Emergency Medical Technician for Mining

West Virginia

CHAPTER 22A. MINERS' HEALTH, SAFETY AND TRAINING.
ARTICLE 10. EMERGENCY MEDICAL PERSONNEL.

§22A-10-1. Emergency personnel in coal mines.

(a) Emergency medical services personnel must be employed on each shift at every mine that:

(1) Employs more than ten employees; and

(2) Has more than eight persons present on the shift.

The emergency medical services personnel must be employed at their regular duties at a central location or, when more than one person is required pursuant to the provisions of subsection (b) of this section, at a location which provides for convenient, quick response to emergency. The emergency medical services personnel must have available to them at all times such equipment prescribed by the director of the office of miners' health, safety and training, in consultation with the commissioner of the bureau of public health.

(b) After the first day of July, two thousand, emergency medical services personnel means any person certified by the commissioner of the bureau of public health or authorities recognized and approved by the commissioner to provide emergency medical services as authorized in article four-c, chapter sixteen of this code and including emergency medical technician-mining. At least one emergency medical services personnel shall be employed at a mine for every fifty employees or any part thereof who are engaged at any time, in the extraction, production or preparation of coal.

(c) A training course designed specifically for certification of emergency medical technician-mining, shall be developed at the earliest practicable time by the commissioner of the bureau of public health in consultation with the board of miner training, education and certification. The training course for initial certification as an emergency medical technician-mining shall not be less than sixty hours, which shall include, but is not limited to, basic life support skills and emergency room observation or other equivalent practical exposure to emergencies as prescribed by the commissioner of the bureau of public health.

(d) The maintenance of a valid emergency medical technician-mining certificate may be accomplished without taking a three -year recertification examination: *Provided*, That the emergency medical technician-mining personnel completes an eight-hour annual retraining and testing program prescribed by the commissioner of the bureau of public health in consultation with the board of miner training, education and certification.

§22A-10-2. First-aid training of coal mine employees.

Each coal mine operator shall provide every new employee within six months of the date of employment with the opportunity for first-aid training as prescribed by the director of the office of miners' health, safety and training unless such employee has previously received such training. Each coal mine employee shall be required to take refresher first-aid training of not less than five hours within each twenty-four months of employment. The employee shall be paid regular wages, or overtime pay if applicable, for all periods of first-aid training.

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West Virginia Department of Health and Human Resources
350 Capitol Street
Room 425
Charleston WV, 25301

Toll Free: 1-888--747-8367
OEMS Phone: (304) 558-3956
OEMS Fax: (304) 558-8379
Trauma Phone: (304) 558-7124
Trauma Fax: (304) 558-7125

EMT-Miner Certification Program

EMT-Miners must complete an EMT-Miner application and submit it to the Office of Emergency Medical Services.

Related files

- EMT-Miner application
- Replacement card/name change form
- Group Payment

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West Virginia Department of Health and Human Resources
State Trauma and Emergency Care System
Office of Emergency Medical Services

(Please print or type)

WV EMT-Miner Personnel Application

(Please print or type)

Type of Application (check all that apply)

☐ EMT-Miner * 60-Hour $25	☐ EMT-Miner * Recertification 32-Hour $25	☐ EMT-Miner * Recertification 8 Hour $25	* Copy of your current CPR card must be attached.
☐ Replacement Card $5	☐ Name Change (legal documentation must be attached) $5		

Last Name:		First:	MI:	DOB:
SS #:	☐ Male ☐ Female	Phone: (H)	(W)	(C)
Mailing Address:		Email Address:		
City:		County:	State:	Zip:

Professional Certification Background

Do you pay child support? ☐ Yes ☐ No **If Yes**, what state(s):

If Yes, are you more than six (6) months in arrears of your payments? ☐ Yes ☐ No

Failure to fully and truthfully complete this application will result in your application being rejected or certification delayed or refused.

I affirm that I meet all requirements for certification as an EMT-Miner, and do hereby swear the information given on this application is true and correct.

Applicant's Signature: _____ Date: _____

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EMS Training

Emergency Medical Technician:
This 150 hour minimum program is the basic level of EMT care by the West Virginia Office of Emergency Medical Services. This class meets the National Standards Curriculum. The EMT candidate must successfully complete the program, complete required clinical time, complete the practical skills testing, and obtain a passing score on the WVOEMS state option test or the computer based National Registry exam. Certification will be good for 2 years and is recertified by completing a refresher course.

Emergency Medical Technician Refresher:
This is a 27 hour program designed to re-certify WV EMTs. Participants must submit a completed CE Form to be eligible for testing. Successful completion of this course requires the student to complete a practical skills evaluation. The written evaluation from WVOEMS is used to determine the amount of CE needed for the next recertification.

Emergency Medical Technician -Miner:
This course mirrors the EMT-B course with a special emphasis on the care of the injured in mining incidents. This course is 60 hours in length.
To receive certification from WVOEMS candidates must score 70 on the state written test and pass practical skills evaluations. Original certification is for 3 years. An annual 8 hour refresher course maintains certification.

