulations (including standard precautions)
- 7.22 Apply principles of body mechanics and ergonomics
- 7.31 Evaluate environment to recognize safe and unsafe working conditions
- 7.32 Apply safety techniques to prevent accidents and to maintain a safe work environment
- 8.21 Recognize methods for building positive team relationships

HSMTS

- 1.0 Students understand the academic content required for entry into postsecondary education and employment in the Health Science and Medical Technology sector.
- 1.2(5.c) Students know how bones and muscles work together to provide a structural framework for movement
- 2.0 Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and context
- 2.2(2.6) Write technical documents
- 2.4(2.1) Deliver narrative presentation

Unit Outline: A detailed descriptive summary of all topics covered in the unit. Explain what the students will learn, know and be able to do.

Goal:

Lesson 1-1 Introduction to EMS Systems Familiarizes the First Responder candidate with the introductory aspects of emergency medical care. Topics include the Emergency Medical Services system, roles and responsibilities of the First Responder, quality improvement, and medical oversight.

Objectives Legend

C = Cognitive P = Psychomotor A = Affective

1 = Knowledge level

2 = Application level

3 = Problem-solving level

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

- 1-1.1 Define the components of Emergency Medical Services (EMS) systems. (C-1)
- 1-1.2 Differentiate the roles and responsibilities of the First Responder from other out-of-hospital care (C3)
- 1-1.3 Define medical oversight and discuss the First Responder's role in the process. (C-1)
- 1-1.4 Discuss the types of medical oversight that may affect the medical care of a First Responder. (C-1)
- 1-1.5 State the specific statutes and regulations in your state regarding the EMS system. (C-1)

Affective Objectives:

- 1-1.6 Accept and uphold the responsibilities of a First Responder in accordance with the standards of an EMS professional. (A-3)
- 1-1.7 Explain the rationale for maintaining a professional appearance when on duty or when responding to calls. (A-3)
- 1-1.8 Describe why it is inappropriate to judge a patient based on a cultural, gender, age, or socioeconomic model, and to vary the standard of care rendered as a result of that judgement. (A-3)

Psychomotor Objective: No psychomotor identified for this lesson

Goal:

Lesson 1-2 Well-Being of the First Responder, Covers the emotional aspects of emergency medical care, stress management, introduction to Critical Incident Stress Debriefing (CISD), scene safety, body substance isolation (BSI), personal protection equipment (PPE), and safety precautions that can be taken prior to performing the role of a First Responder.

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

- 1-2.1 List possible emotional reactions that the First Responder may experience when faced with trauma, illness, death, and dying. (C-1)
- 1-2.2 Discuss the possible reactions that a family member may exhibit when confronted with death and dying. (C-1)
- 1-2.3 State the steps in the First Responder's approach to the family confronted with death and dying. (C-1)
- 1-2.4 State the possible reactions that the family of the First Responder may exhibit. (C-1)
- 1-2.5 Recognize the signs and symptoms of critical incident stress. (C-1)
- 1-2.6 State possible steps that the First Responder may take to help reduce/alleviate stress. (C-1)
- 1-2.7 Explain the need to determine scene safety. (C-2)
- 1-2.8 Discuss the importance of body substance isolation (BSI). (C-1)
- 1-2.9 Describe the steps the First Responder should take for personal protection from airborne and bloodborne pathogens. (C-1)
- 1-2.10 List the personal protective equipment necessary for each of the following situations: (C-1) - Hazardous materials - Rescue operations - Violent scenes - Crime scenes - Electricity - Water and ice - Exposure to bloodborne pathogens - Exposure to airborne pathogens

Affective Objectives:

At the completion of this lesson, the student will be able to:

- 1-2.11 Explain the importance for serving as an advocate for the use of appropriate protective equipment. (A-3)
- 1-2.12 Explain the importance of understanding the response to death and dying and communicating effectively with the patient's family.
- 1-2.13 Demonstrate a caring attitude towards any patient with illness or injury who requests emergency medical services. (A-3)
- 1-2.14 Show compassion when caring for the physical and mental needs of patients. (A-3)
- 1-2.15 Participate willingly in the care of all patients. (A-3)
- 1-2.16 Communicate with empathy to patients being cared for, as well as with family members, and friends of the patient. (A-3)

Psychomotor Objectives:

At the completion of this lesson, the student will be able to:

- 1-2.17 Given a scenario with potential infectious exposure, the student will use appropriate personal protective equipment. At the completion of the scenario, the student will properly remove and discard the protective garments. (P-1,2)
- 1-2.18 Given the above scenario, the student will complete disinfection/cleaning and all reporting documentation. (P-1.2)

Goal:

Lesson 1-3 Legal and Ethical Issues Explores the scope of practice, ethical responsibilities, advance directives, consent, refusals, abandonment, negligence, duty to act, confidentiality, medical identification symbols, and crime scenes.

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

- 1-3.1 Define the First Responder scope of care. (C-1)
- 1-3.2 Discuss the importance of Do Not Resuscitate [DNR] (advance directives) and local or state provisions regarding EMS application. (C-1)
- 1-3.3 Define consent and discuss the methods of obtaining consent. (C-1)
- 1-3.4 Differentiate between expressed and implied consent. (C-3)
- 1-3.5 Explain the role of consent of minors in providing care. (C-1)
- 1-3.6 Discuss the implications for the First Responder in patient refusal of transport. (C-1)
- 1-3.7 Discuss the issues of abandonment, negligence, and battery and their implications to the First Responder. (C-1)
- 1-3.8 State the conditions necessary for the First Responder to have a duty to act. (C-1)
- 1-3.9 Explain the importance, necessity and legality of patient confidentiality. (C-1)
- 1-3.10 List the actions that a First Responder should take to assist in the preservation of a crime scene. (C-3)
- 1-3.11 State the conditions that require a First Responder to notify local law enforcement officials. (C-1)
- 1-3.12 Discuss issues concerning the fundamental components of documentation. (C-1)

Affective Objectives:

At the completion of this lesson, the student will be able to:

- 1-3.13 Explain the rationale for the needs, benefits and usage of advance directives. (A-3)
- 1-3.14 Explain the rationale for the concept of varying degrees of DNR. (A-3)

Psychomotor Objectives: No psychomotor objectives identified.

Goal:

Lesson 1-4 The Human Body Enhances the First Responder's knowledge of the human body. A brief overview of body systems, anatomy, and physiology will be given in this session.

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

- 1-4.1 Describe the anatomy and function of the respiratory system. (C-1)
- 1-4.2 Describe the anatomy and function of the circulatory system. (C-1)

1-4.3 Describe the anatomy and function of the musculoskeletal system. (C-1)

1-4.4 Describe the components and function of the nervous system. (C-1)

Affective Objectives: No affective objectives identified.

Psychomotor Objectives: No psychomotor objectives identified.

Goal:

Lesson 1-5 Lifting and Moving Patients provides students with knowledge of body mechanics, lifting and carrying techniques, and principles of moving patients.

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

1-5.1 Define body mechanics. (C-1)

1-5.2 Discuss the guidelines and safety precautions that need to be followed when lifting a patient. (C-1)

1-5.3 Describe the indications for an emergency move. (C-1)

1-5.4 Describe the indications for assisting in non-emergency moves. (C-1)

1-5.5 Discuss the various devices associated with moving a patient in the out-of-hospital arena. (C-1)

Affective Objectives:

At the completion of this lesson, the student will be able to:

1-5.6 Explain the rationale for properly lifting and moving patients. (A-3)

1-5.7 Explain the rationale for an emergency move. (A-3)

Psychomotor Objectives:

1-5.8 Demonstrate an emergency move. (P-1,2)

1-5.9 Demonstrate a non-emergency move. (P-1,2)

1-5.10 Demonstrate the use of equipment utilized to move patient's in the out-of-hospital arena. (P-1,2)

Instructional Strategies: Indicate how the Instructional Strategies support the delivery of the curriculum and the course goals. Indicate how assignments support the Anchor Standards.

This class is conducive to many teaching modalities

1. Declarative: This will be accomplished by various methods, including direct instruction, small group discussion, and the use of audio-visual materials, and demonstrations if desired.
2. Procedural (How): This is the skills portion of the class. The students should be able to demonstrate competency in all skills listed in each section. The instructor should perform demonstrations prior to having the students perform the skills.
3. Contextual (When, Where, and Why): This section is designed to help the students understand the application of their knowledge and skills relating to their performance as a healthcare provider. This section represents the reasoning as to why, where, and when a First Responder would need to use the knowledge or perform the skills.
4. Kinesthetic (Doing): Students crave hands on training. This section allows the instructor to teach material by having the students perform the skill. Those students who learn best by doing will benefit from this method of instruction.
5. Simulation: One very effective method of teaching is the use of a patient care simulation in the classroom. This is actually acting out an EMS call to give the student the opportunity to respond with equipment, evaluate the scene, assess the patient, control life threats and do any of the treatments covered in the course which would be appropriate while waiting for the ambulance to arrive. Simulations give students the opportunity to demonstrate integration of the courses cognitive, affective, and psychomotor objectives into a real life scenario while working with a team of healthcare providers. This is an application which puts it all together for the student as they will find patients in the field by incorporating their ability to hear, see, and do as well as begin to emphasize teamwork and leadership skills.

Assessments: Describe the Formative and Summative assessments that will be used to demonstrate learning and mastery of the standards.

*The goal of formative assessment is to monitor student learning to provide ongoing feedback that can be used by the instructor to help students identify their strengths and weaknesses and target areas that need work. These areas should be address immediately

Chapter Assignments - These formative assignments help to build the students foundation for the information they will learn during the unit. Weekly assignments serve to assess and give immediate feedback to the students as to how they are progressing with content knowledge. These assignments inform the instructor as to the progress of the students and allow the instruction of the material to be adjusted, should students need remediation or if they require supplementary instruction

Quizzes -These short assignments are used as formative assessment to help the instructor understand whether or not the material covered in class is understood by the students. These are primarily used to assess what is understood by a majority of the students and what areas are in need of emphasis or reteaching

Skill Drills - These are the primary foundation for this class and indicate how well a student applies the information covered in the text, during lectures and demonstrations. These can be a quick formative assessment of their cognitive, affective, and psychomotor domains. Students will receive a skill sheets provided within the curriculum which will assist the students in preparing for field performance and the final practical evaluation . They will also be used in self and peer-evaluations

*The goal of summative assessment is to evaluate student learning at the end of an instructional unit by comparing it against some standard or benchmark.

