



Automated External Defibrillator Program

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Office of Emergency Services
UNIVERSITY OF CALIFORNIA SANTA CRUZ | [COMPANY ADDRESS]

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AED POSTER: DOWNLOAD FROM OFFICE OF EMERGENCY SERVICES AED WEB PAGE

- How to Use an AED Poster (keep posted on wall by your AED)

UC Santa Cruz Automated External Defibrillator Program

The UCSC Automated External Defibrillator (AED) program is managed by the Office of Emergency Services (OES). For questions about this program, please contact OES at oes@ucsc.edu.

AUTOMATED EXTERNAL DEFIBRILLATOR (AED) PROGRAM

The purpose of the Automated External Defibrillator (AED) program is to ensure proper oversight, compliance, installation, maintenance and response for AEDs. AEDs are used to treat victims who are experiencing sudden cardiac arrest. An AED is only to be applied to victims who are unconscious, not breathing normally, and showing no signs of circulation such as normal breathing, coughing or movement. An AED will analyze the heart rhythm and advise the operator if a shockable rhythm is detected. If a shockable rhythm is detected, the AED will charge to the appropriate energy level and deliver a shock.

The UCSC AED Program and Manual satisfy applicable State of California and County requirements for public AEDs. For further explanation of these requirements, visit the Office of Emergency Services web site: <https://oes.ucsc.edu/public-education/cpr-training.html>

OVERSIGHT, ROLES AND RESPONSIBILITIES

This section describes the roles and responsibilities for the UCSC AED Program.

PROGRAM MANAGER RESPONSIBILITIES

The AED Program Manager is the Director of Emergency Services. The Program Manager is responsible for:

- Compliance oversight and material management of the AED program.
- Management of the AED roster.
- Disseminate of procedural changes.
- Notifications to Santa Cruz County Emergency Medical Services (notice of AED program, locations, and use of AEDs).
- Ensure records of maintenance and tests are appropriately maintained.
- Providing emergency response system protocols for AED Emergency Response Teams.

AED DEPARTMENT COORDINATOR RESPONSIBILITIES

Departments intending to place an AED in their building assume the responsibility to maintain compliance with the UCSC AED program, including assigning a Department AED Coordinator. These requirements are not applicable to the UCSC Police Department, which adheres to self-management of their AED program.

The Department AED Coordinator shall:

1. Read and implement the requirements and guidelines of this UCSC AED Program Manual.
2. Complete an AED Emergency Response Plan for your building (see template in Appendices).
3. Per the AED's manual, provide service and maintenance of AED as directed. Record status checks on the AED Roster.
4. Wifi enabled AEDs will provide email alerts when malfunction occurs. See HeartSine Gateway manual for steps to resolve (posted on Emergency Services AED web page).
5. After an AED activation, remove the unit from service and notify the Office of Emergency Services 459-3828. **Do not** download the AED activation record. Instruct the AED responder to complete a patient record form (included in appendices and on OES web page). Secure the patient record form and the AED for pickup by the Office of Emergency Services. Do not email or fax the patient record form.
6. Attend AED Coordinator training.

AED RESPONDER'S RESPONSIBILITIES

1. After an AED activation, remove the AED from public access and notify the Office of Emergency Services 459-3828.
2. Complete a patient record form and submit this record to the AED Department Coordinator. If unable to contact AED Department Coordinator, call the Office of Emergency Services 459-3828. Secure the patient record form for pick up by the Office of Emergency Services.

REFERENCE DOCUMENTS

Forms, codes and recommendations that guide this program.

- UCSC AED Program Manual.
- California Health and Safety Code 1797.196; California Civil Code Section 1714.21.
- County of Santa Cruz Public Access/Layperson Defibrillator (AED) Program Implementation Guidelines.
- Emergency Response Plan for AEDs (see Annex G).
- American Red Cross - *AED Use Steps (for distribution, not posting)*.
- Blood borne Pathogen Exposure Control Plan (visit EHS web page)
- AED Maintenance Roster (visit UCSC AED Team Drive).
- AED User Guide (see individual manufacturer's instructions).

