

Emergency Oxygen

Instructor Guide Preview



AMERICAN SAFETY&

Emergency Oxygen

Instructor Guide, Version 7.0

Purpose of this Guide

This ASHI *Emergency Oxygen Version 7.0 Instructor Guide* is solely intended to give information on the presentation and administration of ASHI Emergency Oxygen certified training classes. The information in this book is furnished for that purpose and is subject to change without notice.

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Program Standards

Emergency Oxygen			
Intended Audience	Individuals who desire or are required to be trained in the administration of Emergency Oxygen.		
Instructor Requirement	A current and properly authorized ASHI Instructor in good standing		
Participant Prerequisites	It is required that a CPR or CPR/first aid training course be completed within the previous 24 months prior to taking the Emergency Oxygen training class.		
Required Training Materials	 ASHI Emergency Oxygen Student Pack (one per participant, print or digital) ASHI Emergency Oxygen Instructor Guide (one per Instructor, print or digital) ASHI Emergency Oxygen presentation media (DVD, PowerPoint^{®,} or Blended) 		
Course Length	 Varies by class type (initial, refresher) and method (classroom, blended, challenge) Initial class, about 1.5 to 2 hrs Successful completion is based on achievement of the core learning objectives rather than a prescribed instruction time. 		
Maximum Student-to-Instructor Ratio	r 12:1 (6:1 recommended)		
Certification Requirements	 Skills Evaluation — Students must perform the following skills competently without assistance. Skill performance can be documented individually on the Class Roster/Student Record or by using Performance Evaluations. Oxygen Delivery for a Breathing Person Oxygen Delivery for a Nonbreathing Person Students must demonstrate the use of gloves and a ventilation mask. Written Evaluation — Required when specified by organizational, local, or state regulation. It is recommended for designated responders with a duty or employer expectation to respond in an emergency and provide first aid care. Successful completion requires a correct score of 70% or better. 		
Card Issued	Constrained for the second secon		
Certification Period	May not exceed 24 months from class completion date. More frequent reinforce- ment of skills is recommended.		

Core Learning Objectives

ASHI Emergency Oxygen is an objectives-driven, skills-based training program. To receive certification, students are required to demonstrate the following knowledge and skill objectives to a currently authorized ASHI Instructor.

Knowledge Objectives

Upon completion of this training program, a student will be able to:

- 1. Explain the importance of emergency oxygen.
- 2. Identify all the components of an emergency oxygen system and explain their function.
- 3. Describe safe storage practices.
- 4. Describe safe handling practices.
- 5. Explain when and how to check, and maintain, an oxygen system.
- 6. Explain when and how to administer emergency oxygen.
- 7. Describe how to perform effective rescue breaths using a CPR mask.
- 8. Describe the steps of a primary assessment for a responsive victim.
- 9. Describe the steps of a primary assessment for an unresponsive person.
- **10.** Explain how pulse oximetry can be used to help determine the need for, and monitor the effectiveness of, emergency oxygen.
- 11. List the situations when a person may benefit from emergency oxygen.
- 12. Describe how to deliver emergency oxygen to a breathing person.
- 13. Describe how to deliver emergency oxygen to a nonbreathing person.

Skill Objectives

Upon completion of this training program, a student will be able to:

- 1. Correctly demonstrate the removal of contaminated gloves.
- 2. Correctly demonstrate rescue breaths using a CPR mask.
- 3. Correctly perform a primary assessment for an unresponsive person.
- 4. Correctly perform a primary assessment for a responsive person.
- 5. Correctly demonstrate how to assemble an emergency oxygen system.
- 6. Correctly demonstrate how to turn an emergency oxygen system on and off and determine if oxygen is flowing.
- 7. Correctly demonstrate how to attach oxygen tubing to a delivery device.
- 8. Correctly demonstrate how to safely integrate use of emergency oxygen when providing emergency care to a responsive person who is breathing.
- **9.** Correctly demonstrate how to safely integrate use of emergency oxygen when providing emergency care to an unresponsive person who is not breathing (may include integration of CPR and AED skills).

Program Overview

The ASHI Emergency Oxygen training program provides training and skills in the administration of emergency oxygen. The goal of this training is to help students develop the knowledge, skills, and confidence to respond in a medical emergency.