Chapter Tests and Practical Skill Test - These longer assessments are the summative portion of the units and will determine whether or not the goals for the units are understood by the students. The information will also help the teacher to redesign learning objectives for the following year and make adjustments to curriculum
Practical Skills test must be performed without any assistance and pass with a 80% or better to be eligible to take the EMR State test.

Interventions: Describe methods used to support students who fail to master unit Formative and Summative assessments. Formative assessments, such as chapter review questions and quizzes, will be followed by immediate reteaching through large group discussion and peer tutoring.

If students are having difficulty understanding the content or performing the skills, the instructor should redirect them. If additional time is needed to complete this task beyond the assigned times of the program, the instructor should schedule additional assistance for the student or group of students experiencing difficulty with the task.

EDUCATIONAL SERVICES

Department: **Health Careers Academy**

Course Title: **Medical Arts and Science 3**

Course Number: **#0285**

Unit Title: **Airway Management, Respiration, and Ventilation**

Content Area Standards (Please identify the source): List content standards students will master in this unit.

Source: National Emergency Medical Services Education Standards, Emergency Medical Responder Education Standards (NEMSES/EMRES), National Healthcare Foundations Standards (NHFS) and Health Science and Medical Technology Industry Sector (HSMTS)

EMRES

1.1 Applies knowledge (fundamental depth, foundational breadth) of anatomy and physiology to assure a patent airway, adequate mechanical ventilation, and respiration while awaiting EMS response for patients of all ages.

NHFS

- 1.11 Classify basic structural and functional organization of the human body (chemical, cellular, tissue, organ, and system)
- 1.12 Recognize body planes, directional terms, quadrants, and cavities
- 1.13 Analyze basic structure and function of the human body
- 1.31 Apply mathematical computations related to healthcare procedures (metric and household, conversions and measurements)
- 2.13 Report relevant information in order of occurrence
- 4.12 Summarize basic professional standards of healthcare workers as they apply to hygiene, dress, language, confidentiality and behavior (i.e. courtesy and self-introductions)
- 5.11 Analyze legal responsibilities and limitations
- 5.12 Explain practices that could result in malpractice, liability, and/or negligence
- 5.25 Analyze legislated scope of practice of healthcare professionals
- 7.21 Apply personal safety procedures based on Occupational Safety and Health Administration (OSHA) and Centers for Disease Control (CDC) regulations (including standard precautions)
- 7.31 Evaluate environment to recognize safe and unsafe working conditions
- 8.11 Understand roles and responsibilities of team members
- 8.21 Recognize methods for building positive team relationships

HSMTS

- 1.2(5.b) Students know organ systems function because of the contributions of individual organs, tissues, and cells. The failure of any part can affect the entire system.
- 1.2 (9.a) Students know how the complementary activity of major body systems provides cells with oxygen and nutrients and removes toxic waste products such as carbon dioxide.
- 2.0 Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts.

Unit Outline: A detailed descriptive summary of all topics covered in the unit. Explain what the students will learn, know and be able to do.

Module 2 Airway

Goal:

Lesson 2-1 Airway Addresses airway anatomy and physiology, how to maintain an open airway, pulmonary resuscitation, variations for infants and children, as well as patients with laryngectomies. The use of airways, suction equipment, and barrier devices will be discussed in this lesson. Also included is the management of foreign body airway obstructions.

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

- 2-1.1 Name and label the major structures of the respiratory system on a diagram. (C-1)
- 2-1.2 List the signs of inadequate breathing. (C-1)
- 2-1.3 Describe the steps in the head-tilt chin-lift. (C-1)
- 2-1.4 Relate mechanism of injury to opening the airway. (C-3)
- 2-1.5 Describe the steps in the jaw thrust. (C-1)
- 2-1.6 State the importance of having a suction unit ready for immediate use when providing emergency medical care. (C-1)
- 2-1.7 Describe the techniques of suctioning. (C-1)
- 2-1.8 Describe how to ventilate a patient with a resuscitation mask or barrier device. (C-1)
- 2-1.9 Describe how ventilating an infant or child is different from an adult. (C-1)
- 2-1.10 List the steps in providing mouth-to-mouth and mouth-to-stoma ventilation. (C-1)
- 2-1.11 Describe how to measure and insert an oropharyngeal (oral) airway. (C-1)
- 2-1.12 Describe how to measure and insert a nasopharyngeal (nasal) airway. (C-1)
- 2-1.13 Describe how to clear a foreign body airway obstruction in a responsive adult.(C-1)
- 2-1.14 Describe how to clear a foreign body airway obstruction in a responsive child with complete obstruction or partial airway obstruction and poor air exchange. (C-1)
- 2-1.15 Describe how to clear a foreign body airway obstruction in a responsive infant with complete obstruction or partial airway obstruction and poor air exchange. (C-1)
- 2-1.16 Describe how to clear a foreign body airway obstruction in a unresponsive adult. (C-1)
- 2-1.17 Describe how to clear a foreign body airway obstruction in a unresponsive child. (C-1)
- 2-1.18 Describe how to clear a foreign body airway obstruction in a unresponsive infant. 2-2 (C-1)

Affective Objectives:

At the completion of this lesson, the student will be able to:

- 2-1.19 Explain why basic life support ventilation and airway protective skills take priority over most other basic life support skills. (A-3)
- 2-1.20 Demonstrate a caring attitude towards patients with airway problems who request emergency medical services. (A-3)
- 2-1.21 Place the interests of the patient with airway problems as the foremost consideration when making any and all patient care decisions. (A-3)
- 2-1.22 Communicate with empathy to patients with airway problems, as well as with family members and friends of the patient. (A-3)

Psychomotor Objectives:

At the completion of this lesson, the student will be able to:

- 2-1.23 Demonstrate the steps in the head-tilt chin-lift. (P-1,2)
- 2-1.24 Demonstrate the steps in the jaw thrust. (P-1,2)
- 2-1.25 Demonstrate the techniques of suctioning. (P-1,2)
- 2-1.26 Demonstrate the steps in mouth-to-mouth ventilation with body substance isolation (barrier shields). (P-1,2)
- 2-1.27 Demonstrate how to use a resuscitation mask to ventilate a patient. (P-1,2)
- 2-1.28 Demonstrate how to ventilate a patient with a stoma. (P-1,2)
- 2-1.29 Demonstrate how to measure and insert an oropharyngeal (oral) airway. (P-1,2)
- 2-1.30 Demonstrate how to measure and insert a nasopharyngeal (nasal) airway. (P-1,2)
- 2-1.31 Demonstrate how to ventilate infant and child patients. (P-1,2)
- 2-1.32 Demonstrate how to clear a foreign body airway obstruction in a responsive adult. (C-1)
- 2-1.33 Demonstrate how to clear a foreign body airway obstruction in a responsive child. (C-1)
- 2-1.34 Demonstrate how to clear a foreign body airway obstruction in a responsive infant. (C-1)
- 2-1.35 Demonstrate how to clear a foreign body airway obstruction in an unresponsive adult. (C-1)
- 2-1.36 Demonstrate how to clear a foreign body airway obstruction in an unresponsive child. (C-1)
- 2-1.37 Demonstrate how to clear a foreign body airway obstruction in an unresponsive infant. (C-1)

Goal:

Lesson 2-2 Practical Lab: Airway Provides supervised practice for students to develop the psychomotor skills of airway care. The use of airways, suction equipment, and barrier devices will be included in this lesson. Students will have an opportunity to practice the techniques of removing a foreign body airway obstruction.

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

Demonstrate the cognitive objectives of Lesson 2-1: Airway.

Affective Objectives:

At the completion of this lesson, the student will be able to:
Demonstrate the affective objectives of Lesson 2-1: Airway.

Psychomotor Objectives:

At the completion of this lesson, the student will be able to:
Demonstrate the steps in the head-tilt chin-lift. (P-1,2)
Demonstrate the steps in the jaw thrust. (P-1,2)
Demonstrate the techniques of suctioning. (P-1,2)
Demonstrate the steps in mouth-to-mouth ventilation with body substance isolation (barrie shields). (P-1,2)
Demonstrate how to use a resuscitation mask to ventilate a patient. (P-1,2)
Demonstrate how to ventilate a patient with a stoma. (P-1,2)
Demonstrate how to measure and insert an oropharyngeal (oral) airway. (P-1,2)
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Demonstrate how to ventilate infant and child patients. (P-1,2)
Demonstrate how to clear a foreign body airway obstruction in a responsive adult. (C-1)
Demonstrate how to clear a foreign body airway obstruction in a responsive child. (C-1)
Demonstrate how to clear a foreign body airway obstruction in a responsive infant. (C-1)
Demonstrate how to clear a foreign body airway obstruction in an unresponsive adult. (C-1)
Demonstrate how to clear a foreign body airway obstruction in an unresponsive child. (C-1)
Demonstrate how to clear a foreign body airway obstruction in an unresponsive infant. (C-1)

Instructional Strategies: Indicate how the Instructional Strategies support the delivery of the curriculum and the course goals. Indicate how assignments support the Anchor Standards.

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5. Simulation : One very effective method of teaching is the use of a patient care simulation in the classroom. This is actually acting out an EMS call to give the student the opportunity to respond with equipment, evaluate the scene, assess the patient, control life threats and do any of the treatments covered in the course which would be appropriate while waiting for the ambulance to arrive. Simulations give students the opportunity to demonstrate integration of the courses cognitive, affective, and psychomotor objectives into a real life scenario while working with a team of healthcare providers. This is an application which puts it all together for the student as they will find patients in the field by incorporating their ability to hear, see, and do as well as begin to emphasize teamwork and leadership skills.

Assessments: Describe the Formative and Summative assessments that will be used to demonstrate learning and mastery of the standards.

