

# High-Performance CPR



**AMERICAN  
SAFETY &  
HEALTH  
INSTITUTE**

# AMERICAN SAFETY & HEALTH INSTITUTE

An HSI Company

## High-Performance CPR Instructor Guide, *Version 8.0*

### Purpose of this Guide

This ASHI *High-Performance CPR Version 8.0 Instructor Guide* is solely intended to give information on the presentation and administration of ASHI High-Performance CPR certified training classes. The information in this book is furnished for that purpose and is subject to change without notice.

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American Safety & Health Institute  
1450 Westec Drive  
Eugene, OR 97402  
800-447-3177  
541-344-7099

E-mail: [response@hsi.com](mailto:response@hsi.com)

Visit our website at [emergencycare.hsi.com](http://emergencycare.hsi.com)

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First Edition—2017



Making the Workplace and Community Safer.

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## *Instructor Guide*

Dedicated to Craig Aman, a firefighter/paramedic, educator, colleague, friend, and tireless advocate for improving survival from sudden cardiac arrest...

*“How can We do Better?”*

PREVIEW

**NOTICE:** Training Programs are evidence-based and peer-reviewed. The treatment recommendations and guidelines presented in this guide conform to the International Liaison Committee on Resuscitation (ILCOR) 2015 Consensus on Science with Treatment Recommendations and the 2015 American Heart Association Guidelines Update for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care, as well as best practices for high-performance CPR.

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**PART 1:**  
**PROGRAM DESIGN AND**  
**INSTRUCTIONAL TOOLS**

**PREVIEW**

# Program Design

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## *Program Overview*

The ASHI High-Performance CPR training program is intended for individuals who are not healthcare providers but desire or are required to become trained in team-based, high-performance CPR techniques. Current certification in adult CPR and AED, or healthcare basic life support (BLS), is a prerequisite for individuals to take this training.

The goal of this training program is to help students develop the knowledge, skills, and confidence to respond in a sudden cardiac arrest emergency. Founded in basic principles of instructional design and learning theory, ASHI promotes a “toolbox” approach to learning. This approach gives Instructors flexibility in both presentation strategies and materials in order to reach students with widely varying abilities in the countless instructional settings that exist in the real world. High-Performance CPR is designed to include a significant amount of hands-on skill practice.

## *Program Structure*

ASHI High-Performance CPR contains only core training content.

### **Core Training Content**

The core training content is the minimum knowledge and skill content that is required for certification in ASHI High-Performance CPR.

### **Third-Party Training Content**

Additional training materials that are not produced by HSI may also be used to enhance ASHI High-Performance CPR at the discretion of the training center director. These additional materials may not be used in lieu of ASHI High-Performance CPR materials and may not be used to shorten or otherwise alter the core training content required for certification.

### **Class Type**

There is only one class type for ASHI High-Performance CPR. Whether the student is new or has taken High-Performance CPR in the past, each class is taught as if it is initial training.

### **Class Methods**

There are two main methods to teaching and certifying students in ASHI High-Performance CPR: instructor-led classroom training, and blended learning, which includes both an on-line course and hands-on training.

### **Classroom Training**

This is an instructor-led, in-person, classroom-based approach where the core knowledge content is provided using scenario-based video segments or a slide presentation, followed by demonstration of skills and the opportunity for instructor-facilitated student practice.

### **Blended Learning**

This is a mixed-mode approach using both online and in-person learning; core knowledge content is provided in video segments and interactive student exercises online, followed by in-person skills practice and evaluation.

## Training Content

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### *Initial Classroom Class*

The content of the initial class is divided into lessons. Each lesson provides an approximate length, skill and/or knowledge objectives (What Students Should Learn), provides an encouraging reason for learning (Why This Topic Matters), lists required equipment, and describes the necessary instructor activities. The outline and time frame for the Initial Instructor-Led Class are provided in Part 3.

ASHI promotes a “toolbox” approach to learning. This means that various presentation methods and tools may be used by the instructor to meet the knowledge and skill objectives of the course, including skill guides, video, slides, scenario sheets, and performance evaluations. 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*

In general, ASHI follows a basic four-step instructional approach (some lessons may include fewer or additional steps).