Focus

This program is designed to focus on caring for injured or ill adults in a variety of settings by integrating the use of emergency oxygen as part of the care provided.

Flexibility

The program is intended to be flexible in content. It can be customized to meet the teaching styles of the Instructor, the learning needs of the student, and the regulatory needs of an employer.

In the United States, Canada, and most other industrialized countries, workplace safety regulations and occupational licensing requirements may call for specific training content to be covered. Instructors must be familiar with the regulations and licensing requirements of the students they offer training and certification to.

This ASHI Emergency Oxygen training program has listed core learning objectives that must be covered in order to issue certification cards. Instructors bear the responsibility of ensuring that each student meets the learning objectives for successful completion.

Initial Training

Students are required to meet the knowledge and skill objectives listed in this program to receive an initial certification card. These core learning objectives represent the minimum content a student needs to understand in order to manage a medical emergency. In addition to this core content, the ASHI Emergency Oxygen program materials include supplemental and optional content. Instructors determine the depth to which the core content is covered and which supplemental or optional content to cover in a training class.

Flexibility is desirable; individual students may request specific content, and employers may require specific content to be covered. Occupational regulatory or licensing agencies may also require additional content, hours of instruction, or other practices.

Program Segments and Practices

The following table provides an overview of the primary topics and student activities/practices found within the ASHI Emergency Oxygen training program. Required activities, segments, and practices are in bold.

Segments	Demonstration and Practice
Introduction	
Introduction to the Course	None
Delivery Systems	
Emergency Oxygen Delivery Systems	Demonstration: Instructor demonstration of emer- gency oxygen delivery system components that stu- dent will use in class.
Pulse Oximetry	Demonstration: Instructor demonstration of pulse oximetry equipment (Optional).
	Student Practice: Using Pulse Oximetry Equipment (Optional)
Oxygen Delivery	
Breathing Person	Demonstration: Instructor demonstration of Oxygen Delivery for Breathing Person
	Student Practice: Oxygen Delivery for a Breathing Person
Nonbreathing Person	Demonstration: Instructor demonstration of Oxygen Delivery for Nonbreathing Person
	Student Practice: Oxygen Delivery for a Nonbreathing Person
Other Considerations	
After-use Considerations	<i>Demonstration:</i> Instructor demonstration of After-use Considerations
	Student Practice: Oxygen Equipment Disassembly and Reassembly (Optional)
Safety Precautions	
Wrap Up	
	Written Exam (Optional)

Recommended Class Schedules

Classes are often populated by students with different levels of experience. This makes a single minute-byminute approach to lesson planning unrealistic. The recommended class schedule does not include time for the Optional Skills. If any of those skills are included in the curriculum, the instructor should allow additional time. Instructors should always ask about previous training and attempt to connect participants' past experience and knowledge to the current learning experience.

	Core	
Introduction: The Case for Emergency Oxygen/	Introduction: The Case for Emergency Oxygen/	
Integrating the Use of Emergency Oxygen	10	
Oxygen Delivery Systems	10	
Pulse Oximetry (20 min. with skill practice)	10–20	
Oxygen Delivery: Breathing Person	15	
Oxygen Delivery: Nonbreathing Person	15	
After-use Considerations		
(20 min. with skill practice)	10–20	
Safety Precautions	10	
Wrapping Up a Training Class	10–20	
Total Approximate Minutes	90–120	
Total Approximate Hours	1.5–2.0	

Integration

The ASHI Emergency Oxygen training program may be integrated with other ASHI programs where necessary or desired. Other programs that can be integrated include the ASHI Basic First Aid, ASHI CPR PRO for the Professional Rescuer, and ASHI CPR and AED programs.

Renewal

Students returning before the end of their certification period can renew their certification in a training class that focuses on achieving the listed core skills objectives through skills practice and evaluation. As the training progresses, instructors need to constantly evaluate the level of cognitive understanding within the group being trained and review core knowledge objectives as needed.

Renewal training is typically shorter than initial training. However, the amount of reduced time is dependent on the level to which the group still understands the cognitive information within the program. Frequent refreshers during the certification period can help improve this. Renewal training can also be accomplished by repeating an initial training class.

