

Accelerated HeartCode® BLS Competency Agenda and Lesson Plans

Introduction to the Accelerated HeartCode BLS Competency Agenda

Recognizing that many students who complete the online portion of HeartCode BLS blended learning come to the skills performance session with some level of competency, the American Heart Association has created an accelerated agenda for students who believe they can demonstrate mastery of the skills associated with high-quality CPR. This competency-focused agenda is called the Accelerated HeartCode BLS Competency Agenda, and it allows a learner to demonstrate competency and thus potentially shorten the time required to complete the instructor-led hands-on portion of HeartCode BLS.

When using this agenda, the instructor must ensure that the student is demonstrating performance at the required level by using an instrumented directive feedback device, which is required throughout both practice and testing in the instructor-led hands-on portion of HeartCode BLS. The *2015 AHA Guidelines Update for CPR and ECC* states, “Learners who used devices that provided corrective feedback during CPR training had improved compression rate, depth, and recoil compared with learners performing CPR without feedback devices.”*

Studies have shown that the use of instrumented directive feedback devices significantly improves CPR performance at the end of training. Studies have also suggested that the use of directive feedback devices has shortened the practice time to demonstration of competence. These devices have demonstrated more accurate and consistent feedback than instructors have.*

- **Definition of instrumented directive feedback device:** An instrumented directive feedback device measures rate, depth, hand position, release, and chest compression fraction and gives real-time audio and/or visual feedback on these items. At a minimum, the device must measure and give real-time audio and/or visual feedback on rate and depth. This information then allows students to self-correct their skills.

Using the new BLS skills testing checklists, the instructor will observe the student and instrumented feedback when evaluating the performance of high-quality CPR as defined in the skills testing checklists and critical skills descriptors.

*Bhanji F, Donoghue AJ, Wolff MS, et al. Part 14: education: 2015 American Heart Association Guidelines Update for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. *Circulation*. 2015;132(18 suppl 2):S561-S573.

Accelerated HeartCode BLS Competency Agenda With High-Performance Teams Activity

3 Students, 1 BLS Instructor

Student-instructor ratio 3:1; student-manikin ratio 3:1

Total time: approximately 70 minutes

8:00-8:05	Lesson 1: Course Introduction
8:05-8:25	Lesson 2: 1-Rescuer Adult BLS Part I: 1-Rescuer Adult BLS Practice Part II: AED Practice Part III: Adult CPR and AED Skills Test
8:25-8:30	Lesson 3: 2-Rescuer Child CPR Part I: 2-Rescuer Child CPR Practice
8:30-8:45	Lesson 4: High-Performance Teams Activity
8:45-9:05	Lesson 5: Infant BLS Part I: Infant Compressions (1-Rescuer) Part II: 2-Rescuer Infant CPR Practice Part III: Infant CPR Skills Test
9:05-9:10	Lesson 6: Conclusion

Lesson 1

Course Introduction

5 minutes

Precourse Requirements

- The accelerated HeartCode BLS Competency Course is only intended for providers who are experienced in the skills of basic life support, are renewing their AHA BLS course completion card, and have successfully completed the online portion of HeartCode BLS.
 - For all other providers, the Lesson Plans and agenda for HeartCode BLS found in the Instructor Manual must be followed.
- Use of a feedback device or manikin is required for the accelerated HeartCode BLS Competency Course to ensure high-quality CPR with the direct assessment of a student's performance of skills.
- Be familiar with the learning objectives and the BLS Course content. Knowing what you want to communicate, why it's important, and what you want to happen as a result is critical to the success of the course.
- Be familiar with all remediation best practices found in "Part 3: Testing and Remediation" in the Instructor Manual. Informal and formal remediation are critical to student success in the accelerated BLS Competency Course.
- All remaining precourse requirements must be followed before teaching this course, per the Precourse Lesson Plan found in "Part 6: HeartCode BLS Lesson Plans" in the Instructor Manual.



