



Mechanical and Aerospace Engineering

Emergency Action Plan

In compliance with:

California Code of Regulations

Title 8, Section 3220

Annual Review Date*: 20 March, 2019

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Implementation Date: 14 September, 2017

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*Reviewed and initialed by Department Safety Coordinator

Introduction

An Emergency Action & Evacuation Plan (herein referred to as an EAP) covers designated actions employers and employees must take to ensure employee safety from emergencies. [Cal-OSHA regulations](#) require employers to establish, implement and maintain an EAP. The program must be in writing and include the following elements:

- The preferred means of reporting fires and other emergencies
- A system to alert and notify employees of an emergency
- Evacuation procedures and emergency escape routes
- Procedures for employees who remain to operate critical plant operations before they evacuate
- A procedure to account for all employees after an emergency evacuation is completed
- Rescue and medical duties for those employees who are able to perform them
- Names or regular job titles of persons or departments who can be contacted for further information or explanation of duties under the plan

How to Complete This Plan Successfully:

This document includes a template for creating a departmental EAP, as well as additional incident and emergency response training that should be incorporated into the annual training for the EAP. As you read through the document, click on the gray shaded areas and type in the information requested.

Example: Mech Mechanical and Aerospace Engineering

This template was designed to help the Department Safety Coordinator (herein referred to as “DSC”) create an EAP, with the understanding that not all departments will have the same structure or protocols during an emergency. As the creator of your department’s plan, you have the flexibility to adjust it to fit your needs to best assure the safety of your colleagues in an emergency.

EAPs are often lengthy documents filled with explanations of the intended actions of every conceivable building occupant. When an event actually occurs, such plans are seldom used efficiently for three reasons: 1) people lack knowledge of the plan, 2) people do not understand the plan, or 3) the plan fails to address the varied physical locations where it must work.

In order for your EAP to be successful, there are essential elements that need to be implemented. These essential elements are detailed on page 8, *Responsibilities of the Department Safety Coordinators*.

If you have questions or suggestions regarding this document, please direct those to:

Brent Wagstaff (bwagstaff@ucdavis.edu)

Contact Information

This EAP has been prepared for UC Davis UC Davis Mechanical & Aerospace Engineering Department. The plan complies with California Code of Regulations, Title 8, Section 3220.

Mechanical and Aerospace Engineering

(Office Name)

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(Office Location)

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(email)

Stephen K. Robinson

(Director/Dean/Chairperson)

Office: 530-754-9295

(Phone)

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Loan-Anh Nguyen

(Department Safety Coordinator)

Office: 530-752-8488

(Phone)

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Felicia Smith

(Alternate Safety Contact)

Office: 530-752-0582

(Phone)

fasmith@ucdavis.edu

(email)

This Emergency Action & Evacuation Plan will be reviewed annually in: March

Emergency Protocols-Alert and Notification

Reporting Emergencies:

In the event of an emergency, UC Davis employees should call UC Davis Dispatch by dialing **9-1-1** or **530-752-1230** or **530-752-1234**.

- In the event of a medical emergency
- To report all fire incidents, *even if the fire is extinguished*
- To report criminal or suspicious behavior
- If you are in doubt about the seriousness of a situation, such as any possible situation that you believe may be serious and that may result in injury, death, loss of property, apprehension of a suspected criminal or prevention of a crime that is about to occur.

For any extinguisher usage, you should immediately alert the UC Davis Fire Department (911) and Fire Prevention (752-1493)

Provide the following information to UC Davis Dispatch upon calling

- Who you are
- Whether you are in a safe location
- What the nature of the emergency is
- Where it is located
- When it happened
- How it happened

Alert and Notification of Employees:

If an emergency calls for an evacuation or employees to take action, there needs to be a system in place to notify them. Emergency alert and notification of employees should be multi-layered, as systems can fail. A variety of methods is available, though not all systems apply to every building on the UC Davis campus, including:

- Audible alarm
- Visual alarms/signals
- Verbal notification
- UC Davis WarnMe
- Via other electronic media

Examples of notification methods include: fire alarm system, PA system, phone tree, bullhorn, even just flashing the lights can be a way to let people know there is an emergency happening.