Emergency Medical Responder (formerly called First Responder):
This course emphasizes the skills needed to provide basic emergency care during the first phases of an emergency. The course is 72 hours of classroom and practical training in all aspects of initial response to a medical emergency. This course requires successful completion of a written test and practical exam for certification as a First Responder. Recertification is required every two years.

Infection Control:
This class will provide the students with a working knowledge of infection control and transmission of disease. This course is 3 hours long and is recommended for all facilities with EMS responders and for those industries that may have housekeeping or maintenance personnel. It is recommended this course be administered annually.

-Click this link to visit the WV State Office of Emergency Medical Services-

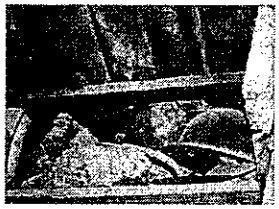
Click this link for the EMS National Education Standards

SchoolInSites

EMT Mining Courses in West Virginia

By Darlene 'Dee' Bishop, eHow Contributor, *last updated August 28, 2014*

Emergency Medical Technician (EMT) mining courses train emergency workers to assist specifically in mining-related accidents or in areas where mining is a dominant industry. EMT courses typically offer certificates designed to validate graduates' training and skills assessment and to help them find a job where their knowledge can be used to help others.



Pierpont Community & Technical College

Pierpont Community & Technical College offers an EMT-Mining (EMT-M) course for students interested in acquiring the skills and knowledge necessary to provide basic medical care in mining-related emergency situations.

The 75-hour course includes learning to perform simple medical procedure,s such as taking blood pressure and other vital signs, learning to communicate a patient's medical status to expert emergency personnel, and learning to safely transport emergency victims for medical care.

The course is compliant with the United States Department of Transportation EMT-M curriculum, as well as the national standard for EMTs.

Pierpont Community & Technical College
1201 Locust Ave.
Fairmont, WV 26554
304-367-4892
800-641-5678 (toll free)
pierpont.edu

West Virginia Office of Emergency Medical Services

The West Virginia Office of Emergency Medical services (EMS) offers a 60-hour EMT-M training course.

In compliance with the West Virginia Division of Health Legislative Rules, applicants must be at least 18 years old; successfully pass the required EMT training and demonstrate the required skills needed to handle mining-related emergency situations; be able to clearly speak and easily understand English; be able to lift and carry at least 125 pounds; be able to read, write and comprehend written English; show physical

dexterity to perform job skills as required; be able to operate a motor vehicle in West Virginia; and be able pass a drug screen and background check.

Students must also maintain a current CPR certification card and complete periodic recertification to maintain licensing.

West Virginia Office of Emergency Medical Services
350 Capitol St., Room 425
Charleston, WV 25301
304-558-3956
wvoems.org

West Virginia University

The West Virginia University College of Engineering and Mineral Resources (CEMR) offers an EMT Certification for Mining course as part of its emergency preparedness program.

The program includes classroom instruction as well as off-campus training. Field instructors are those who know coal mining first-hand and who work with others in the CEMR to research necessary skills and provide training to certify emergency workers in the industry.

Students must meet minimal GPA and ACT/SAT scores.

West Virginia University
College of Engineering and Mineral Resources
PO Box 6070
Morgantown, WV 26506
304-293-4821
cemr.wvu.edu

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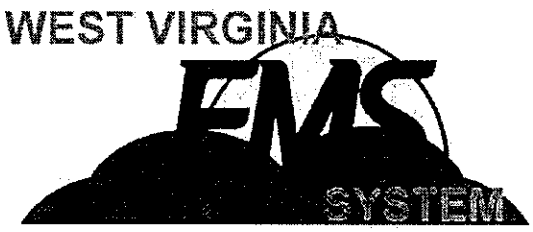

West Virginia Department of Health and Human Resources
Bureau for Public Health
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Acknowledgments

From the very beginning of this revision project, the West Virginia Office of Emergency Medical Services relied on the knowledge, attitudes and skills from individuals within the mining, educational and EMS community. These individuals brought their own level of involvement and contribution toward accomplishing the goals of this project. These contributions varied from individual to individual, and regardless of the level of involvement, everyone played a significant role in the development of this curriculum. It is essential that those who have assisted with the achievement of this worthy endeavor be recognized for their efforts. For all who have contributed, name and unnamed, thank you for sharing your vision. Your efforts have helped assure that the educational and training needs of Emergency Medical Technician Miners are met so that they can provide appropriate and effective patient care.