Discussion: Course Introduction

- Introduce yourself and additional instructors, if present.
- Invite students to introduce themselves.
- Explain that the course is accelerated, will meet all BLS learning objectives, and is designed to adapt to each student's current level of high-quality CPR performance. Refer to the following points (see detailed information for each throughout the Instructor Manual) for discussion with students:
 - Your role
 - Use of the feedback device to ensure high-quality CPR
 - Video-based practice
 - Practice while watching
 - Refer to "Part 2: Teaching the Course" in the Instructor Manual for detailed information about practice while watching.
 - Video-based remediation
 - Instruction of each skill where remediation is needed
 - Skills tests and exam
- Ask that any student who anticipates difficulties due to personal limitations, such as a medical concern or knee or back problems, speak with one of the instructors. Refer to "Part 1: Preparing for the Course" in the Instructor Manual for further explanation about students with special needs.
- Explain the layout of the building, including bathrooms and emergency exits.
- Remind students of where the nearest AED is located and what the emergency response number is.

- Describe the course agenda:
 - Inform students of breaks you have scheduled during the class.
 - Tell the students, “We are scheduled to end at ____.”
- Remind students what they will learn during the course. At the end of the Accelerated HeartCode BLS Competency Course, learners will be able to
 - Apply the BLS concepts of the Chain of Survival
 - Perform high-quality CPR for an adult
 - Demonstrate the appropriate use of an AED
 - Provide effective ventilations by using a barrier device
 - Perform as an effective team member during multirescuer CPR
 - Perform high-quality CPR for a child
 - Perform high-quality CPR for an infant
- Remind students of the course completion requirements:

Skills Test Requirements	Exam Requirements
Students must successfully pass these skills tests by being evaluated once in each role: <ul style="list-style-type: none"> • Adult CPR With AED Skills Test • Infant CPR Skills Test 	Score at least 84% on the exam completed online

Instructor Notes

Next

1-Rescuer Adult BLS

Lesson 2

1-Rescuer Adult BLS

20 minutes

Part I: 1-Rescuer Adult BLS Practice

Part II: AED Practice

Part III: Adult CPR and AED Skills Test

Learning Objectives

Tell students that at the end of this lesson, they will be able to

- Apply the BLS concepts of the Chain of Survival
- Provide effective ventilation by using a barrier device
- Demonstrate the appropriate use of an AED
- Perform high-quality CPR for an adult

Instructor Tips

- Navigate to the Practice While Watching menu in the HeartCode BLS course video to access each practice-while-watching segment.
- For every practice-while-watching or student practice segment:
 - The use of a feedback device is required.
 - Observe students and provide positive and corrective feedback on their performance.
- Repeat the practice as many times as needed for all students to complete the practice session.
- If informal remediation is needed for students on a BLS skill, follow the remediation steps in this Lesson Plan for each skill that students practice, before testing.



Practice While Watching: 1-Rescuer Adult BLS

Students will follow along with the video to complete the steps for scene safety and assessment, adult compressions, and pocket mask in a full sequence for practice before testing. Refer to each skill below for detailed steps.

Scene Safety and Assessment

- Verify that the scene is safe for you and the victim.
- Check for responsiveness. Tap the victim's shoulder and shout, "Are you OK?"
- Assess the victim for presence of a pulse and normal breathing.
- If the victim is not responsive, shout for nearby help.
- Activate the emergency response system in your setting.
- Get the AED and emergency equipment. If someone else is available, send that person to get it.

Adult Compressions

- Step 1: Position yourself at the victim's side.
- Step 2: Put the heel of one hand on the center of the victim's chest, on the lower half of the sternum.
- Step 3: Put the heel of your other hand on top of the first hand.
- Step 4: Straighten your arms and position your shoulders directly over your hands.
- Step 5: Give chest compressions.
 - Press down at least 2 inches (5 cm) with each compression. Make sure you push straight down on the victim's sternum.
 - Deliver compressions at a rate of 100 to 120/min.
 - At the end of each compression, make sure you allow the chest to recoil (re-expand) completely.
- Step 6: Minimize interruptions of chest compressions.