#### **Step 1: Present the Knowledge Content**

The program video and the program slide presentation are the primary tools provided to deliver knowledge content for the class.

Featuring scenario-based video segments, the program video provides you with a simple, engaging, and consistent approach to deliver content.

The program slide presentation allows more experienced Instructors to take an active role in presenting content. Slides focus on the key points of information

and allow Instructors to highlight content using other delivery methods. Slide notes provide more detail on content. Instructors can use stated video-times as a guide for pacing lesson times when using the presentation.

Key points are also included for each lesson in this Instructor Guide and can be used to emphasize key content throughout the class.

### Step 2: Demonstrate Skills

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-by-step, integrating information and facts while pointing out common errors in technique. Present only the knowledge necessary 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. 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.

### CPR Feedback Device Integration

Instructors must integrate the use of a CPR feedback device into the hands-on practices for high-quality chest compressions and high-performance CPR.

A CPR feedback device, at a minimum, must be able to accurately provide real-time measurement on the depth and rate of chest compressions, and provide corrective feedback for those skills. A variety of standalone devices and manikins are available.

Real-time performance feedback allows for the immediate correction and reinforcement of skills. Feedback devices are recommended for the development of high-quality CPR skills. The LOOP Learning System (sold separately) is a CPR feedback device available from HSI.

### Step 4: Wrap It Up

Ask for and answer questions as briefly and concisely as you can. Consider finishing with a short review using the lesson's Knowledge Check feature to help students recall key information.

The initial class proceeds lesson by lesson until its conclusion. ASHI High-Performance CPR certification cards are issued to those students who have earned them.

### Certification Requirements

Instructors must be current and properly authorized as an ASHI CPR and AED or BLS instructor to issue High-Performance CPR certification cards.

The certification requirement for an initial class requires students to demonstrate skill competency using skill guides, Scenario Sheets, or performance evaluations. A Written Exam is not required for certification unless required by organizational policy.

#### **Important:**

WHEN NOT REQUIRED, THE WRITTEN EXAM MAY BE USED AS A PRE-, POST-, OR IN-CLASS ACTIVE LEARNING TOOL. THE INDIVIDUAL'S SCORE ON AN OPTIONAL EXAM MAY NOT BE USED TO WITHHOLD A PROPERLY EARNED CERTIFICATION CARD. WHEN A WRITTEN EXAM IS NOT USED OR REQUIRED, INSTRUCTORS CAN MEASURE COGNITIVE UNDERSTANDING BY INFORMAL OBSERVATION AND QUESTIONING USING THE KNOWLEDGE CHECK FEATURE.

## Initial Blended Class

### About Blended Learning

Blended learning combines the convenience of online learning with face-to-face, in-class skill practice and evaluation by an authorized instructor. The platform used for the online portion of the Initial Blended Class is Otis. This 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 the required information. The management of blended training, including scheduling online and face-to-face sessions, is also done through Otis. Students are notified by email of enrollment in the online class. Student progress can be monitored online. For information on system requirements and how to register students for the online portion of the class contact your training center director or email [customerservice@hsi.com](mailto:customerservice@hsi.com).

## Online Portion

The online portion of a blended training class covers the essential cognitive content for the class using program video segments and interactive exercises. When a student successfully completes the online portion of the class, a Recognition of Completion certificate will be made available to the student for printing and the completion will be recorded within Otis. Successful completion of the online portion is required to attend the face-to-face portion of the class for skills practice and evaluation with an instructor.

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### **Important:**

COMPLETION OF THE ONLINE PORTION ALONE DOES NOT RESULT IN CERTIFICATION. THE ONLINE PORTION IS USEFUL FOR KNOWLEDGE ACQUISITION, BUT IT DOES NOT PROVIDE ANY BENEFIT IN THE PERFORMANCE OF SKILLS. ONLINE TRAINING MUST BE SUPPLEMENTED WITH HANDS-ON PRACTICE.