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Cardiopulmonary Resuscitation

This curriculum contains many of the knowledge and skill objectives of cardiopulmonary resuscitation. In order to maintain an up-to-date curriculum, the didactic material has not been reproduced. Instructors must utilize the current *American Heart Association Guidelines* and teaching strategies as the basis for instruction in Module 1: Circulation and/or its approved equivalent as well as Module 2: Airway. In some states or EMS systems, issuance of a "successful completion" card for CPR may be required to practice as an EMT Miner. Meeting the objectives of this program provides the EMT Miner with the ability to perform CPR; but the program does not contain all of the prevention and recognition material within the guidelines established by the American Heart Association. During the program, if issuance of a CPR card is desirable or required, additional information must be added to the program. Testing and/or other course requirements for issuance of a specific agency's CPR card will need to be completed within the EMT Miner Training Program. Requirements for issuing a successful completion card may be obtained from the local CPR training agency or your Regional Public Service Training Coordinator.

Curriculum

Curriculum

History

In 2004, the West Virginia Office of Emergency Medical Services (WVOEMS) Curriculum and Education Committee appointed a subcommittee to review the existing educational program that was currently used to educate EMTs to provide emergency medical care in the mining environment. As the Committee continued to assess the training curriculum, it became apparent that what was being instructed may not be meeting the needs of the personnel performing basic rescue and emergency care in the mining environment. Furthermore, the supplemental material which was used in the instruction process was not necessarily reflective of terminology and safety equipment used in the industry today.

A thorough review was conducted of the existing curriculum. It was determined that trends in the provision of emergency medical care had changed since the last revision of the training used throughout the mining community. Therefore, the Curriculum and Educational Committee opted to review the entire curriculum, seeking out the weak points and reinforcing it with educational objectives that would better meet the needs of the industry. The results of that review has resulted in the production of a new standard curriculum that we, as EMS educators, feel will be better received in the mining community and make the EMT Miner better prepared to face the needs of those who work in the mining industry.

Course Goals

This instructor's course guide has been designed and developed to assist the course coordinator, instructors and others in planning, managing and teaching the State of West Virginia, Office of Emergency Medical Services *Emergency Medical Technician: Mining Curriculum*. The goals and objectives of this curriculum are to improve the quality of emergency medical care.

This course is designed to instruct a student to the level of Emergency Medical Technician Miner, who serves as a vital link in the chain of the 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:

1. Recognize the seriousness of the patient's condition or extent of injuries to assess requirements for emergency medical care;

2. Administer appropriate emergency medical care for life-threatening injuries relative to airway, breathing and circulation;

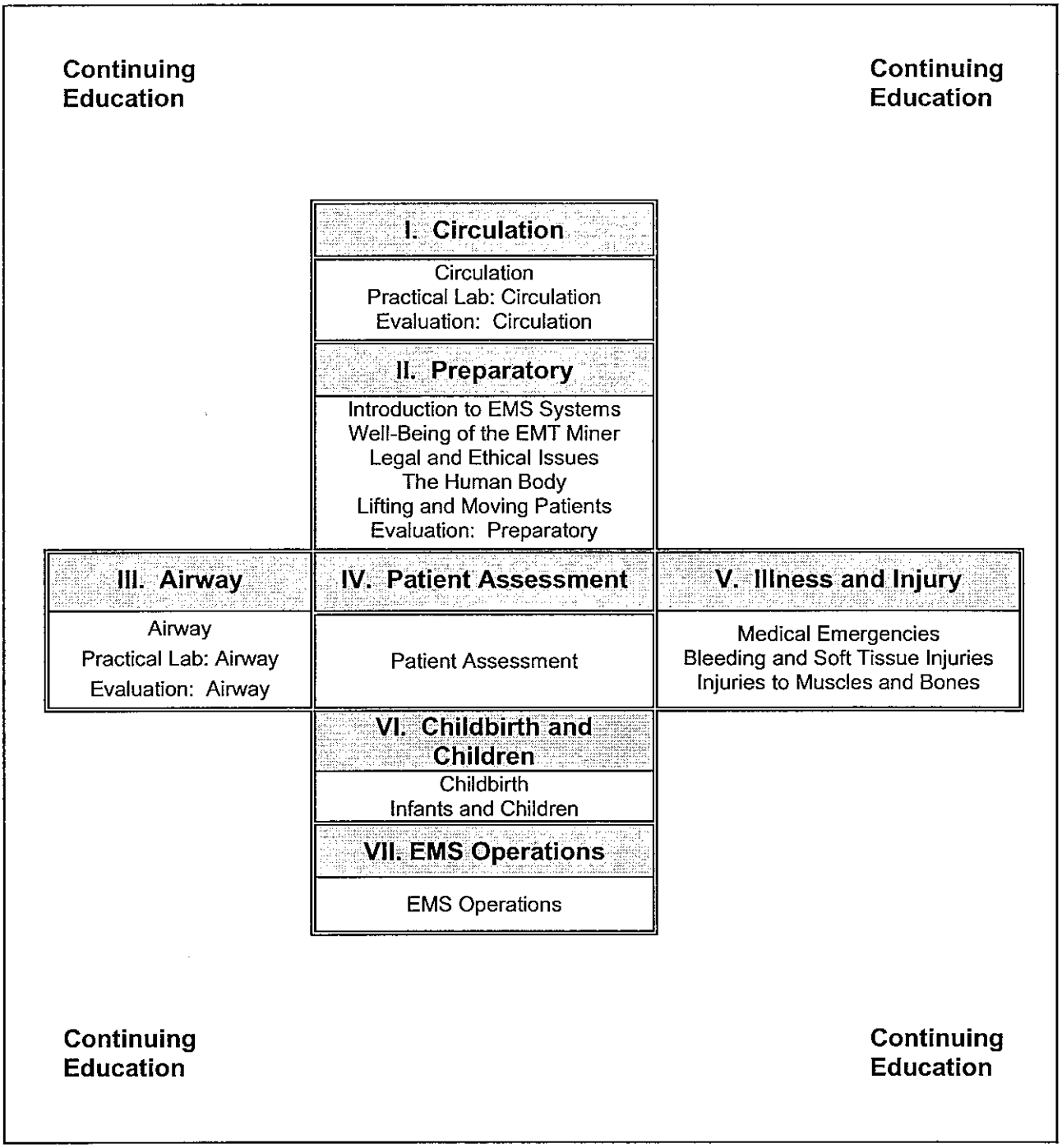
3. Perform safely and effectively the expectations of the job description.