Pocket Mask

- Step 1: Position yourself at the victim's side.
- Step 2: Place the pocket mask on the victim's face, using the bridge of the nose as a guide for correct position.
- Step 3: Seal the pocket mask against the face.
 - Using your hand that is closer to the top of the victim's head, place the index finger and thumb along the edge of the mask.
 - Place the thumb of your other hand along the edge of the mask.
- Step 4: Place the remaining fingers of your second hand along the bony margin of the jaw, and lift the jaw. Perform a head tilt–chin lift to open the airway.
- Step 5: While you lift the jaw, press firmly and completely around the outside edge of the mask to seal the pocket mask against the face.
- Step 6: Deliver each breath over 1 second, enough to make the victim's chest rise.



Remediation: 1-Rescuer Adult BLS (if needed)

For each skill above that student(s) did not adequately perform, follow the steps below for remediation before testing students on adult CPR and AED.

- Navigate to the Instruction menu in the HeartCode BLS course video. Play the Instruction for the skill(s) where remediation is needed.
- Then, navigate to the Practice While Watching menu in the HeartCode BLS course video. Play the practice-while-watching segment for the skill(s) where remediation is needed.



Students Practice: AED

Allow students time to practice with the AED. Lead students by having them practice the following steps on how to use an AED. First show the steps while using your AED trainer *if necessary*, and then have students practice.

Using an AED

- Step 1: Open the carrying case. Power on the AED if needed.
 - Some devices will power on automatically when you open the lid or case.
 - Follow the AED prompts as a guide to next steps.
- Step 2: Attach AED pads to the victim's bare chest.
 - Choose adult pads (not child pads or a child system) for victims 8 years of age and older.
 - Peel the backing away from the AED pads.
 - Attach the adhesive AED pads to the victim's bare chest.
 - Place one AED pad on the manikin's upper-right chest (directly below the collarbone). Place the other pad to the side of the left nipple, with the top edge of the pad a few inches below the armpit.
 - Attach the AED connecting cables to the AED box (some are preconnected).
- Step 3: Clear the manikin and analyze the rhythm.
 - If the AED prompts you, clear the victim during analysis. Be sure no one is touching the victim, not even the rescuer in charge of giving breaths.
 - Some AEDs will tell you to push a button to allow the AED to begin analyzing the heart rhythm; others will do that automatically. The AED may take a few seconds to analyze.
 - The AED then tells you if a shock is needed.
- Step 4: If the AED advises a shock, it will tell you to clear the victim.
 - Clear the victim before delivering the shock; be sure no one is touching the victim.
 - Loudly state a "clear the victim" message, such as "Everybody clear" or simply "Clear."
 - Look to be sure no one is in contact with the victim.
 - Press the shock button.
 - The shock will produce a sudden contraction of the victim's muscles.



Remediation: AED (if needed)

For each skill above that student(s) did not adequately perform, follow the steps below for remediation before testing students on adult CPR and AED.

- Navigate to the Instruction menu in the HeartCode BLS course video. Play the Instruction for AED.
- Then, have students repeat the AED practice session, per the steps in this Lesson Plan.



Skills Test: Adult CPR and AED

Refer to the Adult CPR and AED Skills Testing Checklist for specific direction on how to test students.

- For further detail on each step, see Understanding the Adult CPR and AED Skills Testing Checklist in "Part 3: Testing and Remediation" in the Instructor Manual.

Remediation

- For students who need remediation after skills testing, follow these steps and refer to the remediation Lesson Plan in “Part 6: HeartCode BLS Lesson Plans.”
 - Determine where the students are having trouble during their Adult CPR and AED Skills Test.
 - If needed, replay sections of video or practice skills to ensure learning.
 - Retest skills as necessary.
 - Some students may need additional practice or may need to repeat the course in the full HeartCode BLS course format to demonstrate skills competency and to achieve a course completion card.