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## Face-to-Face Portion

The face-to-face portion of a blended class focuses on the development of competent skills through hands-on practice. Required activities of the face-to-face portion of the Initial Blended Class include performing instructor demonstrations and student practices, completed just as in an Initial Instructor-Led Classroom Class. The outline and time frame for the classroom portion of the Initial Blended Class are provided in Part 4. The class proceeds lesson by lesson until its conclusion.

### **Instructor Demonstration**

The instructor performs a demonstration of the skill, using the Whole-Part-Whole method.

### **Student Practice**

Following the instructor demonstration, allow adequate time for students to practice the skill.

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### **Important:**

THE FACE-TO-FACE PORTION OF THE BLENDED CLASS IS NOT INTENDED TO BE A SIMPLE SKILLS CHECK OFF. THIS PORTION OF THE CLASS INCLUDES BOTH PRACTICE AND EVALUATION.

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### **Certification Requirements**

The certification requirements for the Initial Blended Class are the same as for an Initial Instructor-Led Classroom Class. ASHI High-Performance CPR certification cards are issued to those students who have earned them.

## Instructional Tools

This ASHI High-Performance CPR Instructor Guide, video segments, slides, Scenario Sheets, performance evaluations, and online training provides the materials necessary for a properly qualified and authorized instructor to conduct the Initial and Blended classes.

### **Instructor/Training Center Portal in Otis**

The instructor/training center portal in Otis provides access to the most current support documents. Please see Otis for the most up-to-date information. Login to Otis at [otis.hsi.com/login](http://otis.hsi.com/login). If you need assistance logging into Otis, call 877-440-6049 to speak with technical support.

### **Student Book**

The ASHI High-Performance CPR Student Book is an up-to-date resource that covers the core knowledge and skill content required for certification. Each participant should have a current print or digital Student Book readily available during and after the class.

### **Program Video**

The ASHI High-Performance CPR program video is a scenario-based visual learning tool. Video segments cover all training content. The video is available on digital video disc (DVD), online as a component of the blended class, and as an Otis-powered desktop or mobile application.

### **Program Slide Presentation**

A PowerPoint slide presentation is provided as an alternative visual tool to the program video. Designed for more experienced Instructors, the presentation highlights the key points of the program content to help guide Instructors in class. The program slide presentation file is available in Otis.

### **Skill Guides**

Skill guides combine words and photographs of the correct steps of a skill in the proper sequence. They are visual, easy-to-use instructional tools to be used by the instructor as a teaching aid and by students during skill practice. Skill guides are included in the Student Book and integrated into this Instructor Guide.

### **Scenario Sheet**

A specific high-performance CPR Scenario Sheet is provided for use in a team-based sudden cardiac arrest scenario. The Scenario Sheet is a student practice tool used to help students learn how to apply skills and make reasoned judgments and decisions in a realistic, simulated setting. The Scenario Sheet and instructions for its use are available in Otis.

The ASHI High-Performance CPR slide presentation was created using PowerPoint® presentation graphics program. PowerPoint® is a registered trademark of Microsoft Corporation in the United States and/or other countries.

**Performance Evaluation Sheet**

Instructors can use a performance evaluation sheet for a more formal approach to evaluating required skills. Performance evaluation is a scenario-based assessment process that provides sound, fair, consistent, uniform, objective, and reliable documentation of student competency according to the skill criteria. The performance evaluation sheet and instructions for its use are available in Otis and are included in the Otis-powered desktop or mobile application.

**Written Exam**

Unless required by organizational policy, it is not required for students to take and pass the Written Exam. However, the Written Exam documents are provided as an instructional tool and can be used to check student learning and effective retention of knowledge objectives.

Two Written Exam versions, an answer sheet, and answer keys are included in the program documents in Otis.

**LOOP Learning System**

The LOOP Learning System (sold separately, from HSI) is a CPR feedback device that will increase the level of engagement of students during training.

The LOOP Learning System uses a LOOP CPR Controller, placed on a manikin chest, to measure compression depth and rate, and overall timing of CPR.

The LOOP system also comes with two software programs: LOOP Rhythm and LOOP Metrics. LOOP Rhythm enhances training by using music, video, competitive scoring, and other gaming concepts to create a compelling, fast-paced, and fun experience.