It is obvious that Emergency Medical Technician Miners 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 the Emergency Medical Technician Miner 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 Emergency Medical Technician Miner curriculum, additional continuing education in related content may be provided. Second, continuing education is an integral component of any educational process and the Emergency Medical Technician Miner should be committed to continuous improvement of knowledge and skills.

EMT Miner: West Virginia Standard Curriculum

Diagram of Educational Model



Course Design

Module 1: Circulation

Lesson 1-1
Circulation Objectives

Objectives Legend

C = Cognitive	1 = Knowledge level
P = Psychomotor	2 = Application level
A = Affective	3 = Problem-solving level

Cognitive Objectives - At the completion of this lesson, the EMT Mining student will be able to:

1-1.1 List the reasons for the heart to stop beating (C-1).

1-1.2 Define the components of cardiopulmonary resuscitation (C-1).

1-1.3 Describe each link in the chain of survival and how it relates to the EMS system (C-2).

1-1.4 List the steps of one-rescuer adult CPR (C-1).

1-1.5 Describe the technique of external chest compressions on an adult patient (C-1).

1-1.6 Describe the technique of external chest compressions on an infant (C-1).

1-1.7 Describe the technique of external chest compressions on a child (C-1).

1-1.8 Explain when the EMT Miner is able to stop CPR (C-2).

1-1.9 List the steps of two-rescuer adult CPR (C-1).

1-1.10 List the steps of infant CPR (C-1).

1-1.11 List the steps of child CPR (C-1).

Affective Objectives - At the completion of this lesson, the EMT Miner student will be able to:

1-1.12 Respond to the feelings that the family of a patient may be having during a cardiac event (A-3).

1-1.13 Demonstrate a caring attitude towards patients with cardiac events who request emergency medical services (A-3).

1-1.14 Place the interests of the patient with a cardiac event as the foremost consideration when making any and all patient care decisions (A-3).

1-1.15 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 EMT Miner student will be able to:

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

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

1-1.18 Demonstrate the proper technique of chest compressions on an infant (P-1, 2).

1-1.19 Demonstrate the steps of adult one rescuer CPR (P-1, 2).

1-1.20 Demonstrate the steps of adult two rescuer CPR (P-1, 2).

1-1.21 Demonstrate child CPR (P-1, 2).

1-1.22 Demonstrate infant CPR (P-1, 2).

Module 2: Preparatory

Lesson 2-1
Introduction to EMS Systems

Familiarizes the EMT Miner candidate with the introductory aspects of emergency medical care. Topics include the emergency medical services system, roles and responsibilities of the EMT Miner, quality improvement and medical oversight.

Lesson 2-2
Well-Being of the EMT Miner

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 EMT Miner.

Lesson 2-3
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.

Lesson 2-4
The Human Body

Enhances the EMT Miner knowledge of the human body. A brief overview of body systems, anatomy and physiology will be given in this session.

Lesson 2-5
Lifting and Moving Patients

Provides students with knowledge of body mechanics, lifting and carrying techniques, and principles of moving patients.

Lesson 2-6
Evaluation: Preparatory

Evaluates the student's level of achievement of the cognitive, psychomotor and affective objectives for this module of instruction.

Module 3: Airway

Lesson 3-1
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.

Lesson 3-2
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.

Lesson 3-3
Evaluation: Airway

Evaluates the student's level of achievement of the cognitive, psychomotor and affective objectives for this module of instruction.

Module 4: Patient Assessment

Lesson 4-1
Patient Assessment

Enhances the EMT Miner'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.

Lesson 4-2
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.

Lesson 4-3
Evaluation: Patient Assessment

Evaluates the student's level of achievement of the cognitive, psychomotor and affective objectives for this module of instruction.