*The goal of formative assessment is to monitor student learning to provide ongoing feedback that can be used by the instructor to help students identify their strengths and weaknesses and target areas that need work. These areas should be address immediately

Chapter Assignments - These formative assignments help to build the students foundation for the information they will learn during the unit. Weekly assignments serve to assess and give immediate feedback to the students as to how they are progressing with content knowledge. These assignments inform the instructor as to the progress of the students and allow the instruction of the material to be adjusted, should students need remediation or if they require supplementary instruction

Quizzes - These short assignments are used as formative assessment to help the instructor understand whether or not the material covered in class is understood by the students. These are primarily used to assess what is understood by a majority of the students and what areas are in need of emphasis or reteaching

Skill Drills - These are the primary foundation for this class and indicate how well a student applies the information covered in the text, during lectures and demonstrations. These can be a quick formative assessment of their cognitive, affective, and psychomotor domains. Students will receive a skill sheets provided within the curriculum which will assist the students in preparing for field performance and the final practical evaluation . They will also be used in self and peer-evaluations

Chapter Tests and Practical Skill Test - These longer assessments are the summative portion of the units and will determine whether or not the goals for the units are understood by the students. The information will also help the teacher to redesign learning objectives for the following year and make adjustments to curriculum
Practical Skills test must be performed without any assistance and pass with a 80% or better to be eligible to take the EMR State test.

Interventions: Describe methods used to support students who fail to master unit Formative and Summative assessments. Formative assessments, such as chapter review questions and quizzes, will be followed by immediate reteaching through large group discussion and peer tutoring.

If students are having difficulty understanding the content or performing the skills, the instructor should redirect them. If additional time is needed to complete this task beyond the assigned times of the program, the instructor should schedule additional assistance for the student or group of students experiencing difficulty with the task.

EDUCATIONAL SERVICES

Department: **Health Careers Academy**

Course Title: **Medical Arts and Science 3**

Course Number: **#0285**

Unit Title: **Patient Assessment**

Content Area Standards (Please identify the source): List content standards students will master in this unit.

Source: National Emergency Medical Services Education Standards, Emergency Medical Responder Education Standards (NEMSES/EMRES), National Healthcare Foundations Standards (NHFS) and Health Science and Medical Technology Industry Sector (HSMTS)

EMRES

*Use scene information and simple patient assessment findings to identify and manage immediate life threats and injuries within the scope of practice of the EMR.

*Recognizes and manages life threats based on assessment findings of a patient with a medical emergency while awaiting additional emergency response.

NHFS

1.11 Classify basic structural and functional organization of the human body (chemical, cellular, tissue, organ, and system)

1.12 Recognize body planes, directional terms, quadrants, and cavities

1.13 Analyze basic structure and function of the human body

1.20 Diseases and Disorders

1.21 Describe common diseases and disorders of each body system (prevention, pathology, diagnosis, and treatment)

1.32 Analyze diagrams, charts, graphs, and tables to interpret healthcare data

2.13 Report relevant information in order of occurrence

2.21 Use roots, prefixes, and suffixes to communicate information

2.22 Use medical abbreviations to communicate information

2.31 Recognize elements of written and electronic communication (spelling, grammar, formatting and confidentiality)

5.11 Analyze legal responsibilities and limitations

5.21 Apply standards for Health Insurance Portability and Accountability Act (HIPAA)

5.31 Understand religious and cultural values as they impact healthcare

6.32 Demonstrate respectful and empathetic interactions with diverse age, cultural, economic, ethnic, and religious groups

7.11 Explain principles of infection control

7.31 Evaluate environment to recognize safe and unsafe working conditions

8.11 Understand roles and responsibilities of team members

10.11 Apply procedures for measuring and recording vital signs

10.12 Apply skills to obtain training or certification in cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid

HSMTS

1.2(5.b) Students know organ systems function because of the contributions of individual organs, tissues, and cells. The failure of any part can affect the entire system.

1.2 (9.a) Students know how the complementary activity of major body systems provides cells with oxygen and nutrients and removes toxic waste products such as carbon dioxide.

2.0 Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts.

2.4(2.1) Deliver narrative presentation

2.4(2.3) Apply appropriate interviewing techniques

Unit Outline: A detailed descriptive summary of all topics covered in the unit. Explain what the students will learn, know and be able to do.

Module 3 Patient Assessment

Goal:

Lesson 3-1 Patient Assessment Enhances the First Responder's ability to evaluate a scene for potential hazards, to determine the number of patients, whether additional help is necessary, and to evaluate the mechanism of injury or nature of illness. This lesson provides the knowledge and skills to properly perform the initial assessment. In this session, the student will learn about forming a general impression, determining responsiveness, and assessing the airway, breathing, and circulation. Students will discuss how to determine priorities of patient care. This lesson also teaches the knowledge and skills required to continue the assessment and management of the ill or injured patient.

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

- 3-1.1 Discuss the components of scene size-up. (C-1)
- 3-1.2 Describe common hazards found at the scene of a trauma and a medical patient. (C-1)
- 3-1.3 Determine if the scene is safe to enter. (C-2)
- 3-1.4 Discuss common mechanisms of injury/nature of illness. (C-1)
- 3-1.5 Discuss the reason for identifying the total number of patients at the scene. (C-1)
- 3-1.6 Explain the reason for identifying the need for additional help or assistance. (C-1)
- 3-1.7 Summarize the reasons for forming a general impression of the patient. (C-1)
- 3-1.8 Discuss methods of assessing mental status. (C-1)
- 3-1.9 Differentiate between assessing mental status in the adult, child, and infant patient. (C-3)
- 3-1.10 Describe methods used for assessing if a patient is breathing. (C-1)
- 3-1.11 Differentiate between a patient with adequate and inadequate breathing. (C-3)
- 3-1.12 Describe the methods used to assess circulation. (C-1)
- 3-1.13 Differentiate between obtaining a pulse in an adult, child, and infant patient. (C-3)
- 3-1.14 Discuss the need for assessing the patient for external bleeding. (C-1)
- 3-1.15 Explain the reason for prioritizing a patient for care and transport. (C-1)
- 3-1.16 Discuss the components of the physical exam. (C-1)
- 3-1.17 State the areas of the body that are evaluated during the physical exam. (C-1)
- 3-1.18 Explain what additional questioning may be asked during the physical exam. (C-1)
- 3-1.19 Explain the components of the SAMPLE history. (C-1)
- 3-1.20 Discuss the components of the on-going assessment. (C-1)
- 3-1.21 Describe the information included in the First Responder "hand-off" report. (C-1)

Affective Objectives:

At the completion of this lesson, the student will be able to:

- 3-1.22 Explain the rationale for crew members to evaluate scene safety prior to entering. (A-2)
- 3-1.23 Serve as a model for others by explaining how patient situations affect your evaluation of the mechanism of injury or illness. (A-2)
- 3-1.24 Explain the importance of forming a general impression of the patient. (A-1)
- 3-1.25 Explain the value of an initial assessment. (A-2)
- 3-1.26 Explain the value of questioning the patient and family. (A-2)
- 3-1.27 Explain the value of the physical exam. (A-2)
- 3-1.28 Explain the value of an on-going assessment. (A-2)
- 3-1.29 Explain the rationale for the feelings that these patients might be experiencing. (A-3)
- 3-1.30 Demonstrate a caring attitude when performing patient assessments. (A-3)
- 3-1.31 Place the interests of the patient with as the foremost consideration when making any and all patient care decisions during patient assessment. (A-3)
- 3-1.32 Communicate with empathy during patient assessment to patients as well as with family members and friends of the patient. (A-3)

Psychomotor Objectives:

At the completion of this lesson, the student will be able to:

- 3-1.33 Demonstrate the ability to differentiate various scenarios and identify potential hazards. (P-1)
- 3-1.34 Demonstrate the techniques for assessing mental status. (P-1,2)
- 3-1.35 Demonstrate the techniques for assessing the airway. (P-1,2)
- 3-1.36 Demonstrate the techniques for assessing if the patient is breathing. (P-1,2)

- 3-1.37 Demonstrate the techniques for assessing if the patient has a pulse. (P-1,2)
- 3-1.38 Demonstrate the techniques for assessing the patient for external bleeding. (P-1,2)
- 3-1.39 Demonstrate the techniques for assessing the patient's skin color, temperature, condition, and capillary refill (infants and children only). (P-1,2)
- 3-1.40 Demonstrate questioning a patient to obtain a SAMPLE history.
- 3-1.41 Demonstrate the skills involved in performing the physical exam. (P-1,2)
- 3-1.42 Demonstrate the on-going assessment (P-1,2)

Goal:

Lesson 3-2 Practical Lab: Patient Assessment Integrates the knowledge and skills learned thus far to assure that the student has the knowledge and skills of assessment necessary to continue with the management of patients with medical complaints and traumatic injuries

Objectives Legend

C = Cognitive P = Psychomotor A = Affective

1 = Knowledge level

2 = Application level

3 = Problem-solving level

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

Demonstrate the cognitive objectives of Lesson 3-1: Patient Assessment.

Affective Objectives:

At the completion of this lesson, the student will be able to:

Demonstrate the affective objectives of Lesson 3-1: Patient Assessment.

Psychomotor Objectives:

At the completion of this lesson, the student will be able to:

Demonstrate the ability to differentiate various scenarios and identify potential hazards. (P-1)

Demonstrate the techniques for assessing mental status. (P-1,2)

Demonstrate the techniques for assessing the airway. (P-1,2)

Demonstrate the techniques for assessing if the patient is breathing. (P-1,2)

Demonstrate the techniques for assessing if the patient has a pulse. (P-1,2)

Demonstrate the techniques for assessing the patient for external bleeding. (P-1,2)

Demonstrate the techniques for assessing the patient's skin color, temperature, condition, and capillary refill (infants and children only). (P-1,2)

Demonstrate questioning a patient to obtain a SAMPLE history.

Demonstrate the skills involved in performing the physical exam. (P-1,2)

Demonstrate the on-going assessment (P-1,2)

Lesson 3-3 Evaluation: Patient Assessment Evaluates the student's level of achievement of the cognitive, psychomotor, and affective objectives for this module of instruction.