LOOP Metrics is designed for use in the hands-on practice sessions of a training class. It provides real-time performance feedback that allows for the immediate correction and improvement of skills. Skill performance is also recorded so Instructors can review the results with students at the end of a practice session.

The required use of a CPR feedback device has been integrated into the high-quality CPR compressions and high-performance CPR practice in this training program.



**PART 2:**  
**CLASS REQUIREMENTS**  
**AND ADMINISTRATION**

**PREVIEW**

# Class Requirements

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## **Important:**

COMPLETE STANDARDS AND GUIDELINES FOR QUALITY ASSURANCE INCLUDING PROGRAM STANDARDS, CERTIFICATION STANDARDS, AND THE TERMS AND CONDITIONS FOR INSTRUCTOR AND INSTRUCTOR TRAINER AUTHORIZATION ARE LOCATED IN THE MOST RECENT VERSION OF THE HSI TRAINING CENTER ADMINISTRATION MANUAL (TCAM) AVAILABLE AT [HTTP://WWW.HSI.COM/QUALITYASSURANCE](http://www.hsi.com/qualityassurance). ALL INSTRUCTORS HAVE AGREED TO COMPLY WITH THESE STANDARDS BY SUBMITTING A SIGNED APPLICATION FOR INSTRUCTOR AUTHORIZATION.

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## **Before Class**

A few days before the class, confirm the date, location, and number of students. Ensure you have the following materials (see Equipment List for detailed information):

- High-Performance CPR Instructor Guide
- High-Performance CPR Student Books
- Adult CPR manikins and AED trainers
- CPR feedback devices (or included in manikins)
- CPR masks, gloves, manikin cleaning wipes
- Audio visual equipment and cables
- Class paperwork

Review this Instructor Guide, paying particular attention to the outline and time frame for the class you are teaching (Initial or Blended). Review the video or slides and key points for each lesson, including any supplemental content to be added. Review all of the included Instructor Notes to see if you need to adjust your approach to training. Familiarize yourself with the Student Book.

## **Learning Environment**

The ideal learning environment is comfortable, efficient, and distraction-free with sufficient space, seating, resources, and equipment. Instructors should make reasonable effort to ensure a physically safe, comfortable and appropriate learning environment. The room should be well lit, well ventilated, and comfortable in temperature. Avoid cramped classroom setups where possible. Instructors must often create a makeshift classroom out of a noisy shop floor, poorly lit cafeteria, or cramped conference room. Such challenges should be anticipated and the learning environment made as favorable as possible.

## **Instructor Ratios**

High-Performance CPR has been developed for a maximum class size of 10 students to 1 instructor; the recommended class size is 6 students to 1 instructor. Personal supervision is necessary to ensure effective facilitation, assistance, guidance, and supervision. Additional equipment and the assistance of other authorized instructors are recommended for all skill sessions where possible.

## **Classroom Space**

The room should be large enough to accommodate chairs, tables, and skill practice space for up to 10 students. High-Performance CPR requires hands-on practice and evaluation of skills. Ensure that adequate and appropriate space for these activities is provided. Allow 15 to 17 square feet per student whenever possible. Avoid lecture hall type of arrangements. A sample classroom layout is available in Otis.

## **Classroom Safety**

Make sure there are no obvious hazards in the classroom, such as extension cords that can be tripped over. Discourage students from smoking, eating, or engaging in disruptive or inappropriate behavior. Have an emergency response plan in case of serious injury or illness, including evacuation routes from the classroom. Be aware of and share with students the location of the nearest bathrooms, exit, phone, first aid kit, AED, fire alarm pull station, and fire extinguisher.

## **NOTICE:**

WARN STUDENTS TO AVOID AWKWARD OR EXTREME POSTURES OF THE BODY. IMPROPER LIFTING AND MOVING IS A LEADING CAUSE OF BACK INJURY.

ALL STUDENTS MUST PAY ATTENTION TO PROPER LIFTING AND MOVING TECHNIQUES DURING PRACTICE.

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Warn students that classroom activities involving lifting and moving that may aggravate previous back injuries and they should not practice moving simulated victims if they have a history of back problems.