Instructor Notes

Next

2-Rescuer Child CPR

Lesson 3

2-Rescuer Child CPR

5 minutes

Part I: 2-Rescuer Child CPR Practice

Learning Objective

Tell students that at the end of this lesson, they will be able to

- Perform high-quality CPR for a child

Instructor Tips

- Navigate to the Practice While Watching menu in the HeartCode BLS course video to access each practice-while-watching segment.
- For every practice-while-watching or student practice segment:
 - The use of a feedback device is required.
 - Observe students and provide positive and corrective feedback on their performance.
- Repeat the practice as many times as needed for all students to complete the practice session.
- If informal remediation is needed for students on a BLS skill, follow the remediation steps in this Lesson Plan for each skill that students practice.
- Child BLS skills are not tested in the BLS Course, but performance is practiced to meet all required BLS learning objectives and to allow students practice in child BLS, a 2-rescuer setting, and use of a bag-mask device, because these are important skills in BLS.



Practice While Watching: 2-Rescuer Child CPR

Students will follow along with the video to complete the steps for 2-rescuer child CPR. Assign which student will play Rescuer 1 and which student will play Rescuer 2. Repeat the practice for students to switch and play the role of each rescuer. Refer to each skill below for detailed steps.

Rescuer 1 and 2

- Scene safety and assessment

Rescuer 1

- Have Rescuer 1 position himself at the victim's side to perform chest compressions and to practice the following:
 - Compress the chest at least 2 inches (5 cm).
 - Compress at a rate of 100 to 120/min.
 - Allow the chest to recoil completely after each compression.
 - Minimize interruptions in compressions (try to limit any interruptions in chest compressions to less than 10 seconds).
 - Use a compressions-to-breaths ratio of 15:2.
 - Count compressions out loud.

Rescuer 2

- Have Rescuer 2 position herself at the victim's head and maintain an open airway by
 - Using head tilt–chin lift or jaw thrust
 - Place the mask on the victim's face, using the bridge of the nose as a guide for correct position.
 - Use the E-C clamp technique to hold the mask in place while you lift the jaw to hold the airway open.
 - Place the mask on the face, with the narrow portion at the bridge of the nose.
 - Use the thumb and index finger of one hand to form a “C” on the side of the mask, pressing the edges of the mask to the face.
 - Use the remaining fingers to lift the angles of the jaw (3 fingers form an “E”), open the airway, and press the face to the mask.
 - Giving breaths with a bag-mask device, watching for chest rise and avoiding excessive ventilation
 - Squeeze the bag to give breaths (1 second each) while watching for chest rise. Deliver each breath over 1 second whether or not you use supplementary oxygen.
- Tell the second rescuer to encourage the first rescuer to perform compressions that are deep enough and fast enough and to allow complete chest recoil between compressions.



Remediation: 2-Rescuer Child CPR (if needed)

For each skill above that student(s) did not adequately perform, follow the steps below for remediation.

- Navigate to the Instruction menu in the HeartCode BLS course video. Play the Instruction for Bag-Mask Device and/or Child BLS.
- Then, navigate to the Practice While Watching menu in the HeartCode BLS course video. Play the Bag-Mask Device and/or 2-Rescuer Child CPR practice-while-watching segment.

Instructor Notes

Next

High-Performance Teams
Activity

Lesson 4

High-Performance Teams Activity

15 minutes

Learning Objective

Tell students that at the end of this lesson, they will be able to

- Perform as an effective team member during multirescuer CPR

Instructor Tips

Your role during this activity is to watch multiple rescuers simultaneously, noting team function that can be used for your debriefing at the end of each case. You will complete the following:

- Present one 10-minute scenario, and follow with a 5-minute debriefing.
- The chest compression fraction (CCF) is the proportion of time that chest compressions are performed during a cardiac arrest. A CCF of at least 60% is recommended, and a goal of 80% is often achievable with good teamwork. In this lesson, to determine whether the team is successful in achieving this CPR quality indicator, you can compute the CCF by choosing one of the following options:

Option 1

- Use 2 stopwatches.
 - Start one stopwatch as soon as you give the scenario to the team, and let it run continuously to the 10-minute mark (total resuscitation time). It will serve as a reminder to stop the case.
 - The second stopwatch should be started and stopped as chest compressions are being performed.
 - At the end of the case, to achieve a CCF of greater than 60%, the total chest compression time should be more than 6 minutes of the 10-minute scenario. To achieve a CCF of greater than 80%, the total chest compression time should be more than 8 minutes of the 10-minute scenario.