Challenging the Program

Experienced students can challenge the ASHI Emergency Oxygen training program using performance evaluations. Participants must arrive prepared for skill testing and must perform competently without assistance on all performance evaluations. A warm-up or skills review session may be conducted before the challenge, but must be clearly separated from the challenge itself. Students who cannot perform competently without assistance have not successfully completed the challenge. If unsuccessful, students still seeking certification must attend and complete a training class.

Online Blended Training

Blended training combines the convenience of online learning with a shortened practical skills session in order to meet both knowledge and skill objectives.

The online learning platform used for ASHI blended training classes is ASHI Learning. This specially designed, web-based learning system allows for a variety of sensory interactions to provide users with a low-stress, easy-to-use, and convenient way to learn cognitive information.

It is important to note that students must successfully complete both the online and skills portions of blended training. Completion of the online portion alone will not result in certification.

The entire administrative process for blended training is done through Training Center Manager. A Training Center purchases blended training credits, which include a student seat in an online class and a Student Handbook.

Training Centers schedule classes and add students. Students are notified by email of enrollment in the online class. Student progress can be monitored online.

To successfully complete the online class, students complete all of the lessons. Check marks will indicate which lessons have been completed. When all of the lessons are finished, the student will have the capability of printing a completion certificate for the online portion. If a class exam is included in the class, a student will have to achieve a passing score in order to complete the online class. Skill practice and evaluation is done face-to-face in a classroom setting. Instructors must conduct and document student skill performance for the core skill objectives listed for the class being taught. Skill practice is accomplished using the same approaches available for non-blended classroom training. Sessions can be conducted for groups or for individuals. Individuals can also challenge the skills session in order to receive certification.

Instructional Design

ASHI promotes an instructional approach that is based on simple and practical applications. The focus is on gaining the skills and building the confidence to handle an emergency situation. Skills are best learned and retained by repeat practice. Instructors can make the most of class time by limiting lectures to essential knowledge, and focusing on hands-on skill practice.

Four-step Instructional Approach

Step 1: Present the Knowledge Content

Sample curricula provide the key information about each topic. Lecturing too far beyond this material will reduce skill practice time and should be avoided.

Step 2: Demonstrate Skills

Demonstrations may be done live or by video. When demonstrating skills, a high-quality performance is essential because students will tend to copy it.

When giving a demonstration, consider using the WHOLE-PART-WHOLE method:

- WHOLE: Demonstrate the entire skill, beginning to end, briefly naming each action or step.
- PART: Demonstrate the skill again, step-bystep, integrating information and facts while pointing out common errors in technique.
 Present only the knowledge necessary to for the student to adequately perform the skill. To help, have students look at the appropriate Skill Guide as you demonstrate.
- WHOLE: Demonstrate the entire skill again in real-time — without comment. Perform it without remarks, interruption, or explanation. This helps students get a feel for the tempo of the skill and the opportunity to observe the sequence of actions before they practice.

Step 3: Allow Adequate Time for Students to Practice the Skills

Break students into small groups with the required equipment for the practice. Have one student act as a coach by reading the skill steps from the Skill Guide while another student performs the skill on a manikin or on another student who is playing the role of the ill or injured person. Have students rotate through the roles until all have played each role.

An Instructor should circulate through the classroom, answering questions, correcting errors in technique, and providing constructive feedback and positive reinforcement. Avoid anxiety-producing, perfection-oriented skill checks. A stimulating, but non-threatening, environment is best for learning.

Alternatively, when it is available, use video guided instruction to practice. Students watch and practice along with a video demonstration of skills. Students can also practice along with an Instructor doing the skill. Allow time for each student to adequately imitate the skills.

More experienced or returning students may enjoy a scenario- or problem-based learning approach. Scenario sheets are available to support this approach.

Step 4: Wrap It Up

Ask for and answer questions as briefly and concisely as you can. If available, finish with a short problem-solving scenario to help students recall key information.

Program Materials

Instructor Guide

The ASHI Emergency Oxygen Instructor Guide provides organized instructional guidance on how to conduct a training class. It is integrated with the Student Handbook, Program Video, and Program PowerPoint[®] Presentation.