## **Student Illness and Other Emergencies**

Advise students to not attend class if they have an illness such as influenza or a fever. Training centers should provide reasonable accommodation to students to make up class time or skill sessions. If a student has a medical emergency, instructors should provide the appropriate first aid care and activation of EMS.

## Equipment and Materials List

Some equipment and materials are required for teaching, while other materials are optional (like the Written Exam). Some materials and equipment are recommended but not required. Use the lists below to prepare the right materials and equipment for the training you deliver. The maximum student-to-manikin/AED trainer/CPR feedback device ratio for CPR skills practice is 3:1.

### Core Content

#### Required

- Television with DVD player, or computer with speakers, large monitor, or projection screen
- Adult CPR training manikins, 1 for each group of 2 to 3 students
- AED training devices and pads, 1 for each manikin
- CPR feedback device, 1 for each manikin (or included in manikins)
- Manikin decontamination supplies (eg., manikin cleaning wipes, 70% ethyl alcohol)
- Adult CPR masks, 1 for each group of 2 to 3 students, with 1 separate one-way valve for each student
- Nonlatex disposable gloves, 1 pair for each student
- High-Performance CPR Instructor Guide (print or digital), 1 for each instructor
- High-Performance CPR Student Books, 1 for each student (print or digital)
- High-Performance CPR program video, DVD or Otis-powered desktop, mobile application or High-Performance CPR slide presentation, 1 for each class
- High-Performance CPR certification cards, 1 for each student who fulfills the requirements (print or digital)
- High-Performance CPR Scenario Sheet, 1 for each class
- Class roster, 1 for each class (print or digital)

#### May Be Required (Regulatory Agency)

- Written Exams A and B, 1 version for each student (print)
- Written Exams answer sheets, 1 for each student (print)
- Written Exams answer keys, A and B, 1 for each instructor/assistant (print)
- Performance evaluations, 1 for each practice team (print or digital)
  - High-Performance CPR

### Recommended

- Pens and pencils, 1 for each student when Written Exam is administered
- Blankets or mats
- Name tags or tent cards, 1 for each student
- Spare projector bulb (as needed)
- Extension cord (as needed)
- Whiteboard with dry erase pens and eraser, if available
- Large black markers for student name tags or tent cards
- Large envelope for class paperwork, including Written Exam answer sheets when required

### Conducting a Class

1. Arrive early. Give yourself plenty of time to get organized.
2. Circulate a sign-in sheet or the Class Roster. Be sure all students sign-in.

### During Class

1. Start on time. Briefly cover class expectations: class goal, certification requirements, classroom safety, facilities, mobile phone use, and breaks.
2. Stay on track. Keep lessons within their time limits. End discussions when they are not productive or stray off topic.
3. At the beginning of each lesson, briefly communicate the knowledge and skill objectives, and explain why this topic matters.
4. Show the video or slide presentation (where required) and emphasize the key points as needed. Ask for and briefly answer any questions.
5. Facilitate student practices. Answer questions and offer constructive guidance and positive feedback as appropriate.
6. Upon class completion, issue High-Performance CPR certification cards to those individuals who earned them.
7. Offer and collect students' Rate Your Program evaluations.

### After Class

Complete and sign the Class Roster. If used, complete and sign performance evaluations.

# Administration

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## **Skill Evaluation**

The Instructor must evaluate each student for skill competency — the ability of the individual to do the skill adequately. Each student must be able to demonstrate the skills in the proper sequence according to the skill criteria as it appears in a skill guide, Scenario Sheet, performance evaluation sheet, or program standard.

## **Skill Remediation**

As time permits, the remediation, or the correction, of inadequate skill performance should be offered to students who are experiencing skill difficulties.

Generally, address student skill problems throughout the class using the gentle correction of skills and positive coaching. If possible, assist students privately during breaks, lunch, or at the end of the class.

Be polite, considerate, encouraging, and professional when remediating skills.

If the student is unable or unwilling to perform skills, you can issue the student a Recognition of Participation document, especially in cases where knowledge or experience is a greater goal than certification for the student.

If a student needs certification and requires more remediation than can be provided during a class, recommend the student attend another training class.