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

Demonstrate competence in the cognitive objectives of Lesson 3-1: Patient Assessment

Affective Objectives:

At the completion of this lesson, the student will be able to:

Demonstrate competence in the affective objectives of Lesson 3-1: Patient Assessment

Psychomotor Objectives

At the completion of this lesson, the student will be able to:

Demonstrate competence in the psychomotor objectives of Lesson 3-1: Patient Assessment

Instructional Strategies: Indicate how the Instructional Strategies support the delivery of the curriculum and the course goals. Indicate how assignments support the Anchor Standards.

This class is conducive to many teaching modalities

1. Declarative: This will be accomplished by various methods, including direct instruction, small group discussion, and the use of audio-visual materials, and demonstrations if desired.
2. Procedural (How): This is the skills portion of the class. The students should be able to demonstrate competency in all skills listed in each section. The instructor should perform demonstrations prior to having the students perform the skills.
3. Contextual (When, Where, and Why): This section is designed to help the students understand the application of their knowledge and skills relating to their performance as a healthcare provider. This section represents the reasoning as to why, where, and when a First Responder would need to use the knowledge or perform the skills.
4. Kinesthetic (Doing): Students crave hands on training. This section allows the instructor to teach material by having the students perform the skill. Those students who learn best by doing will benefit from this method of instruction.
5. Simulation: One very effective method of teaching is the use of a patient care simulation in the classroom. This is actually acting out an EMS call to give the student the opportunity to respond with equipment, evaluate the scene, assess the patient, control life threats and do any of the treatments covered in the course which would be appropriate while waiting for the ambulance to arrive. Simulations give students the opportunity to demonstrate integration of the courses cognitive, affective, and psychomotor objectives into a real life scenario while working with a team of healthcare providers. This is an application which puts it all together for the student as they will find patients in the field by incorporating their ability to hear, see, and do as well as begin to emphasize teamwork and leadership skills.

Assessments: Describe the Formative and Summative assessments that will be used to demonstrate learning and mastery of the standards.

*The goal of formative assessment is to monitor student learning to provide ongoing feedback that can be used by the instructor to help students identify their strengths and weaknesses and target areas that need work. These areas should be address immediately

Chapter Assignments - These formative assignments help to build the students foundation for the information they will learn during the unit. Weekly assignments serve to assess and give immediate feedback to the students as to how they are progressing with content knowledge. These assignments inform the instructor as to the progress of the students and allow the instruction of the material to be adjusted, should students need remediation or if they require supplementary instruction

Quizzes -These short assignments are used as formative assessment to help the instructor understand whether or not the material covered in class is understood by the students. These are primarily used to assess what is understood by a majority of the students and what areas are in need of emphasis or reteaching

Skill Drills - These are the primary foundation for this class and indicate how well a student applies the information covered in the text, during lectures and demonstrations. These can be a quick formative assessment of their cognitive, affective, and psychomotor domains. Students will receive a skill sheets provided within the curriculum which will assist the students in preparing for field performance and the final practical evaluation . They will also be used in self and peer-evaluations

Chapter Tests and Practical Skill Test - These longer assessments are the summative portion of the units and will determine whether or not the goals for the units are understood by the students. The information will also help the teacher to redesign learning objectives for the following year and make adjustments to curriculum

Practical Skills test must be performed without any assistance and pass with a 80% or better to be eligible to take the EMR State Test.

Interventions: Describe methods used to support students who fail to master unit Formative and Summative assessments. Formative assessments, such as chapter review questions and quizzes, will be followed by immediate reteaching through large group discussion and peer tutoring.

If students are having difficulty understanding the content or performing the skills, the instructor should redirect them. If additional time is needed to complete this task beyond the assigned times of the program, the instructor should schedule additional assistance for the student or group of students experiencing difficulty with the task.

EDUCATIONAL SERVICES

Department: **Health Careers Academy**

Course Title: **Medical Arts and Science 3**

Course Number: **#0285**

Unit Title: **Circulation, Resuscitation, and Shock**

Content Area Standards (Please identify the source): List content standards students will master in this unit.

Source: National Emergency Medical Services Education Standards, Emergency Medical Responder Education Standards (NEMSES/EMRES), National Healthcare Foundations Standards (NHFS) and Health Science and Medical Technology Industry Sector (HSMTS)

EMRES

*Recognizes and manages life threats based on assessment findings of a patient with a medical emergency while awaiting additional emergency response.

*Uses assessment information to recognize shock, respiratory failure or arrest, and cardiac arrest based on assessment findings and manages the emergency while awaiting additional emergency response.

NHFS

1.11 Classify basic structural and functional organization of the human body (chemical, cellular, tissue, organ, and system)

1.12 Recognize body planes, directional terms, quadrants, and cavities

1.13 Analyze basic structure and function of the human body

1.21 Describe common diseases and disorders of each body system (prevention, pathology, diagnosis, and treatment)

2.13 Report relevant information in order of occurrence

2.21 Use roots, prefixes, and suffixes to communicate information

2.22 Use medical abbreviations to communicate information

5.11 Analyze legal responsibilities and limitations

5.12 Explain practices that could result in malpractice, liability, and/or negligence

5.13 Apply procedures for accurate documentation and record keeping

7.11 Explain principles of infection control

7.22 Apply principles of body mechanics and ergonomics

8.11 Understand roles and responsibilities of team members

9.13 Apply practices that promote prevention of disease and injury

10.11 Apply procedures for measuring and recording vital signs

10.12 Apply skills to obtain training or certification in cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid

HSMTS

2.0 Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts.

1.2(5b) Students know organ systems function because of the contributions of individual organs and tissues, and cells. The failure of any part can affect the entire system.

1.2(5c) Students know how bones and muscles work together to provide a structural framework for movement

2.1(9i) Students know how hormones(including digestive, reproductive, osmoregulatory) provide internal feedback mechanisms for homeostasis at the cellular level and in whole organisms

Unit Outline: A detailed descriptive summary of all topics covered in the unit. Explain what the students will learn, know and be able to do.

Module 4 Circulation

Goal:

Lesson 4-1 Circulation: This lesson provides the student with the knowledge and skills of chest compressions and ventilations for adults, children, and infants.

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

- 4-1.1 List the reasons for the heart to stop beating (C-1)
- 4-1.2 Define the components of cardiopulmonary resuscitation (C-1)
- 4-1.3 Describe each link in the chain of survival and how it relates to the EMS system. (C-2)
- 4-1.4 List the steps of one-rescuer adult CPR (C-1)
- 4-1.5 Describe the technique of external chest compressions on an adult patient. (C-1)
- 4-1.6 Describe the technique of external chest compressions on an infant. (C-1)
- 4-1.7 Describe the technique of external chest compressions on a child. (C-1)
- 4-1.8 Explain when the First Responder is able to stop CPR. (C-2)
- 4-1.9 List the steps of two-rescuer adult CPR (C-1)
- 4-1.10 List the steps of infant CPR (C-1) 4-1.11 List the steps of child CPR (C-1)

Affective Objectives:

At the completion of this lesson, the student will be able to:

- 4-1.12 Respond to the feelings that the family of a patient may be having during a cardiac event. (A-3)
- 4-1.13 Demonstrate a caring attitude towards patients with cardiac events who request emergency medical services. (A-3)
- 4-1.14 Place the interests of the patient with a cardiac event as the foremost consideration when making any and all patient care decisions. (A-3)
- 4-1.15 Communicate with empathy with family members and friends of the patient with a cardiac event. (A-3)

Psychomotor Objectives:

At the completion of this lesson, the student will be able to:

- 4-1.16 Demonstrate the proper technique of chest compressions on an adult. (P-1,2)
- 4-1.17 Demonstrate the proper technique of chest compressions on a child. (P-1,2)

Goal:

Lesson 4-2 Practical Lab: Circulation Draws on the knowledge and skills learned thus far in this practical lab. Students will be given the opportunity to practice CPR skills.

Cognitive Objectives:

At the completion of this lesson, the student will be able to:
Demonstrate the cognitive objectives of Lesson 4-1: Circulation

Affective Objectives:

At the completion of this lesson, the student will be able to:
Demonstrate the affective objectives of Lesson 4-1: Circulation

Psychomotor Objectives:

At the completion of this lesson, the student will be able to:
Demonstrate the proper technique of chest compressions on an adult. (P-1,2)
Demonstrate the proper technique of chest compressions on a child. (P-1,2)
Demonstrate the proper technique of chest compressions on an infant. (P-1,2)
Demonstrate the steps of adult one rescuer CPR. (P-1,2)
Demonstrate the steps of adult two rescuer CPR. (P-1,2)
Demonstrate child CPR. (P-1,2)
Demonstrate infant CPR. (P-1,2)

Lesson 4-3 Evaluation: Circulation: Evaluates the student's level of achievement of the cognitive, psychomotor, and affective objectives for this module of instruction.

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

Demonstrate competence in the cognitive objectives of Lesson 4-1: Circulation

Demonstrate competence in the cognitive objectives of Lesson 4-2: Circulation

Affective Objectives:

At the completion of this lesson, the student will be able to:

Demonstrate competence in the affective objectives of Lesson 4-1: Circulation

Demonstrate competence in the affective objectives of Lesson 4-2: Circulation

Psychomotor Objectives:

At the completion of this lesson, the student will be able to:

Demonstrate competence in the psychomotor objectives of Lesson 4-1: Circulation

Demonstrate competence in the psychomotor objectives of Lesson 4-2: Circulation Practical

Instructional Strategies: Indicate how the Instructional Strategies support the delivery of the curriculum and the course goals. Indicate how assignments support the Anchor Standards.