Information regarding the details of the training program and how to prepare for a class are provided in the front of the guide. The majority of the guide follows a topic-by-topic approach to training that includes available instructional tools, sample curricula, identified practice sessions, and case studies. Instructions on completing the required class administration are also included.

Student Handbook

The ASHI Student Handbook contains the content and skill references a student needs to meet the core learning objectives. Students must have access to skill training reference materials during the class. The Student Handbook provides a convenient way to provide this information. It is required to provide each student a personal printed copy of the Student Handbook to take home or access to a digital version they can download online.

Program Video

The ASHI Emergency Oxygen Program Video is a scenario-based presentation that provides a visual learning tool to accomplish the learning objectives. It is available on DVD and is also streamed online as a component of the online blended class.

Using the DVD, Instructors can play the entire video or select individual topics as desired.

PowerPoint® Presentation

The ASHI Emergency Oxygen training program also includes a Program PowerPoint[®] presentation.

The presentation is closely integrated with the Instructor Guide and provides a visual tool to reinforce cognitive information, skills practices, and case studies.

Scenario Sheets

Scenario-based practice sheets allow students to make realistic decisions in a simulated setting. This alternative small-group practice approach is suited for more experienced students or as supplemental practice to initial training.

Scenario Sheets can be found online in the document section of Training Center Manager or your Instructor Portal.

Class Roster/Student Record

The Class Roster/Student Record is the primary paperwork for documenting the completion of a ASHI Emergency Oxygen training class. It can be found online in the document section of Training Center Manager or your Instructor Portal.

A Class Roster is required for every training class. Completely and accurately fill out the class information. Have students legibly fill out personal information. A Student Record is required when Performance Evaluations are not used to document competent skills. Using the Class Roster/Student Record, check off students who are performing competently without assistance as the class progresses through skills practice.

If a Written Exam is used, document each student's successful completion on the Class Roster/Student Record.

When finished with a training class, sign and return the completed Class Roster/Student Record to the Training Center responsible for the class.

Performance Evaluations

The competent performance of the listed skill objectives without assistance is required for certification. Performance evaluation is required when individual skill performance is not documented on the Student Record or when specified by organizational, local, or state requirement.

Performance Evaluations can be found online in the document section of Training Center Manager or your Instructor Portal.

When finished, score students as outstanding (competent), adequate (competent), or inadequate (not competent) on each Performance Evaluation. Inadequate (not competent) scores require remediation and re-evaluation. Depending on logistics, this may require individually checking off skills using the Student Record or completing another class.

Students who have not had skills checked off on the Student Record or have been scored not competent on the Performance Evaluations have not successfully completed the class.

Sign and return all Performance Evaluations to the Training Center responsible for the class.

When conducting Performance Evaluations:

- Students must perform and not verbalize skills.
- Students do not have to perform skills perfectly, just reasonably to achieve the desired outcome.
- Evaluate consistently between students.
- Avoid excessive communication.
- Do not coach students.

Written Exams

Written evaluation may be necessary when specified by organizational, local, or state requirement. It is recommended for designated responders with a duty or employer expectation to respond in an emergency and provide first aid care.

Written Exams for this class can be found online in the document section of Training Center Manager or your Instructor Portal.

Successful completion of a Written Exam requires a correct score of 70% or better. Document the successful completion of the written exam (when used), on the Class Roster/Student Record. When conducting written evaluation, take precautions to prevent cheating and allow adequate time to complete the exam.

Rate Your Program

Encouraging students to provide feedback and then using that feedback to improve instruction is an essential aspect of any quality educational effort. All students are required to fill out the Rate Your Program class evaluation in order to get a certification card.

Tear-out Rate Your Program class evaluations are found in the back of each Student Handbook. They can also be found online in the document section of Training Center Manager or your Instructor Portal.

The evaluation allows students the opportunity to comment on the program materials and on the Instructor's presentation style and effectiveness. Collect and return the completed Rate Your Program class evaluations to the Training Center responsible for the class.