PROCURING AN AED

Due to State and local Health Code requirements, AEDs should be purchased through the Office of Emergency Services. To purchase an AED, contact OES at oes@ucsc.edu and indicate the following, a) location of AED, b) FOAPAL for transfer of billing, c) AED coordinator.

PROCUREMENT COSTS AND MAINTENANCE FEES (ESTIMATES)

Central funding does not exist for AEDs. Before purchasing an AED, determine if you can sustain the maintenance and training fees associated with sponsoring an AED.

Estimated Costs for AED

Item	Initial Purchase Expense (approx.)	10 Year Expense (approx.)	Department Responsibility
AED Unit	\$1,200-\$1,800		Yes
Semi-annual First Aid/CPR/AED Training (1 per bldg.)	Per person \$90	\$500	Yes
Alarmed box & Install	\$390-\$530		Yes
Battery replacement		\$300	Yes
New Pads/Safety kit		\$120	Yes
Approximate Total	\$1,680 to \$2,420	\$920	Yes

PLACEMENT RECOMMENDATIONS

Most (not all) UCSC buildings are not required to provide a public AED. However, the Office of Emergency Services encourages the provision of AEDs to enhance public safety. A department that “opts in” to providing an AED, must adhere to the requirements of the UCSC AED program.

Visit the OES web site for AED requirements related to:

- Health Studio Facilities (Gyms)
- Health Facilities
- New Construction

Though most UCSC buildings are exempt from AED requirements, the Office of Emergency Services encourages the addition of AED units if your building meets the following descriptors:

1. Group A assembly buildings with an occupancy of greater than 300.
2. Group B business buildings with an occupancy of 200 or more.
3. Group E educational buildings with an occupancy of 200 or more.
4. Group F factory buildings with an occupancy of 200 or more.
5. Group I institutional buildings with an occupancy of 200 or more.
6. Group M mercantile buildings with an occupancy of 200 or more.
7. Group R residential buildings with an occupancy of 200 or more, excluding single-family and multifamily dwelling units.

Please contact OES with any questions about whether your building meets such descriptors or is required to place a public AED.

INSTALLATION: LOCATION AND MAINTENANCE

LOCATION AND INSTALLATION

The following summary provides a guideline for AED installations. OES will review and approve actual installation locations on a case by case basis, in consultation with UCSC Physical Planning, Development and Operations, in order to ensure compliance with applicable laws and regulations, including the Americans with Disabilities Act (ADA).

- ☐ The AED is located in an area accessible to all employees in an unlocked cabinet. An alarm will sound when cabinet door is opened- alarm silences when cabinet door is closed.
- ☐ Install the AED at a central point to the building's population. Optimally within ninety seconds away (walking quickly) from the furthest populated area of your building. High traffic areas are ideal.
- ☐ The AED will have one set of defibrillation electrodes connected to the device and one spare set of electrodes with the AED; these are located in the AED case, in lid under flap.
- ☐ One resuscitation kit will be connected to the handle of the AED. This kit will include two pairs of latex-free gloves, one razor, one set of trauma shears, and one facemask barrier device.
- ☐ Adhere to ADA Guidelines: ADA Accessibility Guidelines (ADAAG) specify that objects such as automated external defibrillator wall cabinets shall not protrude more than 4 inches from the wall into walks, corridors, passageways, or aisles.
- ☐ Near phone service
- ☐ Clearly visible and unobstructed
- ☐ Affix use and reporting instructions with each AED (see AED Instructions and Reporting annexes within this manual)

Automated External Defibrillator Mounting Heights

The height to reach the handle of an automated external defibrillator (AED) in a public gathering place should be no more than 48 inches high. ADA guidelines specify maximum reach ranges for health equipment such as automated external defibrillators and other life safety devices. For safety equipment with an unobstructed approach, the maximum forward reach to the equipment is 48 inches above the floor. The maximum side reach for an unobstructed approach to an AED is 54 inches.

MAINTENANCE COMPLIANCE

Departments sponsoring an AED assume the responsibility of regularly maintaining and testing AEDs in accordance with both the guidelines set forth by the manufacturer and according to applicable State or County Laws / Civil Codes. See the AED Checklist for a list of these requirements.