This class is conducive to many teaching modalities

1. Declarative: This will be accomplished by various methods, including direct instruction, small group discussion, and the use of audio-visual materials, and demonstrations if desired.
2. Procedural (How): This is the skills portion of the class. The students should be able to demonstrate competency in all skills listed in each section. The instructor should perform demonstrations prior to having the students perform the skills.
3. Contextual (When, Where, and Why): This section is designed to help the students understand the application of their knowledge and skills relating to their performance as a healthcare provider. This section represents the reasoning as to why, where, and when a First Responder would need to use the knowledge or perform the skills.
4. Kinesthetic (Doing): Students crave hands on training This section allows the instructor to teach material by having the students perform the skill. Those students who learn best by doing will benefit from this method of instruction.
5. Simulation: One very effective method of teaching is the use of a patient care simulation in the classroom. This is actually acting out an EMS call to give the student the opportunity to respond with equipment, evaluate the scene, assess the patient, control life threats and do any of the treatments covered in the course which would be appropriate while waiting for the ambulance to arrive. Simulations give students the opportunity to demonstrate integration of the courses cognitive, affective, and psychomotor objectives into a real life scenario while working with a team of healthcare providers. This is an application which puts it all together for the student as they will find patients in the field by incorporating their ability to hear, see, and do as well as begin to emphasize teamwork and leadership skills.

Assessments: Describe the Formative and Summative assessments that will be used to demonstrate learning and mastery of the standards.

Chapter Assignments - These formative assignments help to build the students foundation for the information they will learn during the unit. Weekly assignments serve to assess and give immediate feedback to the students as to how they are progressing with content knowledge. These assignments inform the instructor as to the progress of the students and allow the instruction of the material to be adjusted, should students need remediation or if they require supplementary instruction

Quizzes - These short assignments are used as formative assessment to help the instructor understand whether or not the material covered in class is understood by the students. These are primarily used to assess what is understood by a majority of the students and what areas are in need of emphasis or reteaching

Skill Drills - These are the primary foundation for this class and indicate how well a student applies the information covered in the text, during lectures and demonstrations. These can be a quick formative assessment of their cognitive, affective, and psychomotor domains. Students will receive a skill sheets provided within the curriculum which will assist the students in preparing for field performance and the final practical evaluation . They will also be used in self and peer-evaluations

Chapter Tests and Practical Skill Test - These longer assessments are the summative portion of the units and will determine whether or not the goals for the units are understood by the students. The information will also help the teacher to redesign learning objectives for the following year and make adjustments to curriculum
Practical Skills test must be performed without any assistance and pass with a 80% or better to be eligible to take the EMR State test.

Interventions: Describe methods used to support students who fail to master unit Formative and Summative assessments. Formative assessments, such as chapter review questions and quizzes, will be followed by immediate reteaching through large group discussion and peer tutoring.

If students are having difficulty understanding the content or performing the skills, the instructor should redirect them. If additional time is needed to complete this task beyond the assigned times of the program, the instructor should schedule additional assistance for the student or group of students experiencing difficulty with the task.

EDUCATIONAL SERVICES

Department: **Health Careers Academy**

Course Title: **Medical Arts and Science 3**

Course Number: **#0285**

Unit Title: **Illness and Injury**

Content Area Standards (Please identify the source): List content standards students will master in this unit.

Source: National Emergency Medical Services Education Standards, Emergency Medical Responder Education Standards (NEMSES/EMRES), National Healthcare Foundations Standards (NHFS) and Health Science and Medical Technology Industry Sector (HSMTS)

EMRES

*Use scene information and simple patient assessment findings to identify and manage immediate life threats and injuries within the scope of practice of the EMR.

*Recognizes and manages life threats based on assessment findings of a patient with a medical emergency while awaiting additional emergency response.

*Uses simple knowledge to recognize and manage life threats based on assessment findings for an acutely injured patient while awaiting additional emergency medical response. This level of provider does not transport patients, but should be able to identify and categorize trauma patients and activate the appropriate trauma system response.

NHFS

1.11 Classify basic structural and functional organization of the human body (chemical, cellular, tissue, organ, and system)

1.12 Recognize body planes, directional terms, quadrants, and cavities

1.13 Analyze basic structure and function of the human body

2.2 Medical Terminology

2.21 Use roots, prefixes, and suffixes to communicate information

2.22 Use medical abbreviations to communicate information

6.13 Recognize ethical issues and their implications related to healthcare

7.21 Apply personal safety procedures based on Occupational Safety and Health Administration (OSHA) and Centers for Disease Control (CDC) regulations (including standard precautions)

7.22 Apply principles of body mechanics and ergonomics

9.12 Describe strategies for prevention of diseases including health screenings and examinations

9.13 Apply practices that promote prevention of disease and injury

10.11 Apply procedures for measuring and recording vital signs

10.12 Apply skills to obtain training or certification in cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid

11.11 Identify records and files common to healthcare

HSMTS

1.2(5b) Students know organ systems function because of the contributions of individual organs and tissues, and cells. The failure of any part can affect the entire system.

1.2(5c) Students know how bones and muscles work together to provide a structural framework for movement

2.1(9i) Students know how hormones (including digestive, reproductive, osmoregulatory) provide internal feedback mechanisms for homeostasis at the cellular level and in whole organisms

Unit Outline: A detailed descriptive summary of all topics covered in the unit. Explain what the students will learn, know and be able to do.

Module 5 Illness and Injury

Goal:

Lesson 5-1 Medical Emergencies: Discusses the recognition and management of general medical complaints, seizures, altered mental status, environmental emergencies, behavioral emergencies, psychological crisis, and typical patient situations.

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

- 5-1.1 Identify the patient who presents with a general medical complaint. (C-1)
- 5-1.2 Explain the steps in providing emergency medical care to a patient with a general medical complaint. (C-1)
- 5-1.3 Identify the patient who presents with a specific medical complaint of altered mental status. (C-1)
- 5-1.4 Explain the steps in providing emergency medical care to a patient with an altered mental status. (C-1)
- 5-1.5 Identify the patient who presents with a specific medical complaint of seizures. (C-1)
- 5-1.6 Explain the steps in providing emergency medical care to a patient with seizures. (C-1)
- 5-1.7 Identify the patient who presents with a specific medical complaint of exposure to cold. (C-1)
- 5-1.8 Explain the steps in providing emergency medical care to a patient with an exposure to cold. (C-1)
- 5-1.9 Identify the patient who presents with a specific medical complaint of exposure to heat. (C-1)
- 5-1.10 Explain the steps in providing emergency medical care to a patient with an exposure to heat. (C-1)
- 5-1.11 Identify the patient who presents with a specific medical complaint of behavioral change. (C-1)
- 5-1.12 Explain the steps in providing emergency medical care to a patient with a behavioral change. (C-1)
- 5-1.13 Identify the patient who presents with a specific complaint of a psychological crisis. (C-1)
- 5-1.14 Explain the steps in providing emergency medical care to a patient with a psychological crisis. (C-1)

Affective Objectives:

- 5-1.15 Attend to the feelings of the patient and/or family when dealing with the patient with a general medical complaint. (A-3)
- 5-1.16 Attend to the feelings of the patient and/or family when dealing with the patient with a specific medical complaint. (A-3)
- 5-1.17 Explain the rationale for modifying your behavior toward the patient with a behavioral emergency. (A-3)
- 5-1.18 Demonstrate a caring attitude towards patients with a general medical complaint who request emergency medical services. (A-3)
- 5-1.19 Place the interests of the patient with a general medical complaint as the foremost consideration when making any and all patient care decisions. (A-3)
- 5-1.20 Communicate with empathy to patients with a general medical complaint, as well as with family members and friends of the patient. (A-3)
- 5-1.21 Demonstrate a caring attitude towards patients with a specific medical complaint who request emergency medical services. (A-3)
- 5-1.22 Place the interests of the patient with a specific medical complaint as the foremost consideration when making any and all patient care decisions. (A-3)
- 5-1.23 Communicate with empathy to patients with a specific medical complaint, as well as with family members and friends of the patient. (A-3)
- 5-1.24 Demonstrate a caring attitude towards patients with a behavioral problem who request emergency medical services. (A-3)
- 5-1.25 Place the interests of the patient with a behavioral problem as the foremost consideration when making any and all patient care decisions. (A-3)
- 5-1.26 Communicate with empathy to patients with a behavioral problem, as well as with family members and friends of the patient. (A-3)

Psychomotor Objectives:

At the completion of this lesson, the student will be able to:

- 5-1.27 Demonstrate the steps in providing emergency medical care to a patient with a general medical complaint. (C-1)
- 5-1.28 Demonstrate the steps in providing emergency medical care to a patient with an altered mental status. (C-1)
- 5-1.29 Demonstrate the steps in providing emergency medical care to a patient with seizures. (C-1)
- 5-1.30 Demonstrate the steps in providing emergency medical care to a patient with an exposure to cold. (C-1)

- 5-1.31 Demonstrate the steps in providing emergency medical care to a patient with an exposure to heat. (C-1)
- 5-1.32 Demonstrate the steps in providing emergency medical care to a patient with a behavioral change. (C-1)
- 5-1.33 Demonstrate the steps in providing emergency medical care to a patient with a psychological crisis. (C-1)

Goal:

Lesson 5-2 Bleeding and Soft Tissue Injuries: Reviews the cardiovascular system, describes the care of the patient with internal and external bleeding, and teaches the management of soft tissue injuries and burns. Techniques of dressing and bandaging wounds will also be taught in this lesson.