The methods of alert and notification of employees in this department are:

Primary Method: Audible visual building alarms

Additional notifications: Verbal communication, UC Davis WarnMe emergency notification system. All MAE personnel are encouraged to sign up for the UC Davis [WarnMe \(https://warnme.ucdavis.edu\)](https://warnme.ucdavis.edu).

MAE department phone tree:

First contact	Department Safety Coordinator: Loan-Anh Nguyen	Alternative contact: Felicia Smith
Secondary contact	Supervisor/PI: _____	Department Chair: Stephen Robinson
	Utility/Building structures 530-752-1655	
	EH&S 530-752-1493 during business hours, or call 911 for EH&S on-call staff after hours.	

Emergency Protocols-Evacuation

Evacuation Procedures & Routes

All employees must evacuate the building when notified to do so. The type of evacuation or protective measure may be specified as part of the notification. Please refer to Policy & Procedure [390-10](#) for more information on Campus Emergency Policy.

Evacuation Types

- **Evacuation:** Evacuation is total building or partial building evacuation due to conditions making it no longer safe to remain inside a building or a specific area in a building. This level of evacuation requires occupants to move out and away from the building being evacuated.
- **Controlled Evacuation:** Controlled evacuation is total building or partial building evacuation due to safety conditions or an armed intruder making it no longer safe to remain inside a building or specific area in a building. This level of evacuation requires occupants to move out and away from the building once notified.
- **Shelter-in-Place:** Shelter-in-place means selecting a small interior room, with no or few windows, and taking refuge there; it does not mean sealing off your entire office. Shelter-in-place is used in emergency situations where hazardous materials have been released into the atmosphere or in emergencies related to civil unrest or violent demonstrations.
- **Lock Down:** Lockdown is the temporary sheltering technique utilized to limit exposure to an “armed intruder” or similar incident. When alerted, occupants of a building within the area of concern will lock all doors and windows, not allowing entry or exit to anyone until the all clear has been sounded. If you are in a ground floor office or common area, take precautions and move away from glass windows or doors and seek shelter in a locked room of office.

Prior to Exiting

After being notified to evacuate, stop all work activities, gather your medications and evacuate immediately. Securely close departmental and office doors behind you. You may choose to lock your doors to prevent property theft (the UC Davis Fire Department has keys to campus buildings and rooms if access is necessary). Remember that you may not be allowed back into the building for an extended time.

Evacuation Routes/Exiting the Building

During an emergency evacuation, use the nearest door or stairway if available. Each employee needs to be aware of at least two exit routes in their main building in the event one is compromised.

All campus buildings over one story high must have building evacuation signs posted on every floor.

The signs must be posted at all stairway and elevator landings and immediately inside all public entrances to the buildings. More information on this is available in the FireNet [Emergency Evacuation Signs](#).

Identifying People Needing Assistance during an Emergency (Safetynet #534)

An essential component and major challenge in developing a comprehensive emergency plan is identifying all individuals who need assistance during an emergency. This is not always easy to do. People using wheelchairs or those with other visible disabilities come to mind immediately. However, there are others who may require assistance, but may not appear to have a disability, or people who may not even realize they need assistance. In fact, many employees do not think they will require assistance, but may have a condition like asthma, heart disease or pregnancy which can reduce stamina to the point of needing help in an actual emergency. For more information: [Guidelines to Emergency Evacuation Procedures for Employees/Clients with Disabilities.](#)

Discuss with your Department Safety Coordinator, Loan-Anh Nguyen, if you or a member of your group will need assistance.

Assembly Area

After exiting the building, all employees, students, volunteers, and visitors should follow the evacuation route to the pre-arranged assembly area.

The Department Chair should assign an Assembly Area Manager to each evacuation location. List all buildings in which department members are assigned space and the corresponding assembly areas and manager.

The assembly areas are found in the evacuation maps on pages 10, 11, 12 and 13 of this plan. Follow your laboratory-specific evacuation plan and assembly area.

All employees should stay within your respective group at the Assembly Area. No one should leave the area until notified by the First Responders, Assembly Area Manager, or Responder Liaison - Loan- Anh Nguyen, Department Safety Coordinator.