Module 5: Illness and Injury

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.

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.

Lesson 5-3
Injuries to the Head and Spine

Reviews the anatomy of the nervous system and the skeletal system. Injuries to the spine and head, including mechanism of injury, signs and symptoms of injury, and assessment. Emergency medical care, including the use of cervical immobilization devices and short and long back boards will also be discussed and demonstrated by the instructor and students. Other topics include helmet removal and infant and child considerations.

Lesson 5-4
Practical Lab: Illness and Injury

Provides practice in assessing and managing patients with traumatic injuries.

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.

Module 6: Children and Childbirth

Lesson 6-1
Childbirth

Reviews the anatomical and physiological changes that occur during pregnancy. Demonstrates deliveries and newborn care.

Lesson 6-2
Infants and Children

Presents information concerning anatomical differences in infants and children, discusses common medical and trauma situations.

Lesson 6-3
Practical Lab: Children and Childbirth

Provides the EMT Miner candidate with the opportunity to interact with infants and children and to practice the knowledge and skills learned thus far concerning this special population.

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.

Module 7: EMS Operations

Lesson 7-1
EMS Operations

Presents an overview of the knowledge needed to function as an EMT Miner in the out-of-hospital environment. In addition, this lesson provides the EMT Miner student with an overview of extrication and rescue operations and information on hazardous materials, mass casualty situations and basic triage.

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.

How to Use the Curriculum and Lesson Plans

There are seven modules of instruction in the core content. There are 26 lessons within the seven modules. Each lesson includes the following components: objectives, preparation, presentation, application, evaluation, remediation and enrichment.

Objectives

The objectives are divided into three categories: Cognitive, Affective, and Psychomotor.

Cognitive	Affective	Psychomotor
thinking	**emotional response**	**physical process**
▪ knowledge	▪ feelings	▪ physical movement
▪ comprehension	▪ emotional intensity	▪ skilled activities
▪ application		

To assist with the design and development of a specific lesson, each objective has a numerical value, e.g., 3-1.1. The first number is the module of instruction, followed by a hyphen and the number of the specific lesson. For example, 3-1.1 is:

Module 3:	Patient Assessment
Lesson 3-1:	Patient Assessment
Objective 3-1.1	Recognize hazards/potential hazards (C-1)

At the end of each objective is a letter for the type of objective: C = Cognitive; A = Affective; and P = Psychomotor. The example above is cognitive.

The number following the type of objective represents the level of objective: 1 = Knowledge; 2 = Application; and 3 = Problem-Solving. The example above is knowledge.

Preparation

Motivation - Each lesson has a motivational statement that should be read by the instructor prior to teaching the lesson. It is not the intent for the instructor to necessarily read the motivational statement to the students, but more importantly to be familiar with its content and to be able to prepare the students or explain why this lesson is important.

Prerequisites - Prior to starting a lesson, the instructor should assure that the students have completed the necessary prerequisites.

Materials - Audio Visual (AV) Equipment -- In recent years, high quality video materials have become available for the EMS community. They should be used as an integral part of the instruction in this program. The course coordinator should ensure in advance that the necessary types of AV equipment are available for the class. If possible, the course administrator should have a video library available for the student.

Emergency Medical Services (EMS) Equipment - Each lesson plan contains a list of equipment that should be available for instruction.

Personnel - Program personnel are a primary instructor and an assistant instructor. Their roles of the program personnel are discussed in more detail under Program Personnel.

Recommended Minimum Time to Complete - Each lesson plan has a recommended minimum time for completion. Although the time for each lesson has been pilot tested, because of the varying nature of adult learners, the enrichment and the need for remediation may require additional time. Time limits may be extended to bring the students to the full level of competency.

Presentation

Declarative (What) - This is the cognitive lesson plan, the information that the instructor provides the students. This may be accomplished by various methods, including lectures, small group discussion and the use of audio-visual materials. Demonstrations, if the instructor desires, may be used as part of the instruction. The instructor must be well-versed in the entire content of the lesson plan. It is not appropriate to read the lesson plans word for word to the students. Lesson plans should be considered dynamic documents that provide guidelines for the appropriate flow of information. The instructor's lesson plans should be based upon local practice, national standards and scientific evidence approved by the Course Medical Director. The instructor should feel free to write notes in the margins and make the lesson plan his own.

Application

Procedural (How) - This is the skills portion of the program. The students should be able to demonstrate competency in all skills listed in each section. If the declarative (what) content was presented as a lecture, the instructor should perform demonstrations prior to having the students perform the skills. If the instructor performed a demonstration as part of the declarative component, the students may begin by practicing skills in the practical setting.

When this component of the lesson is being conducted, there should be one instructor for every six students. Students should be praised for their progress. For those students having difficulty performing a skill or skills, remediation is required. It is well known that a demonstration must be followed by practice, which must be drilled to a level that assures mastery of the skill. It has been proven that demonstration followed as soon as possible by organized, supervised practice enhances mastery and successful applications.