Class Requirements

The following requirements are necessary to help ensure all students and Instructors experience a safe, enjoyable, and satisfying ASHI Emergency Oxygen training class.

Administration

- Instructors must teach in accordance with the most recent administrative policies and procedures as described in the Training Center Administrative Manual (TCAM).
- An Instructor must be authorized to teach the ASHI Emergency Oxygen training program in order to issue certification cards.

- It is required that a CPR or CPR/first aid training course be completed within the previous 24 months prior to taking the Emergency Oxygen training class.
- Students must demonstrate the use of gloves and a ventilation (resuscitation) mask during at least one Performance Evaluation. Instructors should take necessary steps to be aware of students with latex allergies and provide suitable, non-latex barrier products for their use in class.
- There are no minimum age requirements for participation in a ASHI Emergency Oxygen class. However, regardless of age, students must be able to competently perform the required skill objectives to receive a certification card.
- The maximum allowed ratio is 12 students to 1 Instructor. A ratio of 6 students per Instructor is recommended.
- The student-to-Instructor ratio for lecture and discussion may be exceeded when organizational realities make small class size unachievable. However, additional ASHI-authorized Instructors must be available to maintain the student-to-Instructor ratio for skill practice and evaluation.
- Instructors must provide access to the most current ASHI training materials to students for use during and after the course. This is especially important in skill practice sessions. Appropriate training materials include video segments, print handbooks and skill sheets, scenario sheets, and projected or mobile computer-based ASHI training materials. Each course participant must also be provided a print or digital version of the Student Handbook.
- As part of an initial training class, Instructors must conduct all required segments and practices as outlined in this ASHI Instructor Guide.
- As part of an initial training class, Instructors must use one of the associated visual media tools designed for the program. These include the Program Video, Program PowerPoint[®] presentation, or the online blended training class. Use of a visual media tool is highly recommended for renewal training. The online blended training class may be used as an alternative approach. Use of these training tools is highly recommended for renewal training.
- During a class, Instructors must provide informal evaluation and prompt feedback to students about their skill performance. This will allow students to evaluate their skills and correct deficiencies.

- An Instructor must verify that each student has met the required knowledge and skill objectives before issuing a certification card. The Instructor must include their registry number and Training Center ID on the card to validate it.
- Each student must fill out and return to the Instructor the Rate Your Program class evaluation. Completed evaluations must be returned to the Training Center responsible for the class.
- Instructors must complete a Class Roster/Student Record and return it to the Training Center that is responsible for the class.

Equipment

- Required Equipment
 - Visual presentation equipment (television, monitor, projector)
 - Adult CPR training manikins (6:1 maximum student-to-manikin ratio)
 - Emergency oxygen delivery system (6:1 maximum student-to-system ratio)
 - Each delivery system must include:
 - Filled medical-grade oxygen cylinder
 - Oxygen regulator with flow controller
 - Connecting tubing
 - Ventilation mask (with oxygen inlet)
- Oxygen delivery devices for breathing persons (when not using ventilation mask). This includes simple masks or non-rebreather masks (6:1 maximum student-to-device ratio).

Note: When using students as breathing persons, Instructors need to provide each student with an unused oxygen delivery device.

- Optional Equipment
 - Pulse Oximeter

Materials

- Required Instructional Materials
 - ASHI Emergency Oxygen Instructor Guide (printed or digital)
 - ASHI Emergency Oxygen media presentation (Program Video, PowerPoint[®])
 - ASHI Emergency Oxygen Class Roster/ Student Record

- Optional Instructional Materials
 - ASHI Emergency Oxygen Scenario Sheets
 - ASHI Emergency Oxygen Performance Evaluations
 - ASHI Emergency Oxygen Written Exam
- Required Student Materials (for each student)
 - ASHI Emergency Oxygen Student Handbook (printed or digital)
 - ASHI Emergency Oxygen Certification Card
 - CPR mask, (ventilation or resuscitation mask with one-way valve and oxygen inlet, disposable training valves or mouthpieces are okay)
 - Disposable barrier gloves
- Optional Student Materials
 - Oxygen delivery device (when using students as breathing persons in practice)