## **Written Exam**

A Written Exam is not required for certification unless required by organizational policy.

Evaluation of the core knowledge objectives in High-Performance CPR is normally accomplished by informal observation and questioning throughout a training class.

When a Written Exam is used, adequate time must be added to the class to complete the exam. Two versions of the Written Exam, along with instructions for their use, are included online in Otis. An exam answer sheet is also available to help minimize the amount of paper used. Exam answer keys are provided for both exam versions to aid in exam correction.

Each student must obtain a passing score of 78% or better (At least 8 questions correct out of the 10 provided.) If a student does not pass the first Written Exam, he or she must take the alternative version. If a student does not pass the alternative version, he or she must retake the class.

ASHI uses an open-book approach to written exams. Open-book exams emphasize critical thinking and problem solving over recall of memorized facts and decrease

test anxiety. Open-book exams mean that students may use reference materials to take exams when they are required. Reference materials include any notes taken during the class as well as the print or digital ASHI Student Book.

Although students may use reference materials while taking the exam, they should not be allowed to openly discuss the exam with other students or the instructor. Their answers should be their own. Instructors may read aloud the exam to the students as necessary without providing the answers.

Consider the following tips to prevent cheating if students take the Written Exam.

1. Before distributing the exams, remind students those who are caught cheating will not receive certification cards.
2. Request a photo ID if you suspect someone may be taking the test in place of a student. Taking an exam for someone else constitutes cheating.
3. Inform students there is to be no talking during the exam. If a student has a question during the exam, ask that student to raise a hand and you will go to him or her.
4. For extra precaution, use both versions of the exam, alternating them between students to make copying from another student more difficult.
5. Walk around the room throughout the exam. Do not do other work while monitoring the exam.

## **Criteria for Certification**

When the instructor determines a student has demonstrated adequate knowledge and skill competency, the instructor may issue a certification card (print or digital).

Certification means verification that on the indicated class completion date the student demonstrated achievement of the required knowledge and hands-on skill objectives to the satisfaction of a currently authorized ASHI instructor or instructor Trainer.

Certification does not guarantee future performance, or imply licensure or credentialing. Certification is documented by the legitimate issuance of a correctly completed ASHI certification card.

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### **Important:**

SEE THE MOST RECENT VERSION OF THE HSI TRAINING CENTER ADMINISTRATION MANUAL (TCAM) FOR COMPLETE PROGRAM STANDARDS REGARDING CERTIFICATION. THE TCAM IS AVAILABLE AT [HTTP://WWW.HSI.COM/QUALITYASSURANCE](http://www.hsi.com/qualityassurance).

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## Class Documentation

All of the class documentation forms used in the ASHI High-Performance CPR training program are available for download in the documents section of Otis. A complete list of those forms can be found in the Appendix of this Instructor Guide.

There may be periodic revisions or updates to the class documentation forms. Refer to Otis for the most current version.

### *Class Roster*

The Class Roster is the principal record of training. The roster verifies student completion of the class. It also documents the results of the Written Exam and remediation, if used during training. A complete, accurate, and legible Class Roster signed by the authorized Instructor or submitted online through Otis is required for every training class. The Class Roster must be promptly delivered to the training center responsible for the class or submitted online through Otis. The training center is required to keep clear, legible, and orderly class records (paper or digital) for no less than 3 years.

### *Performance Evaluation Sheet*

Instructors can use a team-based performance evaluation sheet for a more formal approach to evaluating required skills. Performance evaluation is a scenario-based assessment process that provides sound, fair, consistent, uniform, objective, and reliable documentation of student competency according to the skill criteria.

A performance evaluation sheet signed by the instructor should be considered important potential evidence demonstrating instructor evaluation of student skill competency. Although a secondary record of training, a performance evaluation sheet may be required by state regulation or organizational policy.

When used, signed performance evaluation sheets must be promptly delivered to the training center responsible for the class.

### *Rate Your Program Course Evaluation*

Encouraging class participants to provide feedback and then using that feedback to improve instruction is an essential aspect of any quality educational effort. HSI requires that students be given the opportunity to evaluate any ASHI class using the Rate Your Program course evaluation form.

