The Automated External Defibrillator Program is reviewed annually and amended as necessary and whenever:

- Applicable codes and regulations are revised; or
- Automated External Defibrillator usage guidelines or technologies change; or
- Deficiencies in the design or implementation of this Program are identified.

All revisions to this program will be shared with the parties identified in this document.

Acronyms
AED Automated External Defibrillator  
AHA American Heart Association  
CPR Cardio-Pulmonary Resuscitation  
EHS Environmental Health and Safety Office  
EMS Emergency Medical Services  
FDA Food and Drug Administration  
PPE Personal Protective Equipment  
SCA Sudden Cardiac Arrest

1.0 Introduction
Sudden cardiac arrest (SCA) is a major cause of death in the United States and causes an estimated 220,000 deaths each year. Abnormal heart rhythm is the cause of most Sudden Cardiac Arrests. When the heart rhythm becomes chaotic, often without warning, the heart will stop abruptly. Death usually follows unless a normal heart rhythm is restored within five to seven minutes. The American Heart Association (AHA) states that survival from SCA depends on the speed in administering a defibrillation shock in an attempt to restore normal heart function. Every minute in delay reduces the chance of recovery by seven to ten percent.

1.1 Purpose
The Automated External Defibrillator (AED) Program is an integral part of Northern Virginia Community College’s commitment to the safety and health of employees, students, and visitors. The purpose of this program is to provide public access to College maintained Automatic External Defibrillators (AED) for use in the event of a cardiac emergency. This
document establishes protocols for training, use, and maintenance of AED’s located on Northern Virginia Community College property and or off campus sites controlled by the College.

2.0 Roles and Responsibilities
The following individuals and units are responsible for maintaining AEDs and overseeing the AED Program.

2.1 Environmental Health and Safety Office (EHS)
EHS must employ an individual that is certified as an emergency medical service provider, healthcare provider or who has successfully completed a CPR/AED training course provided by an approved training program who is responsible for overseeing the AED Program.

- Implement and administer the AED Program.
- Provide written operational policies and procedures regarding the operation and maintenance of AED’s.
- Maintain AED software necessary to download electronic rescue data.
- Ensure that the electronic rescue data is downloaded (following manufacture protocols) within 24-hours of AED use and forward data to the appropriate person(s).
- Complete documentation and maintenance for equipment used on a victim within 48-hours of the incident.
- Initiate required servicing of equipment by the manufacturer as needed and/or required by the manufacture.
- Perform annual inspections of all AED’s and maintain inspection records for a minimum of five years.
- Maintain an adequate inventory of AED batteries, pads, and replacement supplies to support the AED Program.
- If an AED malfunctions or does not operate correctly during use (as indicated on AED Incident Report) complete and submit a FDA Form3500A.

3.0 Care of Equipment
Employees are responsible for safeguarding and maintaining AEDs and all associated equipment in accordance with this program and College and Commonwealth of Virginia regulations pertaining to state property. All AEDs are contained within a protective case specifically designed to hold AEDs and are marked conspicuously. Each AED case contains one AED and an “Emergency Response Kit” that contain various supplies and tools to assist in CPR and the use of an AED. EHS may remove a College-owned AED from the care of a unit, department, or individual(s) if it is determined that the equipment is improperly maintained or inaccessible to the public.

3.1 Procurement and Placement
AEDs are managed by EHS, however not all AEDs are purchased by EHS. In some cases, College/campus units purchase additional AEDs to augment the College’s inventory. Units that elect to purchase AEDs are responsible for ensuring that the models purchased are supported by EHS and that the AED is registered on the master inventory of AEDs.
maintained by EHS. Currently, EHS has approved the Philips HeartStart HS1 model for use at Northern Virginia Community College, although other models are in use that were purchased prior to this policy and are in serviceable condition.

AEDs are required to be provided and maintained in public assembly buildings. Additional AEDs will be provided in academic and administrative areas as deemed appropriate. Large buildings and buildings with multiple floors may require two or more AEDs.

3.2 Inspections
AEDs must be inspected quarterly at a minimum but, monthly is preferred. Campus Police, in cooperation with EHS, are responsible for completing the AED Inspection Form and Inspection Logs. Forms must be forwarded to EHS electronically (safety@nvcc.edu). Completed forms should be forwarded to EHS no later than the 5th of every month.

EHS conducts semi-annual inspections of AEDs to ensure that the condition and contents of the AED meet the requirements of this Program.