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 an EMT Miner. This section relates back to the motivational statement and represents the reasoning as to why, where, and when an EMT Miner would need to use the knowledge or perform the skills. It is of utmost importance that the instructor be familiar with the intent of this section and relay that intent to the students.

Student Activities - Students learn by various methods. The three learning styles are auditory, visual and kinesthetic (A-V-K). The intent of this section is to ensure that the content of the curriculum is presented to meet the needs of the three different types of learning styles. These three areas should not necessarily be used separately from the lesson plan, but as an adjunct to it. An attempt to provide instruction to the student with these three types of modalities will enhance student learning. Instructors should feel free to add additional A-V-K experiences appropriate for each lesson.

Auditory (Hearing) - This section allows the instructor to provide material in an orally. Students who learn best by hearing will benefit from this method of instruction.

Visual (Seeing) - This section allows the instructor to provide material visually. Visual learners will benefit from this method of instruction.

Kinesthetic (Doing) - 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.

Instructor Activities - This section is to remind the instructors that they should always supervise student practice and praise progress. They should reinforce student progress in cognitive, affective, and psychomotor domains. 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 complete a remediation form to schedule additional assistance for the student or group of students experiencing difficulty with the task.

Evaluation

Written - The instructor should design and develop various quizzes, verbal reviews, handouts and any other desired materials for the students. Ideally, the instructor should provide a brief quiz after every lesson to determine if the students are comprehending the material.

Practical - The instructor should provide students with practical evaluations when applicable. The skill sheets provided within the curriculum will assist the students in preparing for field performance and the final practical evaluation. State EMS Offices and program personnel should work together to determine minimum performance for successful course completion.

Remediation

The intent of this section is to ensure that the instructor meets the needs of those students who are experiencing difficulty understanding the material or performing practical skills. Remediation sheets supplied in this guide will enable the instructor to keep track of those students. If a student requires remediation frequently, a decision should be reached as to whether the student should continue in the program (see Appendix B for remediation sheet).

Enrichment

This section is designed to allow the instructors, the course medical director, the course coordinator, the region or state to add additional information or augment the curriculum. Anything that is unique to your area should be added. Refer to Appendix A for an Enrichment Lesson Plan.

Instructors

Instructors

Assessing Student Achievement

This training program includes several methods for assessing student achievement. As mentioned before, quizzes of the cognitive and affective domains should be provided at the completion of each lesson. Time is allocated at the end of each module of instruction for a cognitive and psychomotor evaluation. The primary instructor in conjunction with the course coordinator, program director and course medical director is responsible for the design, development, administration and grading of all written and practical examinations. The instructor should feel free to use outside agency-approved psychomotor evaluation instruments or those found in texts. All written examinations used within the program should be valid and reliable and conform to psychometric standards. Instructors should be encouraged to use outside sources to validate examinations and/or as a source of classroom examination items.

The primary purpose of this course is to prepare students to meet the entry-level job expectations for an EMT Miner. Each student, therefore, must demonstrate attainment of knowledge, attitude and skills in each area taught in the course. It is the responsibility of the course coordinator, medical director, primary instructor and educational institution to assure that students obtain proficiency in each module of instruction before they proceed to the next area. If after counseling and remediation a student is not able to demonstrate the ability to learn specific knowledge, attitudes, and skills, the program director should not hesitate to dismiss the student. The level of knowledge, attitude and skills attained by a student in the program will be reflected in performance on the job as an EMT Miner. It is not the responsibility solely of the certifying examination to assure competency over successful completion of the course. Program directors should recommend only qualified candidates for licensure, certification or registration.

Requirements for successful completion of the course are as follows:

Cognitive - Students must obtain passing grades on all module examinations and the final examination. Special remedial sessions may be utilized to assist in the completion of a lesson or module of instruction. Scores should be in accordance with accepted practices.

Affective - Students must demonstrate conscientiousness and interest in the program. Students who do not should be counseled while the course is in progress in order to provide them the opportunity to develop and exhibit the proper attitude expected of an EMT Miner.

Psychomotor - Students must demonstrate proficiency in all skills in each testing session of selected topic areas and mastery of skills in the final examination. Special remedial sessions may be utilized to assist in the completion of a lesson or module of instruction. Pass/fail scores should be in accordance with accepted practices. Usage of the skill measurement instruments within this curriculum or developed by way of a valid process is strongly recommended to achieve maximum results with the students.

The additional areas that should be utilized for evaluation of student achievement include:

Personal Appearance - Each student should be neat, clean, well groomed and physically fit to perform the minimal entry-level job requirements. Students who do not exhibit good hygiene habits should be counseled while the program is in session to provide them with the opportunity to correct the habits.

Attendance - Students are required to attend all lessons. At the discretion of the program director or designee, a student missing a lesson may demonstrate the fulfillment of all cognitive, affective, and psychomotor objectives covered in the missed lesson.