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

- 5-2.1 Differentiate between arterial, venous, and capillary bleeding. (C-3)
- 5-2.2 State the emergency medical care for external bleeding. (C-1)
- 5-2.3 Establish the relationship between body substance isolation and bleeding. (C-3)
- 5-2.4 List the signs of internal bleeding. (C-1)
- 5-2.5 List the steps in the emergency medical care of the patient with signs and symptoms of internal bleeding. (C-1)
- 5-2.6 Establish the relationship between body substance isolation (BSI) and soft tissue injuries. (C-3)
- 5-2.7 State the types of open soft tissue injuries. (C-1)
- 5-2.8 Describe the emergency medical care of the patient with a soft tissue injury. (C-1)
- 5-2.9 Discuss the emergency medical care considerations for a patient with a penetrating chest injury. (C-1)
- 5-2.10 State the emergency medical care considerations for a patient with an open wound to the abdomen. (C-1)
- 5-2.11 Describe the emergency medical care for an impaled object. (C-1)
- 5-2.12 State the emergency medical care for an amputation. (C-1)
- 5-2.13 Describe the emergency medical care for burns. (C-1)
- 5-2.14 List the functions of dressing and bandaging. (C-1)

Affective Objectives:

At the completion of this lesson, the student will be able to:

- 5-2.15 Explain the rationale for body substance isolation when dealing with bleeding and soft tissue injuries. (A-3)
- 5-2.16 Attend to the feelings of the patient with a soft tissue injury or bleeding. (A-3)
- 5-2.17 Demonstrate a caring attitude towards patients with a soft tissue injury or bleeding who request emergency medical services. (A-3)
- 5-2.18 Place the interests of the patient with a soft tissue injury or bleeding as the foremost consideration when making any and all patient care decisions. (A-3)
- 5-2.19 Communicate with empathy to patients with a soft tissue injury or bleeding, as well as with family members and friends of the patient. (A-3)

Psychomotor Objectives:

At the completion of this lesson, the student will be able to:

- 5-2.20 Demonstrate direct pressure as a method of emergency medical care for external bleeding. (P-1,2)
- 5-2.21 Demonstrate the use of diffuse pressure as a method of emergency medical care for external bleeding. (P-1,2)
- 5-2.22 Demonstrate the use of pressure points as a method of emergency medical care for external bleeding. (P-1,2)
- 5-2.23 Demonstrate the care of the patient exhibiting signs and symptoms of internal bleeding. (P-1,2)
- 5-2.24 Demonstrate the steps in the emergency medical care of open soft tissue injuries. (P-1,2)
- 5-2.25 Demonstrate the steps in the emergency medical care of a patient with an open chest wound. (P-1,2)
- 5-2.26 Demonstrate the steps in the emergency medical care of a patient with open abdominal wounds. (P-1,2)
- 5-2.27 Demonstrate the steps in the emergency medical care of a patient with an impaled object. (P-1,2)
- 5-2.28 Demonstrate the steps in the emergency medical care of a patient with an amputation. (P-1,2)
- 5-2.29 Demonstrate the steps in the emergency medical care of an amputated part. (P-1,2)

Goal:

Lesson 5-3 Injuries to Muscles and Bones: Reviews the anatomy of and injuries to the musculoskeletal system. Presents information about injuries of the skeletal system. Reviews the anatomy of the nervous system and the skeletal system. Discusses injuries to the spine and head, including the mechanism of injury, signs and symptoms of injury, and assessment.

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

- 5-3.1 Describe the function of the musculoskeletal system. (C-1)
- 5-3.2 Differentiate between an open and a closed painful, swollen, deformed extremity. (C-1)
- 5-3.3 List the emergency medical care for a patient with a painful, swollen, deformed extremity. (C-1)
- 5-3.4 Relate mechanism of injury to potential injuries of the head and spine. (C-3)
- 5-3.5 State the signs and symptoms of a potential spine injury. (C-1)
- 5-3.6 Describe the method of determining if a responsive patient may have a spine injury. (C-1)
- 5-3.7 List the signs and symptoms of injury to the head. (C-1)
- 5-3.8 Describe the emergency medical care for injuries to the head. (C-1)

Affective Objectives:

At the completion of this lesson, the student will be able to:

- 5-3.9 Explain the rationale for the feeling patients who have need for immobilization of the painful, swollen, deformed extremity. (A-3)
- 5-3.10 Demonstrate a caring attitude towards patients with a musculoskeletal injury who request emergency medical services. (A-3)
- 5-3.11 Place the interests of the patient with a musculoskeletal injury as the foremost consideration when making any and all patient care decisions. (A-3)
- 5-3.12 Communicate with empathy to patients with a musculoskeletal injury, as well as with family members and friends of the patient. (A-3)

Psychomotor Objectives:

At the completion of this lesson, the student will be able to:

- 5-3.13 Demonstrate the emergency medical care of a patient with a painful, swollen, deformed extremity. (P-1,2)

Goal:

Lesson 5-4 Practical Lab: Illness and Injury: Provides practice in assessing and managing patients with traumatic injuries.

Objectives Legend

C = Cognitive P = Psychomotor A = Affective

1 = Knowledge level

2 = Application level

3 = Problem-solving level

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

- Demonstrate the cognitive objectives of Lesson 5-1: Medical Emergencies
- Demonstrate the cognitive objectives of Lesson 5-2: Bleeding and Soft Tissue Injuries
- Demonstrate the cognitive objectives of Lesson 5-3: Injuries to Muscles and Bones

Affective Objectives At the completion of this lesson, the First Responder student will be able to:

- Demonstrate the affective objectives of Lesson 5-1: Medical Emergencies
- Demonstrate the affective objectives of Lesson 5-2: Bleeding and Soft Tissue Injuries
- Demonstrate the affective of Lesson 5-3: Injuries to Muscles and Bones

Psychomotor Objectives:

At the completion of this lesson, the student will be able to:

- Demonstrate the steps in providing emergency medical care to a patient with a general medical complaint. (C-1)
- Demonstrate the steps in providing emergency medical care to a patient with an altered mental status. (C-1)
- Demonstrate the steps in providing emergency medical care to a patient with seizures. (C-1)
- Demonstrate the steps in providing emergency medical care to a patient with an exposure to cold. (C-1)
- Demonstrate the steps in providing emergency medical care to a patient with an exposure to heat. (C-1)
- Demonstrate the steps in providing emergency medical care to a patient with a behavioral change. (C-1)
- Demonstrate the steps in providing emergency medical care to a patient with a psychological crisis. (C-1)

Goal:

Lesson 5-5 Evaluation: Illness and Injury: Evaluates the student's level of achievement of the cognitive, psychomotor, and affective objectives for this module of instruction.

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

Demonstrate competence in the cognitive objectives of Lesson 5-1: Medical Emergencies

Demonstrate competence in the cognitive objectives of Lesson 5-2: Bleeding and Soft Tissue Injuries

Demonstrate competence in the cognitive objectives of Lesson 5-3: Injuries to Muscles and Bones

Affective Objectives:

At the completion of this lesson, the student will be able to:

Demonstrate competence in the affective objectives of Lesson 5-1: Medical Emergencies

Demonstrate competence in the affective objectives of Lesson 5-2: Bleeding and Soft Tissue Injuries

Demonstrate competence in the affective objectives of Lesson 5-3: Injuries to Muscles and Bones

Psychomotor Objectives:

At the completion of this lesson, the student will be able to:

Demonstrate competence in the psychomotor objectives of Lesson 5-1: Medical Emergencies

Demonstrate competence in the psychomotor objectives of Lesson 5-2: Bleeding and Soft Tissue Injuries

Demonstrate competence in the psychomotor objectives of Lesson 5-3: Injuries to Muscles and Bones

Instructional Strategies: Indicate how the Instructional Strategies support the delivery of the curriculum and the course goals. Indicate how assignments support the Anchor Standards.

This class is conducive to many teaching modalities

1. Declarative: This will be accomplished by various methods, including direct instruction, small group discussion, and the use of audio-visual materials, and demonstrations if desired.
2. Procedural (How): This is the skills portion of the class. The students should be able to demonstrate competency in all skills listed in each section. The instructor should perform demonstrations prior to having the students perform the skills.
3. Contextual (When, Where, and Why): This section is designed to help the students understand the application of their knowledge and skills relating to their performance as a healthcare provider. This section represents the reasoning as to why, where, and when a First Responder would need to use the knowledge or perform the skills.
4. Kinesthetic (Doing): Students crave hands on training This section allows the instructor to teach material by having the students perform the skill. Those students who learn best by doing will benefit from this method of instruction.
5. Simulation: One very effective method of teaching is the use of a patient care simulation in the classroom. This is actually acting out an EMS call to give the student the opportunity to respond with equipment, evaluate the scene, assess the patient, control life threats and do any of the treatments covered in the course which would be appropriate while waiting for the ambulance to arrive. Simulations give students the opportunity to demonstrate integration of the courses cognitive, affective, and psychomotor objectives into a real life scenario while working with a team of healthcare providers. This is an application which puts it all together for the student as they will find patients in the field by incorporating their ability to hear, see, and do as well as begin to emphasize teamwork and leadership skills.

Assessments: Describe the Formative and Summative assessments that will be used to demonstrate learning and mastery of the standards.

Chapter Assignments - These formative assignments help to build the students foundation for the information they will learn during the unit. Weekly assignments serve to assess and give immediate feedback to the students as to how they are progressing with content knowledge. These assignments inform the instructor as to the progress of the students and allow the instruction of the material to be adjusted, should students need remediation or if they require supplementary instruction

Quizzes -These short assignments are used as formative assessment to help the instructor understand whether or not the material covered in class is understood by the students. These are primarily used to assess what is understood by a majority of the students and what areas are in need of emphasis or reteaching

Skill Drills- These are the primary foundation for this class and indicate how well a student applies the information covered in the text, during lectures and demonstrations. These can be a quick formative assessment of their cognitive, affective, and psychomotor domains. Students will receive a skill sheets provided within the curriculum which will assist the students in preparing for field performance, the final practical evaluation and they will also be used in self and peer-evaluations

Chapter Tests and Practical Skill Test- These longer assessments are the summative portion of the units and will determine whether or not the goals for the units are understood by the students. The information will also help the teacher to redesign learning objectives for the following year and make adjustments to curriculum

Interventions: Describe methods used to support students who fail to master unit Formative and Summative assessments. Formative assessments, such as chapter review questions and quizzes, will be followed by immediate reteaching through large group discussion and peer tutoring.

If students are having difficulty understanding the content or performing the skills, the instructor should redirect them. If additional time is needed to complete this task beyond the assigned times of the program, the instructor should schedule additional assistance for the student or group of students experiencing difficulty with the task.

EDUCATIONAL SERVICES

Department: **Health Careers Academy**

Course Title: **Medical Arts and Science 3**

Course Number: **#0285**

Unit Title: **Special Patient Populations**

Content Area Standards (Please identify the source): List content standards students will master in this unit.