NOTICE OF AEDS TO OCCUPANTS

Annually, the Office of Emergency Services will provide public notice of AED locations to the campus. Department coordinators shall maintain their AED record on the resource provided by the Office of Emergency Services.

WIFI Enabled AEDS:

Wifi enabled AEDs will provide a daily self-check. When this check prompts an alert, Department AED Coordinators shall troubleshoot and clear this alert. See user manual to service AED and online serviced account. Visual checks are necessary. See AED Checklist for maintenance schedule.

TRAINING CPR/AED PROVIDERS

For up to five AEDs in one building, the Department Coordinator shall ensure that one employee is trained in cardiopulmonary resuscitation and AED use. This training must comply with the regulations adopted by the Emergency Medical Service Authority and the standards of the American Heart Association or the American Red Cross.

The Department AED Coordinator and the Campus AED Program Coordinator will maintain these training records. Email training certificates to: oes@ucsc.edu.

ACTIVATION, REPORTING AND RESTORATION

AED deployments require notification, reporting and restoration. Complete the following steps after each AED use.

1. The AED responder shall notify the Department Coordinator and the Office of Emergency Services (831) 459-3828 of the AED use. Prepare a **Notification of AED Use** form (see annex) and note any procedural complications. Documentation shall be initiated whether or not defibrillator shocks were delivered. Contact Emergency Services for pickup of the *Notification of AED Use Form* to OSE@ucsc.edu.
2. The Office of Emergency Services will pick up the AED to process the data report. After examining and refurbishing the unit, OES will return the unit to the department.
3. Do not restore the unit to public access until OES has picked up and serviced the unit.
4. Rendering aid can be a difficult experience. Visit UCSC Human Resources for grief counseling or mental health services.

HEARTSINE USER MANUALS

Heartsine 450P units have wifi self check capabilities. Reference these manuals for use, maintenance, and troubleshooting LifeLink notifications. Manuals are located in the AED case.

Heartsine User Manual



- When should an AED be used?
- Warnings and Precautions
- Device layout
- How to use AED on both adults and children
- Service and maintenance of device

HeartSine Gateway with LIFELINK Central AED Program Manager User Manual:



- Assembly of HeartSine Gateway device
- Connecting device to the network
- Monitoring AED functionality
- Caring for the AED
- Battery maintenance
- Warnings and precautions
- Troubleshooting (wifi connectivity, LIFELINKcentral alerts, etc).

Heartsine LIFELINK central Technical Support Phone Number: 1-800-442-1142

Visit your AED manufacturer's user manual for specific maintenance requirements.

AED PROGRAM AGREEMENT

Medical Practitioner Review

By signature, I approve the guidelines provided within this University of California, Santa Cruz Automated External Defibrillator Program manual.

Print First and Last Name	Title	Signature	Date
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Department AED Coordinator Review

By signature, I acknowledge that I have received and reviewed the guidelines provided within this University of California, Santa Cruz Automated External Defibrillator Program manual.

Print First and Last Name	Title	Signature	Date
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ANNEX

- A) AED Response Plan
- B) AED Checklist
- C) AED Use Protocol (Heartsine)
- D) How to Report an AED Activation
- E) Notification of AED Use Form

ANNEX A: AED RESPONSE PLAN

BUILDING AED RESPONSE PLAN

1. Identify 1 Department AED Coordinator for each Division/College/Admin Unit.
2. Identify 1 CPR/AED Certified individual **per building**, for up to 5 AEDs.*
3. Train at least 2 more occupants in AED Response Support.
 - a. **AED Response Support duties:** 1) Assist response by calling 911 when an AED is activated. 2) Flag the ambulance from outside building to rescue scene. 3) Assist with providing privacy at the response scene. 4) Observe and report critical information to first responders.

AED Department Coordinator Acknowledgement_____ **Date**_____

Location of AED

Building Name	Address	Floor	Office Number (nearest) or Description of AED Location

AED Response Team

Team Members Name	Phone (mobile when possible)	CPR/AED Certification (enter expiration mo/yr)
(1 CPR/AED trained responder)*:		
<input type="checkbox"/> AED Response Support Role trained (check when completed)		
<input type="checkbox"/> AED Response Support Role trained (check when completed)		
<input type="checkbox"/> AED Response Support Role trained (check when completed)		
<input type="checkbox"/> AED Response Support Role trained (check when completed)		

***NAME REQUIRED**

ANNEX B: AED COMPLIANCE CHECKLIST

The AED coordinator is responsible for reading and implementing all requirements and guidelines of the following AED Compliance Checklist.