Program Personnel - There are several sets of responsibilities required to present the EMT Miner program. These identified roles and responsibilities are a necessary part of each EMT Miner course. The individuals carrying them out may vary from program to program and from locality to locality as the roles may interface and overlap. In fact, one person, if qualified, may carry out all of the roles in some programs. For clarity, the following terms are defined as they will be used throughout this document.

Program Director - The program director is responsible for course planning, operation, and evaluation. While the Program Director is responsible for the overall operation of the education experience, this person need not be qualified or involved in the actual instruction of specific course lessons. The Program Director is responsible for EMT Miner course planning.

Course Coordinator - The Course Coordinator is the individual responsible for coordinating and conducting the EMT Miner Program. The Course Coordinator acts as the liaison among the students, the sponsoring agency, the local medical community and the state-level certifying or licensing agency and is responsible for assuring that the course goals and objectives (and those set forth by any licensing, registering, or certifying agency as applicable) are met. The Course Coordinator may also serve as the Primary Instructor.

Primary Instructor - The Primary Instructor must be knowledgeable in all aspects of out-of-hospital emergency medical care, in the techniques and methods of adult education and in managing resources and personnel. This

individual should have attended and successfully completed a program in EMS instruction methodology. The Primary Instructor should be present at most, if not all, class sessions to assure program continuity and to be able to identify that the students have the cognitive, affective and psychomotor skills necessary to function as an EMT Miner. This person is responsible for the teaching of a specific lesson of the EMT Miner course. This individual should have attended a workshop that reviews the format, philosophy, and skills of the new curriculum.

Assistant Instructor - This person assists the Primary Instructor of any lesson in the demonstration and practice designed to develop and evaluate student skill competencies.

Philosophy Regarding Adult Learners

Individuals participating in this educational program should be considered adult learners even in those programs instructing students younger than age 18. Adult learners are responsible for their own learning. There are several characteristics regarding the adult learner as an EMT Miner student.

1. EMT Miner students usually want to utilize knowledge and skills they have learned soon after they have learned them.

2. EMT Miner students are interested in learning new concepts and principles; they enjoy situations that require problem-solving, not necessarily learning facts. It is less difficult for them to use the concepts and principles they have gained if they are able to participate actively in the learning process.

3. EMT Miner students learn best if they are able to proceed at their own pace.

4. Motivation is increased when the content is relevant to the immediate interests and concerns of the EMT Miner student.

5. Immediate feedback is essential to the EMT Miner student, who needs to be kept informed of progress continuously.

One intent of this revised curriculum is to alter the methods of instruction used by the instructor. This curriculum has been designed and developed to reduce the amount of lecture time and move towards an environment of discussion and practical skills. This way both learners and instructors are active in the process of learning.

Some Principles of Adult Education

Attract and maintain the attention of the EMT-M student - If instructors get off to a bad start, it is often because they are not able to successfully gain and maintain the attention of the student. In these situations, students may be enthusiastic when they arrive and disappointed when they leave.

A clear statement of the purpose of each lesson is of utmost importance in gaining the student's attention. This may be accomplished by using the information found in the motivational statement or the contextual statement of the lesson plan.

There are many methods that may be used to gain the student's attention, e.g., telling a relevant anecdote, posing a unique situation, or asking how they would solve a problem. Once the attention of the student is gained, it must be maintained throughout the entire lesson. After about 15-20 minutes of presentation, it is essential that the student be re-involved in the learning process. Three methods are often utilized to keep the students active in the process: questioning, brainstorming and demonstration.

Questions should be used to promote thought, to evaluate what has been learned, and to continuously move students toward their desired goal. Questioning students keeps them actively involved and keeps them thinking. It is also appropriate to ask rhetorical questions that are not meant to be answered by the student, but that encourage thinking. Questions should be open-ended, that is questions should not have "yes" or "no" answers. Questions should be a significant part of the lesson and should be used in both didactic and practical presentation.

Brainstorming is a special and different type of questioning. This process generates a wide variety of creative ideas. There is no right or wrong answer, only creative thinking. A question is posed to the students, and they are then allowed to provide as many answers as possible. After all the ideas have been presented, the students can be moved toward the appropriate and important points.

The third technique is demonstration, which bridges the gap between theory and practice. When demonstrating, it is beneficial to involve the students in the process. Demonstration should be used during the didactic component of the presentation to break up long runs of lecture material.

Make the presentation clear and keep it organized - By following the lesson plans, instruction can be clear and organized. However, there are some additional tips that may assist further.

1. Tell the students what you are going to tell them.
2. Tell them.
3. Show them.
4. Let them try.
5. Observe.
6. Praise progress and redirect.
7. Tell them what you have told them.
8. Have them summarize what they have learned.

To help keep lessons clear, the students should know the objectives. The objectives should be presented to the students on the first day of class. It may be beneficial to give students the written lesson plans and allow them to write additional information in the margins.

Conducting Patient Care Simulations in the Classroom - Adults crave hands on training. 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 course's cognitive, affective, and psychomotor objectives into a real life scenario while working with a team of EMT Miner. 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.