Source: National Emergency Medical Services Education Standards, Emergency Medical Responder Education Standards (NEMSES/EMRES), National Healthcare Foundations Standards (NHFS) and Health Science and Medical Technology Industry Sector (HSMTS)

EMRES

*Recognizes and manages life threats based on simple assessment findings for a patient with special needs while awaiting additional emergency response.

NHFS

- 1.11 Classify basic structural and functional organization of the human body (chemical, cellular, tissue, organ, and system)
- 1.13 Analyze basic structure and function of the human body
- 2.11 Interpret verbal and nonverbal communication
- 2.16 Apply speaking and active listening skills
- 2.21 Use roots, prefixes, and suffixes to communicate information
- 5.11 Analyze legal responsibilities and limitations
- 6.31 Understand religious and cultural values as they impact healthcare
- 6.32 Demonstrate respectful and empathetic interactions with diverse age, cultural, economic, ethnic, and religious groups
- 7.11 Explain principles of infection control
- 7.21 Apply personal safety procedures based on Occupational Safety and Health Administration (OSHA) and Centers for Disease Control (CDC) regulations (including standard precautions)
- 8.11 Understand roles and responsibilities of team members
- 9.11 Apply behaviors that promote health and wellness
- 10.11 Apply procedures for measuring and recording vital signs
- 10.12 Apply skills to obtain training or certification in cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid

HSMTS

- 1.2(5b) Students know organ systems function because of the contributions of individual organs and tissues, and cells. The failure of any part can affect the entire system.
- 1.2(5d) Students know how the reproductive organs of the human female and male generate egg and sperm and how sexual activity may lead to fertilization and pregnancy.
- 1.2(5e) Student know the function of the umbilicus and placenta during pregnancy.
- 2.1(9i) Students know how hormones(including digestive, reproductive, osmoregulatory) provide internal feedback mechanisms for homeostasis at the cellular level and in whole organisms

Unit Outline: A detailed descriptive summary of all topics covered in the unit. Explain what the students will learn, know and be able to do.

Module 6 Children and Childbirth

Goal:

Lesson 6-1Childbirth: Reviews the anatomical and physiological changes that occur during pregnancy. Demonstrates deliveries and newborn care.

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

- 6-1.1 Identify the following structures: birth canal, placenta, umbilical cord, amniotic sac. (C-1)
- 6-1.2 Define the following terms: crowning, bloody show, labor, abortion. (C-1)
- 6-1.3 State indications of an imminent delivery. (C-1)
- 6-1.4 State the steps in the pre-delivery preparation of the mother. (C-1)
- 6-1.5 Establish the relationship between body substance isolation and childbirth. (C-3)
- 6-1.6 State the steps to assist in the delivery. (C-1)
- 6-1.7 Describe care of the baby as the head appears. (C-1)
- 6-1.8 Discuss the steps in delivery of the placenta. (C-1)
- 6-1.9 List the steps in the emergency medical care of the mother post-delivery. (C-3)
- 6-1-10 Discuss the steps in caring for a newborn. (C-1)

Affective Objectives:

At the completion of this lesson, the student will be able to:

- 6-1.11 Explain the rationale for attending to the feeling of a patient in need of emergency medical care during childbirth. (A-2)
- 6-1.12 Demonstrate a caring attitude towards patients during childbirth who request emergency medical services. (A-3)
- 6-1.13 Place the interests of the patient during childbirth as the foremost consideration when making any and all patient care decisions. (A-3)
- 6-1.14 Communicate with empathy to patients during childbirth, as well as with family members and friends of the patient. (A-3)

Psychomotor Objectives:

At the completion of this lesson, the student will be able to:

- 6-1.15 Demonstrate the steps to assist in the normal cephalic delivery. (P-1,2)
- 6-1.16 Demonstrate necessary care procedures of the fetus as the head appears. (P- 1,2)
- 6-1.17 Attend to the steps in the delivery of the placenta. (P-1,2)
- 6-1.18 Demonstrate the post-delivery care of the mother. (P-1,2)
- 6-1.19 Demonstrate the care of the newborn. (P-1,2)

Goal:

Lesson 6-2 Infants and Children: Presents information concerning anatomical differences in infants and children, discusses common medical and trauma situations.

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

- 6-2.1 Describe differences in anatomy and physiology of the infant, child, and adult patient. (C-1)
- 6-2.2 Describe assessment of the infant or child. (C-1)
- 6-2.3 Indicate various causes of respiratory emergencies in infants and children. (C-1)
- 6-2.4 Summarize emergency medical care strategies for respiratory distress and respiratory failure/arrest in infants and children. (C-1)
- 6-2.5 List common causes of seizures in the infant and child patient. (C-1)
- 6-2.6 Describe management of seizures in the infant and child patient. (C-1)
- 6-2.7 Discuss emergency medical care of the infant and child trauma patient. (C-1)
- 6-2.8 Summarize the signs and symptoms of possible child abuse and neglect. (C-1)
- 6-2.9 Describe the medical - legal responsibilities in suspected child abuse. (C-1)
- 6-2.10 Recognize need for First Responder debriefing following a difficult infant or child transport. (C-1)

Affective Objectives:

At the completion of this lesson, the student will be able to:

- 6-2.11 Attend to the feelings of the family when dealing with an ill or injured infant or child. (A-1)
- 6-2.12 Understand the provider's own emotional response to caring for infants or children. (A-1)
- 6-2.13 Demonstrate a caring attitude towards infants and children with illness or injury who require emergency medical services. (A-3)
- 6-2.14 Place the interests of the infant or child with an illness or injury as the foremost consideration when making any and all patient care decisions. (A-3)

Goal:

Lesson 6-3 Practical Lab: Children and Childbirth: Provides the student with the opportunity to interact with infants and children and to practice the knowledge and skills learned thus far concerning this special population.

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

Demonstrate the cognitive objectives of Lesson 6-1: Childbirth

Demonstrate the cognitive objectives of Lesson 6-2: Infants and Children

Affective Objectives:

At the completion of this lesson, the student will be able to:

Demonstrate the affective objectives of Lesson 6-1: Childbirth

Demonstrate the affective objectives of Lesson 6-2: Infants and Children

Psychomotor Objectives:

At the completion of this lesson, the student will be able to:

Demonstrate the steps to assist in the normal cephalic delivery. (P-1,2)

Demonstrate necessary care procedures of the fetus as the head appears. (P-1,2)

Attend to the steps in the delivery of the placenta. (P-1,2)

Demonstrate the post-delivery care of the mother. (P-1,2)

Demonstrate the care of the newborn. (P-1,2)

Demonstrate assessment of the infant and child. (P-1,2)

Goal:

Lesson 6-4 Evaluation: Childbirth and Children: Evaluates the student's level of achievement of the cognitive, psychomotor, and affective objectives for this module of instruction.

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

Demonstrate competence in the cognitive objectives of Lesson 6-1: Childbirth

Demonstrate competence in the cognitive objectives of Lesson 6-2: Infants and Children

Affective Objectives:

At the completion of this lesson, the student will be able to:

Demonstrate competence in the affective objectives of Lesson 6-1: Childbirth

Demonstrate competence in the affective objectives of Lesson 6-2: Infants and Children

Psychomotor Objectives:

At the completion of this lesson, the student will be able to:

Demonstrate competence in the psychomotor objectives of Lesson 6-1: Childbirth

Demonstrate competence in the psychomotor objectives of Lesson 6-2: Infants and Children

Instructional Strategies: Indicate how the Instructional Strategies support the delivery of the curriculum and the course goals. Indicate how assignments support the Anchor Standards.

This class is conducive to many teaching modalities

1. Declarative: This will be accomplished by various methods, including direct instruction, small group discussion, and the use of audio-visual materials, and demonstrations if desired.
2. Procedural (How): This is the skills portion of the class. The students should be able to demonstrate competency in all skills listed in each section. The instructor should perform demonstrations prior to having the students perform the skills.
3. Contextual (When, Where, and Why): This section is designed to help the students understand the application of their knowledge and skills relating to their performance as a healthcare provider. This section represents the reasoning as to why, where, and when a First Responder would need to use the knowledge or perform the skills.
4. Kinesthetic (Doing): Students crave hands on training This section allows the instructor to teach material by having the students perform the skill. Those students who learn best by doing will benefit from this method of instruction.
5. Simulation: One very effective method of teaching is the use of a patient care simulation in the classroom. This is actually acting out an EMS call to give the student the opportunity to respond with equipment, evaluate the scene, assess the patient, control life threats and do any of the treatments covered in the course which would be

appropriate while waiting for the ambulance to arrive. Simulations give students the opportunity to demonstrate integration of the courses cognitive, affective, and psychomotor objectives into a real life scenario while working with a team of healthcare providers. This is an application which puts it all together for the student as they will find patients in the field by incorporating their ability to hear, see, and do as well as begin to emphasize teamwork and leadership skills.

Assessments: Describe the Formative and Summative assessments that will be used to demonstrate learning and mastery of the standards.

Chapter Assignments - These formative assignments help to build the students foundation for the information they will learn during the unit. Weekly assignments serve to assess and give immediate feedback to the students as to how they are progressing with content knowledge. These assignments inform the instructor as to the progress of the students and allow the instruction of the material to be adjusted, should students need remediation or if they require supplementary instruction

Quizzes - These short assignments are used as formative assessment to help the instructor understand whether or not the material covered in class is understood by the students. These are primarily used to assess what is understood by a majority of the students and what areas are in need of emphasis or reteaching

Skill Drills - These are the primary foundation for this class and indicate how well a student applies the information covered in the text, during lectures and demonstrations. These can be a quick formative assessment of their cognitive, affective, and psychomotor domains. Students will receive a skill sheets provided within the curriculum which will assist the students in preparing for field performance, the final practical evaluation and they will also be used in self and peer-evaluations

Chapter Tests and Practical Skill Test - These longer assessments are the summative portion of the units and will determine whether or not the goals for the units are understood by the students. The information will also help the teacher to redesign learning objectives for the following year and make adjustments to curriculum Practical Skills test must be performed without any assistance and pass with a 80% or better to be eligible to take the EMR State test.

Interventions: Describe methods used to support students who fail to master unit Formative and Summative assessments. Formative assessments, such as chapter review questions and quizzes, will be followed by immediate reteaching through large group discussion and peer tutoring.