Health and Safety

- Screen students for health or physical conditions that require modifications of skill practice.
- Follow the manufacturer recommendations for the decontamination of manikins before, during, and after training.
- When using disposable gloves in skills practice, Instructors must take necessary steps to be aware of students with latex allergies and provide suitable, non-latex barrier products for their use in class.
- Caution students to avoid awkward or extreme postures of the body.
- Caution students to avoid certain skills during student-on-student practice, including chest compressions, rescue breaths, and abdominal or chest thrusts. These skills are not appropriate for student-on-student practice and must be performed on training manikins designed for that purpose.
- Students must be informed to use proper lifting and moving techniques during a student-on-student practice in which a simulated ill or injured person is moved. Students should not participate in these practices if they have a history of back problems.

Classroom

- Classes need to be conducted in a safe and comfortable environment conducive to learning.
- A carpeted floor is preferred. However, blankets or mats may be used for practice sessions.
- Comfortable seating is important and a table or work area is quite useful.
- A monitor stand can help ensure the monitor is easily visible to all students.
- An erasable white board, blackboard, or easel and paper can be very helpful.

Classroom Safety

- All Instructors must ensure a physically safe learning environment for their students.
- Make sure there are no obvious hazards in the classroom, such as extension cords that can be tripped over.
- In addition, Instructors should be aware of the location of the nearest phone, first aid kit, AED, fire alarm pull station, and fire extinguisher.
- Instructors should have an emergency response plan in case of serious injury or illness, including evacuation routes from the classroom.
- Students should be discouraged from smoking, eating, or engaging in disruptive or inappropriate behavior.



The Case for Emergency Oxygen

Reason for Learning

When a serious illness or injury occurs, the body's ability to use oxygen is likely to be compromised and a condition called shock will result. Emergency oxygen can help meet a person's critical need for oxygen.

Core Learning Objectives

Upon completion of this training program, a student will be able to explain the rationale for delivering supplemental oxygen in medical emergencies.

Instructional Tools Available

- Student Handbook Refer students to page 2
- PowerPoint[®] Presentation Use slides 1–6
- Program Video 2:23

Instructor Note

Explain to students that state or local regulations regarding the requirement for medical control and direction with the use of emergency oxygen can vary. Always be familiar with and comply with any state and local regulations.

Sample Curriculum

Knowledge Content

- 1. Oxygen is essential to sustain life. When a serious illness or injury occurs, the body's ability to process oxygen can be compromised.
 - a. Low levels of oxygen in the body, or hypoxia, can result in a deteriorating condition known as shock.
 - b. Unless the effects of the decreased amount of oxygen can be reversed, shock can quickly progress into a life-threatening emergency.
- 2. Basic priority care, such as maintaining a clear and open airway, ensuring adequate breathing, and controlling external bleeding, should always be a provider's initial priorities of care for an ill or injured person.
- 3. The use of emergency oxygen by a first aid provider can help meet an ill or injured person's critical need for oxygen to further improve the person's outcome.
 - a. Many medical authorities recommend that a person be provided the highest concentration of oxygen available during many medical emergencies.
- Air contains about 21% oxygen. In an emergency, oxygen delivery systems can potentially increase oxygen percentages close to 100%.
- 5. Conditions that could benefit from emergency oxygen include the following:
 - a. Divers with a decompression injury
 - b. Serious bleeding
 - c. Difficulty breathing
 - d. Suspected internal injury
 - e. Warning signs of serious illness
 - f. Serious mechanisms of injury
- 6. There are few significant medical risks when providing supplemental oxygen in an emergency.
 - a. When in doubt, provide emergency oxygen for someone who shows signs of respiratory difficulty, if it is available, local protocols allow, and you are trained in its use.
- 7. This training program will focus on how to safely and effectively provide supplemental oxygen in a medical emergency.

Wrap Up

Be sure to ask for and answer any questions students may have.

References

The ASHI Emergency Oxygen Instructor Guide is based upon the following standards, guidelines, and recommendations:

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- FDA AND NIOSH Public Health Notification: Oxygen Regulator Fires Resulting from Incorrect Use of CGA 870 Seals. Available: http://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/PublicHealthNotifications/ ucm062088.htm [8 February 2013].
- Other sources of national training and care guidelines.



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