Continuing Education

It will be necessary to provide updates to the primary instructor and assistant instructors regarding new curriculum material, and annual updates should be scheduled to inform instructors of current trends in out-of-hospital emergency medicine.

Students

Students

Continuing Education and Its Importance in Lifelong Learning

This curriculum is designed to provide the student with the essentials to serve as an EMT Miner. Employers and service chiefs are strongly encouraged to integrate new graduates into specific orientation training programs.

It is important to understand that this curriculum does not provide students with extensive knowledge in hazardous materials, blood-borne pathogens, emergency vehicle operations, or rescue practices in the mining environments. These areas are not core elements of education and practice as identified in the *National EMS Education and Practice Blueprint.* Identified areas of competency not specifically designed within the EMT Miner Standard Curriculum will be taught in conjunction with this program.

Environment

Environment

Classroom Environment

The intent of the revised curriculum is to allow for greater interaction between students and instructors. The instruction should be highly experiential and interactive. By using the procedural (how) section of the application area of the lesson plan as well as the kinesthetic (do) component of the student activity section, the instructor should be able to enhance the educational experience for the students.

Maintaining Records

It is recommended that the Program Director/Course Coordinator maintain minimum, information on the following:

1. Student attendance and performance at each lesson, including comments as appropriate regarding need for improvement in skills, knowledge, attitudes, or personal habits.

2. Results of evaluation and counseling sessions.

3. Grades for each written examination and completed checklists for each skill evaluation.

4. Number and qualifications of the instructional team.

5. Instructor performance.

6. Cost: total program costs, costs for each program element and costs per student.

7. Lists of enrichments and add-on courses taught in conjunction with the program.

8. Results of course entry examinations and qualifications as required by the certifying agency, state EMS office, course medical director, or training institution.

Credentialing

In addition to course completion, state regulatory agencies may require specific evaluation of cognitive and/or psychomotor performance prior to official licensure, certification, or registration as an EMT Miner. The National Registry of EMTs is a recognized agency that provides examinations for such certification and

registration. The program director should contact the area RESA Office or the State Office of Emergency Medical Services for licensure, certification or registration information.

Program Evaluation - Ongoing evaluation of the program must be conducted to identify instructional or organizational deficiencies affecting student performance. The evaluation process should be two-fold in nature, objective and subjective. Two main methods of objective evaluation generally used are:

1. How well do students measure up to standardized examination?

2. How well does the EMT Miner practice in accordance with established standards of care?

Group and individual deficiencies may indicate problems in the training program.

Subjective evaluation should be conducted at regular intervals by providing students with written questions on their opinions of the program's strengths and weaknesses. Students should be given the opportunity to comment on the primary and assistant instructors, presentation styles and effectiveness. Students should also be asked to comment on the program's compliance with specified course of instruction, the quality and quantity of psychomotor skills labs, and the face validity of the examinations.

The purpose of this evaluation process is to strengthen future training efforts. All information obtained as part of the subjective evaluation should be reviewed for legitimacy and possible incorporation into the course. Due to the important nature of this educational program, every effort should be made to ensure instruction of the highest quality.

Facilities

The physical environment of the EMT Miner program is a critical component for the success of the overall program. The facility should have a large hall with sufficient space for seating all students. Abundant space should be made available for demonstrations. Additional rooms or adequate space should be available as practice areas.

It is recommended that all the required equipment for the program be stored at the facility for ready availability. The facility should be well lit for adequate viewing of various types of visual aids and demonstrations. Heating and ventilation should assure student and instructor comfort, and the seats should be comfortable with desk tops or tables for taking notes. There should be an adequate number of tables for display of equipment, medical supplies, and training aids. A chalkboard (flip chart or grease board) should be in the main hall. A projection screen and appropriate audio visual equipment should be located in

the presentation facility. If possible, light switches should be conveniently located in the presentation area. The practice areas should be carpeted and large enough to accommodate six students, one instructor, and the necessary equipment and medical supplies. Tables should be available for practice areas, with appropriate and sufficient equipment and medical supplies.

Preparation

Motivation - Over 600,000 patients die each year from cardiovascular diseases; half of these deaths occur outside the hospital, with sudden death (collapse) being the first sign of cardiac disease in 50% of the cases.

Cardiopulmonary Resuscitation (CPR), which will be covered in this module, is the major determinant of survival in cardiac arrest.

Prerequisites – None.

Materials

AV Equipment - Utilize various audio-visual materials relating to emergency medical care. The continuous development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to ensure that the objectives of the curriculum are met.

EMS Equipment - CPR manikins, artificial ventilation manikins, suction equipment, airway management equipment, eye protection and exam gloves.

Personnel

Primary Instructor - One instructor knowledgeable in basic life support.

Assistant Instructor - The instructor-to-student ratio should be 1:6 for psychomotor skills practice. Individuals used as assistants should be knowledgeable in basic life support skills.