If students are having difficulty understanding the content or performing the skills, the instructor should redirect them. If additional time is needed to complete this task beyond the assigned times of the program, the instructor should schedule additional assistance for the student or group of students experiencing difficulty with the task.

EDUCATIONAL SERVICES

Department: **Health Careers Academy**

Course Title: **Medical Arts and Science 3**

Course Number: **#0285**

Unit Title: **EMS Operations**

Content Area Standards (Please identify the source): List content standards students will master in this unit.

Source: National Emergency Medical Services Education Standards, Emergency Medical Responder Education Standards (NEMSES/EMRES), National Healthcare Foundations Standards (NHFS) and Health Science and Medical Technology Industry Sector (HSMTS)

EMRES

- *Knowledge of operational roles and responsibilities to ensure patient, public, and personnel safety.
- *Uses simple knowledge to recognize and manage life threats based on assessment findings for an acutely injured patient while awaiting additional emergency medical response.
- *Uses assessment information to recognize shock, respiratory failure or arrest, and cardiac arrest based on assessment findings and manages the emergency while awaiting additional emergency response.
- *Recognizes and manages life threats based on assessment findings of a patient with a medical emergency while awaiting additional emergency response.
- *Use scene information and simple patient assessment findings to identify and manage immediate life threats and injuries within the scope of practice of the EMR.
- *Applies knowledge (fundamental depth, foundational breadth) of anatomy and physiology to assure a patent airway, adequate mechanical ventilation, and respiration while awaiting EMS response for patients of all ages.
- *Uses simple knowledge of age-related differences to assess and care for patients.

NHFS

- 1.11 Classify basic structural and functional organization of the human body (chemical, cellular, tissue, organ, and system)
- 1.12 Recognize body planes, directional terms, quadrants, and cavities
- 1.13 Analyze basic structure and function of the human body
- 1.32 Analyze diagrams, charts, graphs, and tables to interpret healthcare data
- 2.11 Interpret verbal and nonverbal communication
- 2.21 Use roots, prefixes, and suffixes to communicate information
- 2.22 Use medical abbreviations to communicate information
- 2.31 Recognize elements of written and electronic communication (spelling, grammar, formatting and confidentiality)
- 4.12 Summarize basic professional standards of healthcare workers as they apply to hygiene, dress, language, confidentiality and behavior (i.e. courtesy and self-introductions)
- 4.21 Apply employability skills in healthcare
- 5.25 Analyze legislated scope of practice of healthcare professionals
- 6.11 Differentiate between ethical and legal issues impacting healthcare
- 7.21 Apply personal safety procedures based on Occupational Safety and Health Administration (OSHA) and Centers for Disease Control (CDC) regulations (including standard precautions)
- 7.31 Evaluate environment to recognize safe and unsafe working conditions
- 8.21 Recognize methods for building positive team relationships
- 10.11 Apply procedures for measuring and recording vital signs
- 10.12 Apply skills to obtain training or certification in cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid
- 11.12 Interpret information from electronic medical documents

HSMTS

- 2.0 Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts
- 2.2(2.6) Write technical documents c. Include scenarios, definitions, and examples to aid comprehension

2.4(2.3) Apply appropriate interviewing techniques

Unit Outline: A detailed descriptive summary of all topics covered in the unit. Explain what the students will learn, know and be able to do.

Module 7 EMS Operations

Goal:

Lesson 7-1 EMS Operations: Presents an overview of the knowledge needed to function as a First Responder in the out-of-hospital environment. In addition this lesson provides the First Responder student with an overview of extrication and rescue operations and information on hazardous materials, mass casualty situations, and basic triage.

Cognitive Objectives:

At the completion of this lesson, the student will be able to:

- 7-1.1 Discuss the medical and non-medical equipment needed to respond to a call. (C-1)
- 7-1.2 List the phases of a out-of-hospital call. (C-1)
- 7-1.3 Discuss the role of the First Responder in extrication. (C-1)
- 7-1.4 List various methods of gaining access to the patient. (C-3)
- 7-1.5 Distinguish between simple and complex access. (C-3)
- 7-1.6 Describe what the First Responder should do if there is reason to believe that there is a hazard at the scene. (C-1)
- 7-1.7 State the role the First Responder should perform until appropriately trained personnel arrive at the scene of a hazardous materials situation. (C-1)
- 7-1.8 Describe the criteria for a multiple-casualty situation. (C-1)
- 7-1.9 Discuss the role of the First Responder in the multiple-casualty situation. (C-3)
- 7-1.10 Summarize the components of basic triage. (C-1)

Affective Objectives:

At the completion of this lesson, the student will be able to:

- 7-1.11 Explain the rationale for having the unit prepared to respond. (A-3)

Psychomotor Objectives:

At the completion of this lesson, the student will be able to:

- 7-1.12 Given a scenario of a mass casualty incident, perform triage. (P-2)

Goal:

Lesson 7-2 Evaluation: EMS Operations: Evaluates the student's level of achievement of the cognitive, psychomotor, and affective objectives for this module of instruction.

Cognitive Objectives

At the completion of this lesson, the student will be able to:

Demonstrate competence in the cognitive objectives of Lesson 7-1: EMS Operations

Affective Objectives:

At the completion of this lesson, the student will be able to:

Demonstrate competence in the affective objectives of Lesson 7-1: EMS Operations

Psychomotor Objectives:

At the completion of this lesson, the student will be able to:

Demonstrate competence in the psychomotor objectives of Lesson 7-1: EMS Operations

Instructional Strategies: Indicate how the Instructional Strategies support the delivery of the curriculum and the course goals. Indicate how assignments support the Anchor Standards.

This class is conducive to many teaching modalities

1. Declarative: This will be accomplished by various methods, including direct instruction, small group discussion, and the use of audio-visual materials, and demonstrations if desired.
2. Procedural (How): This is the skills portion of the class. The students should be able to demonstrate competency in all skills listed in each section. The instructor should perform demonstrations prior to having the students perform the skills.
3. Contextual (When, Where, and Why): This section is designed to help the students understand the application of their knowledge and skills relating to their performance as a healthcare provider. This section represents the reasoning as to why, where, and when a First Responder would need to use the knowledge or perform the skills.
4. Kinesthetic (Doing): Students crave hands on training This section allows the instructor to teach material by having the students perform the skill. Those students who learn best by doing will benefit from this method of instruction.
5. Simulation: One very effective method of teaching is the use of a patient care simulation in the classroom. This is actually acting out an EMS call to give the student the opportunity to respond with equipment, evaluate the scene, assess the patient, control life threats and do any of the treatments covered in the course which would be appropriate while waiting for the ambulance to arrive. Simulations give students the opportunity to demonstrate integration of the courses cognitive, affective, and psychomotor objectives into a real life scenario while working with a team of healthcare providers. This is an application which puts it all together for the student as they will find patients in the field by incorporating their ability to hear, see, and do as well as begin to emphasize teamwork and leadership skills.

Assessments: Describe the Formative and Summative assessments that will be used to demonstrate learning and mastery of the standards.

Chapter Assignments - These formative assignments help to build the students foundation for the information they will learn during the unit. Weekly assignments serve to assess and give immediate feedback to the students as to how they are progressing with content knowledge. These assignments inform the instructor as to the progress of the students and allow the instruction of the material to be adjusted, should students need remediation or if they require supplementary instruction

Quizzes - These short assignments are used as formative assessment to help the instructor understand whether or not the material covered in class is understood by the students. These are primarily used to assess what is understood by a majority of the students and what areas are in need of emphasis or reteaching

Skill Drills - These are the primary foundation for this class and indicate how well a student applies the information covered in the text, during lectures and demonstrations. These can be a quick formative assessment of their cognitive, affective, and psychomotor domains. Students will receive a skill sheets provided within the curriculum which will assist the students in preparing for field performance, the final practical evaluation and they will also be used in self and peer-evaluations

Chapter Tests and Practical Skill Test - These longer assessments are the summative portion of the units and will determine whether or not the goals for the units are understood by the students. The information will also help the teacher to redesign learning objectives for the following year and make adjustments to curriculum Practical Skills test must be performed without any assistance and pass with a 80% or better to be eligible to take the EMR State test.

Interventions: Describe methods used to support students who fail to master unit Formative and Summative assessments.

Formative assessments, such as chapter review questions and quizzes, will be followed by immediate reteaching through large group discussion and peer tutoring.

If students are having difficulty understanding the content or performing the skills, the instructor should redirect them. If additional time is needed to complete this task beyond the assigned times of the program, the instructor should schedule additional assistance for the student or group of students experiencing difficulty with the task.

EDUCATIONAL SERVICES

Medical Arts and Science 3

First Semester

This course is designed to introduce students to the level of First Responders (EMR), which serves as a vital link in the chain of health care team. This curriculum includes skills necessary for the individual to provide emergency medical care with a limited amount of equipment. Specifically, after successful completion of the program, the student will be capable of performing the following functions at the minimum entry level:

- Recognize the seriousness of the patient's condition or extent of injuries to assess requirements for emergency medical care;
- Administer appropriate emergency medical care for life threatening injuries relative to airway, breathing and circulation;
- Perform safely and effectively the expectations for the job description

First Responders provide a service in an environment requiring special skills and knowledge. They also serve as liaisons with other emergency services. This course provides an introduction to these concepts. Individual orientation to the specific systems and services with which the First Responder will be affiliated is necessary to achieve a full level of competency within a specific organization.

The entire curriculum is surrounded by continuing education, which is designed to reflect two primary goals. First, during the instruction of the First Responder; National Standard Curriculum, additional continuing education in related content may be provided. Second, continuing education is an integral component of any educational process and the First Responder should be committed to continuous improvement of knowledge and skills.

Second Semester

The second semester will be concentrated on internships. The previous two years of the Health Careers Academy have been preparing the students for internships, workforce readiness and career options. They have also been introduced to some of the top skills employers are seeking such as behavior at work, workplace etiquette, workplace ethics and health and safety on the job. Students will be expected to both learn and follow classroom expectations, uniform policies, and job sites policies in the classroom and internship settings.