All inspections examine the following:

1. **Storage case intact**: Check to see if the storage case (either soft flexible or wall-mounted) is present, serviceable, and undamaged.

2. **Battery charged**: Check to see if the status indicator, above the green power button, is "green". If the indicator is "red", the unit is NOT ready for a rescue and must be immediately pulled from service and the batteries replaced.

3. **Pads Unexpired**: Check to see if the expiration date of the pads (electrodes) has been exceeded. Pads are to be replaced within 30 days of expiration.

4. **All equipment accounted for in the Emergency Kit**:
   - 1 CPR facemask
   - 2 Pair of disposable gloves
   - Safety razor
   - 1 Absorbent towel or trauma pad
   - 1 Pair of scissors

If any of the above items do not pass inspection or are missing, contact EHS immediately for repairs and replacement parts.

3.3 Repairs
Upon discovery of missing parts, expired AED pads, or dead batteries, immediately notify EHS. EHS maintains an inventory of AED parts and supplies and provides replacement supplies to maintain AEDs upon request. All expired or dead AED batteries and pads must be returned to EHS for proper disposal.
3.4 Replacement
In the event of loss of or damage to an AED and/or its associated equipment, the employee discovering the loss must notify the EHS. EHS will provide guidance on filing for reimbursement under the state’s insurance program if appropriate.

4.0 Record Keeping
EHS will maintain all documentation for equipment maintenance, repairs, inspections, usage and AED Incident Forms for a minimum of five years. Documentation includes:

- Maintenance and safety inspection records for each AED (semi-annual and monthly).
- Original copy of each AED Incident Report completed after an AED is used.
- All information of AED usage, including College Police reports and/or emergency response treatment. This documentation will be stored in accordance with local, regional and federal standards for storing confidential medical information.
Appendix: A

Using an AED
A victim who does not respond, or appears to be in distress may have an abnormal heart rhythm that stops the heart from pumping blood. In such a case, an AED may be used to provide aid to the victim. Observe the following steps:

1. Check to see if the scene is free of hazards such as:
   - Electrical (e.g., downed power lines, electrical cords, etc.),
   - Chemical hazards (e.g., gases, liquids, solids or fumes),
   - Suspicious individuals or anyone that could potentially harm a person,
   - Traffic (both vehicular and pedestrian that may harm the victim), and
   - Fire or flammable gases such as medical oxygen or cooking gas.

2. Determine that the victim is:
   - Unresponsive
   - Not breathing
   - Without a pulse

3. Immediately begin chest compressions and CPR if trained and feel comfortable doing so.

4. Notify College Police by calling (703) 764-5000 or 911.

5. Retrieve or ask someone to retrieve the nearest AED.

6. When the AED arrives:
   - Stop CPR.
   - Turn the AED on by pulling the handle labeled “PULL” or press the green power button.
   - Follow voice prompts provided by the AED.

7. Advise College Police to contact EHS of AED use so that appropriate action and paperwork is initiated.

8. Maintain custody of the AED until it can be turned over to EHS for repair and maintenance.

Important notes for AED use:

1. If a patient is under eight years of age or 55 lbs., an infant/child pads cartridge should be used. If an infant/child cartridge is not available, an adult cartage can be used. Place the pads on the front of the chest between the nipples and on the center of the back.

2. Remove any medicine patches and residual adhesives before applying AED pads using proper Personal Protection Equipment, such as gloves.
3. Pacemakers may interfere with rhythm analysis; do not place electrodes directly over a pacemaker, they should be placed one hand width away.

4. If the victim converts to a heart rhythm that does not require defibrillation, follow instructions from the AED voice prompt.

5. Do not remove the pads unless directed to do so by emergency personnel.

6. Individuals who elect to use an AED, perform CPR, or are requested by recognized emergency response personnel to assist a victim are protected from civil liability by the Code of Virginia section 8.01-225.

7. All equipment contained within the emergency kit associated with each AED is disposable. Upon use, EHS must be notified to ensure that equipment and Personal Protective Equipment (PPE) used to aid a victim is disposed of properly. Under most circumstances, unless blood or bodily fluids are present, PPE and equipment may be disposed of in a solid waste bin.

8. An AED used on any patient must be returned to EHS as soon as possible to retrieve the electronic rescue data stored on the device so that it can be provided to medical service professionals to assist in the treatment of the victim.