Option 2

- Download the Full Code Pro tracking app to an iOS smartphone or tablet. This app can be used to capture resuscitation data during training events as well as in real patient events.

Option 3

- Use a manikin that captures resuscitation data.

For students' review of this lesson, they can reference "Part 4: Team Dynamics" in the Provider Manual.



Play Video (optional)

For additional review of high-performance teams and an introduction to this activity and chest compression fraction, navigate to the Lessons Menu in the HeartCode BLS course video and play "Team Dynamics."



Video Pauses

- Have students position themselves into groups for the scenario and assign team roles. Refer to the team roles discussed in the Team Dynamics Lesson Plan in “Part 6: HeartCode BLS Lesson Plans” for more detailed information on team roles, if needed.
- Let students know that they will first be given a scenario and then they will begin the High-Performance Teams Activity.



Students Practice

Present the following scenario to each team:

“As part of a multirescuer emergency response team, you respond to a call about a 65-year-old woman who suddenly collapsed. Your team arrives within seconds of the incident, and you notice that compression-only CPR is being performed by a bystander.”

- Observe students and provide positive and corrective feedback on their performance.
 - Focus on coaching students through the teamwork.
 - Keeping in mind the components of high-quality CPR, watch for poor performance in any area, and then provide focused practice in those areas.
 - As the compressor gets closer to the end of the 2 minutes, ensure that the compressions are still of adequate rate and depth and that the compressor allows complete chest recoil (avoiding leaning on the chest).



Discussion: High-Performance Teams Activity Debriefing

- At the end of the scenario, debrief by allowing the team to say what they thought went well and what could have been better.
 - Disclose the CCF and discuss any strategies that could be incorporated to improve.
 - Talk about the other components of high-quality CPR and whether the team achieved these.
 - Let the team lead the discussion; ask open-ended questions to facilitate the discussion.
- Coach on how communication might be improved through the use of closed-loop communication. When communicating with resuscitation team members, the team leader should use closed-loop communication by taking these steps:
 - The team leader gives a message, order, or assignment to a team member.
 - By receiving a clear response and eye contact, the team leader confirms that the team member heard and understood the message.
 - The team leader listens for confirmation of task performance from the team member before assigning another task.

Instructor Notes

Next

Infant BLS

Lesson 5

Infant BLS

20 minutes

Part I: Infant Compressions (1-Rescuer)

Part II: 2-Rescuer Infant CPR Practice

Part III: Infant CPR Skills Test

Learning Objective

Tell students that at the end of this lesson, they will be able to

- Perform high-quality CPR for an infant

Instructor Tips

- Navigate to the Practice While Watching menu in the HeartCode BLS course video to access each practice-while-watching segment.
- For every practice-while-watching or student practice segment:
 - The use of a feedback device is required.
 - Observe students and provide positive and corrective feedback on their performance.
- Repeat the practice as many times as needed for all students to complete the practice session.
- If informal remediation is needed for students on a BLS skill, follow the remediation steps in this Lesson Plan for each skill that students practice, before testing.



Practice While Watching: Infant Compressions (1-Rescuer)

Students will follow along with the video to complete the steps for infant compressions before testing. Refer to each skill below for detailed steps.

- Place the infant on a firm, flat surface.
- Place 2 fingers in the center of the infant's chest, just below the nipple line, on the lower half of the sternum. Do not press the tip of the sternum.
- Push hard and fast at a depth of at least one third the depth of the chest (about 1½ inches [4 cm]). Deliver compressions at a rate of 100 to 120/min.
- At the end of each compression, make sure you allow the chest to fully recoil (re-expand); do not lean on the chest.
- Minimize interruptions between compression sets to less than 10 seconds.



Remediation: Infant Compressions (1-Rescuer) (if needed)

For each skill above that student(s) did not adequately perform, follow the steps below for remediation before testing students on infant CPR.