Item	Department AED Coordinator Tasks	Completed
1	Read the full content of this AED manual and your AED users/maintenance manuals.	
2	Comply with all regulations governing the placement of an AED (see this manual).	
3	Determine if your department has funding to purchase, install and maintain an AED unit.	
4	Purchase an AED model recommended by UCSC's Office of Emergency Services.	
5	Register your AED with the Office of Emergency Services oes@ucsc.edu . (OES will register your unit with the Santa Cruz County Emergency Mgmt).	
6	Emergency Services will provide a the AED is maintained and tested in accordance to the operation and maintenance guidelines set forth by the manufacturer.	
7	Access the AED Team drive or relevant program to maintain your AED maintenance records (request access by emailing oes@ucsc.edu).	
8	Training: Ensure you have at least 1 trained AED/CPR responder per 5 AEDs in one building and an AED Emergency Response Team for each building.	
9	Install your AED (or coordinate installation) in accordance with the manufacturer's installation guidelines.	
10	Ensure that the AED is maintained and tested in accordance with the operation and maintenance guidelines set forth by the manufacturer.	
11	Ensure that all records of service, maintenance and testing are recorded on the AED Team Drive roster or on the Lifelink web service (Heartsine 450P units).	
12	Inspect your AEDs at least every 90 days for potential issues related to operability of the device, including a blinking light or other obvious defect that may suggest tampering or that another problem has arisen with the functionality of the AED. Document this inspection on UCSC AED Roster (see Google team drive).	
13	Maintain list of CPR/AED trained personnel on the AED Roster.	
14	Once a year, ensure that a member of your AED response team attends an OES AED demonstration . Document this on the AED Roster.	
15	Next to AED, maintain an AED Instruction poster (print from OES web page) .	
16	After AED use, immediately remove the unit from public access and contact the Office of Emergency Services (831)234-3551 within 8 hours. Complete a Notification of AED Use Report, send to oes@ucsc.edu . OES will pick up the AED and Notification Report.	
17	Following an activation , OES will Restored and return your AED. Recharge fees may apply to equipment purchases.	
Office of Emergency Services Tasks		
	Test AEDs at least biannually and after each use.	
	OES will Restore AEDs following an activation.	
	Annually, OES will notify the campus of AED locations and training opportunities.	
	Annually, OES will provide AED demonstration training . Register through the Learning Center. Class name: "AED Demonstration"	

AED Response Protocol

The following protocol is for use by the Emergency Response or AED Team. Heartsmart.com and our Physicians issue the following to contracted clients for use by those who have been trained by a nationally recognized training provider (e.g. AHA, ARC, Medic First Aid, EMS Safety Services) only. The protocol will be replaced by a revised or customized protocol as necessary.

Initial Protocol for Unresponsive Victim

- Assess scene for safety; use universal precautions.
- Assess victim for responsiveness.
- If unresponsive, activate EMS and in-house emergency plan by phoning 9-1-1 and/or designated number.
- Call for AED to be brought to the scene.
- Briefly assess patient's respiratory status (5-10 seconds).
- If respiratory effort is absent, or patient is only gasping, begin CPR, starting with compressions, at a depth of 2-2.4 inches for adults, or 1/3 the depth of the chest for children and infants.
- Continue CPR until AED arrives, alternating between 30 compressions and 2 breaths, at a rate of 100-120 compressions per minute.
- For a witnessed arrest, or if desired, use compression only CPR, without performing breaths.