When used, course evaluations must be promptly delivered to the training center responsible for the class.

Additionally, class participants may provide Rate Your Program feedback directly to HSI <http://www.hsi.com/rateyourprogram>. All information obtained by HSI through this process is reviewed and shared with the training center, Instructor, or Instructor Trainer as appropriate.

## Initial Class Outline and Time Frame

Lesson	Lesson Title	Knowledge Objectives	Skill Objectives	Approximate Length (min)
Introduction	Describe the purpose of the program, health and safety precautions, and		conduct a warm up exercise.	5
1	Quality Makes a Difference	Explain how CPR skill quality affects survival outcomes for cardiac arrest. List the 5 basic measures of high-quality CPR skills.		10
2	High-Quality Chest Compressions	Describe how to perform high-quality chest compressions on an adult. Explain how a CPR feedback device/manikin can improve the quality of CPR skills.	Correctly demonstrate how to perform high-quality chest compressions on an adult using a CPR feedback device.	16
3	High-Quality Rescue Breaths	Describe how to perform high-quality rescue breaths on an adult.	Correctly demonstrate how to perform high-quality rescue breaths on an adult using a CPR mask.	10
4	Multiple-Provider CPR	Explain how the coordination of CPR as a team improves efficiency. List and describe the 5 main roles in a team resuscitation and the primary responsibility for each.	Correctly demonstrate how to perform CPR as a member of a team of two or more members. Correctly demonstrate how to switch the compressor role during CPR.	19
5	Tips and Tricks to Improve CPR Performance	Explain the purpose of a tip or trick in regard to team performance of CPR.	(Optional) Correctly demonstrate how to perform interposed breaths during CPR.	4
6	High-Performance CPR	Describe the reason for using an integrated team-based resuscitation effort.	Correctly demonstrate how to perform as a team member in an integrated resuscitation effort.	37
7	Maintaining Readiness	Explain the importance of ongoing practice and evaluation in relation to high-performance CPR.		4
<b>EVALUATION</b>				
Skill and Performance Evaluation		Skill evaluation, required. Performance evaluation, optional, unless required. <sup>a</sup>		0–15
Written Exam		Optional, unless required. <sup>b</sup>		10–15
<b>CONCLUSION</b>				
Documentation and Certification		Verify class documentation and issue certification cards to students who earned them.		5+
<b>Total Time<sup>c,d</sup></b>				105

<sup>a</sup> At a minimum, skill competency is visually evaluated by instructors during the required small group practices for the class. A performance evaluation can be used to provide a more formal approach to skill evaluation. When a performance evaluation is not required by organizational policy, it is optional.

<sup>b</sup> When a Written Exam is not required by organizational policy, it is optional. The exam may be used before, during, or after class as an active learning tool; however, the participant's score on an optional exam may not be used to withhold a properly earned certification card. See Written Exam on page 10.

<sup>c</sup> Class size, class location, instructor-to-student ratios, and other factors will affect the actual schedule.

<sup>d</sup> Projected times for lessons take into account video run times, brief introductions and answers to questions, demonstrations, and student practices. Lesson times are influenced by class preparation, available equipment, and instructor efficiency. These could increase the time needed to meet the core learning objectives.

# High-Quality Chest Compressions

**Class Method:** Initial

**Class Type:** Classroom

**Length:** 16 minutes

## Why This Topic Matters

High-quality chest compressions have the greatest impact on the overall quality of CPR and therefore on survival.

## What Students Should Learn

After completing this lesson, the student should be able to state or identify the following:

- How to perform high-quality chest compressions on an adult
- How a CPR feedback device/manikin can improve the quality of CPR skills

After completing this lesson, the student should be able to demonstrate the following:

- How to perform high-quality chest compressions on an adult using a CPR feedback device