- Navigate to the Instruction menu in the HeartCode BLS course video. Play the Instruction for Infant Compressions.

- Then, navigate to the Practice While Watching menu in the HeartCode BLS course video. Play the practice-while-watching segment for Infant Compressions.



Practice While Watching: 2-Rescuer Infant CPR

Students will follow along with the video to complete the steps for scene safety and assessment, infant compressions, and using a bag-mask device in a full sequence for practice before testing. Assign which student will play Rescuer 1 and which student will play Rescuer 2. Repeat the practice for students to switch and play the role of each rescuer. Refer to each skill below for detailed steps.

Rescuer 1 and 2

- Scene safety and assessment

Rescuer 1

- Have Rescuer 1 position himself at the victim's side to perform chest compressions by using the 2 thumb-encircling hands technique and to practice the following:
 - Compress at least one third the depth of the infant's chest (at least 1½ inches [4 cm] deep).
 - Compress at a rate of 100 to 120/min.
 - Allow the chest to recoil completely after each compression.
 - Minimize interruptions in compressions (try to limit any interruptions in chest compressions to less than 10 seconds).
 - Use a compressions-to-breaths ratio of 15:2.
 - Count compressions out loud.

Rescuer 2

- Have Rescuer 2 position herself at the victim's head and maintain an open airway by
 - Using a head tilt-chin lift or jaw thrust
 - Place the mask on the victim's face, using the bridge of the nose as a guide for correct position.
 - Use the E-C clamp technique to hold the mask in place while you lift the jaw to hold the airway open.
 - Place the mask on the face, with the narrow portion at the bridge of the nose.
 - Use the thumb and index finger of one hand to form a "C" on the side of the mask, pressing the edges of the mask to the face.
 - Use the remaining fingers to lift the angles of the jaw (3 fingers form an "E"), open the airway, and press the face to the mask.
 - Giving breaths with a bag-mask device, watching for chest rise and avoiding excessive ventilation
 - Squeeze the bag to give breaths (1 second each) while watching for chest rise. Deliver each breath over 1 second whether or not you use supplementary oxygen.
- Tell the second rescuer to encourage the first rescuer to perform compressions that are deep enough and fast enough and to allow complete chest recoil between compressions.



Remediation: 2-Rescuer Infant CPR (if needed)

For each skill above that student(s) did not adequately perform, follow the steps below for remediation.

- Navigate to the Instruction menu in the HeartCode BLS course video. Play the Instruction for Bag-Mask Device for Infants and/or 2-Rescuer Infant CPR.
- Then, navigate to the “Practice While Watching” menu in the HeartCode BLS course video. Play the Bag-Mask Device for Infants and/or 2-Rescuer Infant CPR practice-while-watching session.



Skills Test: Infant CPR

Refer to the Infant CPR Skills Testing Checklist for specific direction on how to test students.

- For further detail on each step, see Understanding the Infant CPR Skills Testing Checklist in “Part 3: Testing and Remediation” in the Instructor Manual.

Remediation

- For students who need remediation after skills testing, follow these steps and refer to the remediation Lesson Plan in “Part 6: HeartCode BLS Lesson Plans.”
 - Determine where the students are having trouble during their Infant CPR Skills Test.
 - If needed, replay sections of video or practice skills to ensure learning.
 - Retest skills as necessary.
 - Some students may need additional practice or may need to repeat the course in the full HeartCode BLS Course format to demonstrate skills competency and to achieve a course completion card.

Instructor Notes

Next

Conclusion

Lesson 6

Conclusion

5 minutes

Instructor Tips

- When summarizing what the course has covered, allow students to lead this discussion at times by asking 1 or 2 students (maximum, for class time efficiency) what they observed/learned during the course.
- During the summary and closing, provide students with clear direction on how they can further study and seek out additional resources provided by the AHA to help with postclassroom training.



Discussion

To conclude the course, discuss the following with students:

- Thank students for their participation.
- Summarize what students learned during the course.
- Remember: Students taking HeartCode BLS will complete their evaluation form during the online portion of the course before the classroom portion.

Instructor Notes