Begin AED Response

- As soon as AED is available, turn on AED and follow prompts.
- If needed:
 - Remove victim from pool of water (AED may be used on snow or ice)
 - Wipe chest if wet from water or sweat
 - Shave chest with disposable razor (Discard razor according to company procedures.)
- Apply AED pads. (*For victims <55lbs or <8 years of age, use pediatric pads or pediatric setting if available.)
*Users of pediatric pads or pediatric setting should have Infant and Pediatric CPR training
- Make sure that AED pads are placed in proper location and make good contact with victim's chest. Do not place AED pads over the nipple, medication patches, or implantable medical devices. (Note – if victim has an implantable cardiac defibrillator (ICD) which is discharging as evidenced muscle contraction similar to when an AED discharges, wait 30-60 seconds for cycle to complete before attaching AED pads.) (One inch/2.5 cm separation between AED pad placement and implantable medical device is recommended.)
- If shock is recommended, shout "clear" and do not touch victim. Deliver shock as advised by AED. Resume CPR for 2 minutes, then allow AED to assess victim's rhythm. Repeat cycle as needed.
- Continue CPR and follow AED defibrillation prompts until otherwise directed by AED or EMS.
- Transfer responsibility of victim to EMS when directed or appropriate.

When EMS Arrives

- Responders should document and communicate important victim information if known to EMS such as; name, known medical problems, allergies, medical history, time found, initial and current condition, and information from the AED if available, number of shocks delivered, time of first shock.
- Assist as requested by EMS.

Post-Use Procedure

- Immediately document event. Contact Office of Emergency Services within 8 hours; call(831) 234-3551. The Office of Emergency Services will contact Heartsmart to process the activated unit.
- Heartsmart.com will overnight a loaner AED with a return box for your AED. We will clean and refurbish your AED, replacing any used supplies. We will download AED event data from the device, create a post-event report, send all required notifications to applicable government agencies, and send your refurbished AED back to you, along with a copy of the post-event report.
- Campus AED Coordinator will conduct employee incident debriefing in coordination with heartsmart.com.

ANNEX D: HOW TO REPORT AN AED ACTIVATION

If an AED has been used to provide emergency aid, IMMEDIATELY FOLLOW THESE STEPS:

1. Responders, always stay within you're the scope of First Aid, CPR, AED training.
2. When safe to do so, stay until first responders arrive. Provide as much information about the circumstances and person as possible.
3. **Complete a Notification of AED Use Form** (see next page, also available on the Office of Emergency Services web page or in AED case). Keep form confidential, OES will pick up the form. Do not give the form to first responders.
4. Remove the activated AED from public access.
5. **Within 8 hours**, contact the Office of Emergency Services at (831) 459-3828, (831) 234-3551 or at oes@ucsc.edu. Emergency Services will pick up the AED and Notification Form.
6. The Office of Emergency Services will file an AED Use report with the County. AEDs that can be refurbished by Emergency Services will receive new pads. An AED operational check will be completed and the AED will be returned to the sponsoring department, ready again for public use. Some AEDs may require pad purchases by departments.
7. If you have provided rescue aid and feel overwhelmed from the experience, visit UCSC's Human Resources web site to locate information regarding support services.

Annex E: Notification of AED Use Form.

1. Complete form immediately after rendering AED assistance.
2. Within 8 hours, send form to the Office of Emergency Services, attention to: Director of Emergency Management. Scan and email to oes@ucsc.edu. If you cannot scan and email, call to arrange pickup of this form, (831) 459-3828.
3. Remove the used AED from public use. OES will arrange pickup after receiving this notice.

Name of AED Service Provider: _____

Date of Occurrence: _____ Time of Occurrence: _____

Place of Occurrence (Address and Specific Location): _____

Patient's Name: _____

Patient's Age: _____ Patient's Gender: _____

Did anyone witness the collapse/arrest: _____

Time AED Service Provider or User was notified: _____

Approximate down time prior to arrival of AED Provider or User: _____

Was CPR used prior to AED on victim: _____

Time of first shock (if given): _____ Total number of shocks: _____

Did victim regain a pulse at scene: _____



Public Health Division
Emergency Medical Services

County of Santa Cruz

HEALTH SERVICES AGENCY

POST OFFICE BOX 962, 1080 EMELINE AVE., SANTA CRUZ, CA 95061
TELEPHONE: (831) 454-4120 FAX: (831) 454-4488 TDD: Call 711

NOTIFICATION OF AED USE

Lay Responder Name(s): _____

Name and phone number of person completing form: _____

Additional comments/information: _____