## Equipment

- 

## Instructor Activities

### 1 Present Knowledge Content — Video (approx. duration 1:45) or Slides

- Emphasize key points as needed.
  - ✓ High-quality compressions need to be
    - fast (100-120 per minute),
    - deep (at least 2 inches),
    - fully recoiled, and
    - continuous.
  - ✓ High-quality chest compressions can become physically challenging within minutes.
  - ✓ Good body mechanics help minimize your effort and maximize your endurance.
  - ✓ Use of a CPR feedback device, or manikin, can
    - provide real-time, measured feedback on compression rate, depth, and recoil;
    - help develop muscle memory of high-quality compressions; and
    - allow for ongoing adjustments to achieve and maintain high-quality compressions.
  - ✓ Feedback devices are not just for training purposes; if available, use one when performing CPR in real life.
- Ask for and briefly answer any questions.
- Refer students to pages 4–5 of the Student Book.
- Use the Knowledge Check activity to evaluate and increase retention.

### 2 Demonstrate Skills

- Provide WHOLE-PART-WHOLE demonstration of Skill Guide 1 — High-Quality Chest Compressions
- Demonstrate the whole skill with brief comments, demonstrate again step-by-step with comments, and demonstrate the whole skill again without comment.

### 3 Student Practice

- Arrange students into pairs or small groups. Have one student act as a coach by reading the skill steps from the skill guide while another student performs high-quality chest compressions on a manikin.
- Have students rotate through the roles until all have played each role.
- Circulate through the groups looking for competent performance. Use positive coaching and gentle correction to improve student skills.

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**Instructor Note:**

Have each student perform two minutes of uninterrupted high-quality chest compressions using a real-time CPR feedback device. An important goal of this practice is for students to experience the physical demand of performing high-quality chest compressions for two minutes.

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### 4 Evaluation

- Confirm each student demonstrates the correct steps and decision-making tasks in the proper sequence as defined by the skill criteria in the skill guide.

### 5 Wrap It Up

- Ask for and answer any questions before moving on to the next lesson.

**Knowledge Check**

What are the 4 most important attributes of high-quality chest compressions?

*High-quality chest compressions are fast (100-120 per minute), deep (at least 2 inches), fully recoiled, and continuous.*

---

PREVIEW

## High-Quality Chest Compressions



Chest compressions have the greatest impact on the overall quality of CPR.

High-quality compressions need to be:

- Fast
- Deep
- Fully recoiled
- Continuous

### **Body Mechanics**

After just a few minutes, high-quality compressions can become physically challenging. Good body mechanics can help you minimize your effort and maximize your endurance.

It is important to avoid leaning on the chest between compressions. This will allow for full recoil of the chest at the top of each compression.

### **CPR Feedback Device**

A CPR feedback device, or manikin, can provide real-time, measured feedback to a compressor on compression rate, depth, and recoil.

The use of one when training is essential to develop muscle memory of high-quality compressions. Use one in real-life, if possible. Real-time feedback allows for ongoing adjustments by a compressor to achieve and maintain high-quality compressions.



#### *Knowledge Check*

What are the 4 most important attributes of high-quality chest compressions?

## High-Quality Chest Compressions



### Position Your Hands

- Position person face up on a firm, flat surface. Kneel close to the chest.
- Place heel of one hand on center of chest, on lower half of breastbone.
- Place heel of your other hand on top of and parallel to first. You can interlace fingers to keep them off chest.



### Position Your Body

- Use good body mechanics to minimize effort and maximize endurance.
- Bring your body up and over the chest so your shoulders are directly above your hands.
- Straighten your arms and lock your elbows.



### Compress

- Push straight down, at least 2 inches, bending at the waist as a fulcrum point and using your upper body weight to help compress.
- Lift hands and allow chest to fully recoil to its normal position. Move immediately into down stroke of next compression.
- Avoid leaning on chest at the top of each compression.
- Continue compressions at a rate of 100 to 120 times per minute.



### Maintain Quality

- Use a CPR feedback device to ensure you are continuously meeting depth and rate guidelines.
- Continue uninterrupted for 2 minutes to get a sense of how tiring ongoing compressions can be.

ASHI

Student Book — High-Performance CPR

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An HSI Company

American Safety & Health Institute  
1450 Westec Drive  
Eugene, OR 97402 USA  
800-447-3177 • 541-344-7099 • 541-344-7429 fax  
emergencycare.hsi.com

## High-Performance CPR



Making the Workplace and Community Safer.