Assigned Job Responsibilities

Assembly Area Manager Duties:

It is recommended that the Assembly Area Manager or a member of each group from a laboratory or an office record the names of those who gather at the assembly area. That manager or member should report any injuries in need of immediate care to First Responders. Any other minor injuries should be documented and reported through the proper chain of command to the PI/Supervisor and DSC Loan-Anh Nguyen.

Area Manager is responsible for sharing information as it becomes available to the evacuated persons. The Assembly Area Manager *should not leave* the assembly area; therefore it is suggested the Assembly Area Manager communicates to the Responder Liaison.

Responder Liaison Duties:

The Responder Liaison ensures important communication and information exchange between the First and Second Responders (*e.g.* Fire, Police, Facilities), and the Area Assembly Manager. The Responder Liaison (whom may be the DSC if present) is responsible for informing the on-scene Incident Commander of the status of department employees and visitors. Responder Liaisons should be prepared to provide the following information (if known)

- Nature of the emergency (*e.g.* fire)
- Location of the emergency
- Number of persons trapped
- Number of persons hurt
- Number of persons unaccounted for

If needed, the Responder Liaison should recruit volunteers to help direct and contain evacuees to the Assembly Area.

After a major incident, building occupants may not re-enter buildings until cleared by a campus official, which is a Fire Responder for most events, or a Police Officer.

Procedures for Employees Who Remain to Operate Critical Operations

Safety is a top priority at UC Davis, and there are no critical operations worth risking one's welfare to perform. If you believe your department has critical operations requiring an employee(s) to remain in the building during an evacuation (most departments will not), please contact [Steve Ball](#) to develop this section of the plan.

Rescue & Medical Duties

UC Davis relies on the UC Davis Fire Department and partnering agencies to provide rescue and medical duties. It may be useful to document employees in your department who have specialized medical training.

None in the MAE department at this time.

The individuals listed above should not practice outside their scope of training and are not expected or required to assist in any emergency or medical situation.

Responsibilities of the Department Safety Coordinator

Loan-Anh Nguyen and Felicia Smith are responsible for implementing essential elements including planning, evaluating, and implementing the EAP. The following duties must be performed to maintain an effective EAP:

- Review and update the EAP annually or as needed.
- Update and submit the [Emergency Call List](#) to the [UC Davis Dispatch Center](#).
- Train employees on the location of emergency exits, fire extinguishers, manual pull stations, first aid kits, and AEDs if applicable.
- Ensure evacuation routes are posted and walkways remain clear at all times.
- Train employees annually on the EAP, including the “Additional Training” sections. Ensure all new hires are familiar with the procedures and a copy of the plan is made available. **Document all training.**
- Train the Assembly Area Managers, Responder Liaisons, and Alternate Department Safety Contact. Confirm they understand their duties as assigned in the plan.
- Exercise your department’s EAP annually. It is recommended you exercise your plan in the following order:
 1. **Conduct a Tabletop Exercise.** This will allow departments to use their training on the EAP, as well as to work through any inefficiencies *prior* to an emergency. Contact [Steve Ball](#) for training or assistance with your tabletop exercise.
 2. **Schedule a Building Evacuation.** The UC Davis Fire Department can perform a limited number of building evacuations each month. Advanced notice and coordination between the departments that share your building **before** the exercise is critical. The Fire Department **will not** conduct the exercise if coordination between department DSCs has not occurred. Please contact your [Department Safety Coordinator](#) to schedule an exercise. Evacuations will be scheduled on a first come first serve basis and times and dates will be decided based on the Fire Department’s availability. To schedule a fire drill, please contact the [UC Davis Fire Department](#).

Signatures

This EAP has been reviewed and approved by the following individuals:

On File

(Stephen Robinson, Department Chairperson)

(Date)

The Safety Contact and Alternate are aware of their responsibilities, as described in this plan:

On File

(Loan-Anh Nguyen, Department Safety Coordinator)

(Date)

On File

(Felicia Smith, Department Manager, Alternate Safety Contact)

(Date)

Additional Comments:

Emergency Procedures

Police

- Disruptive behavior
- Harassment
- Gun related incidents
- Theft/break-in/robbery
- Trespass/illegal activity
- Bomb/terror threats

Fire

- Any fire
- Any discharge of a fire extinguisher

Hazardous Spills

- Chemical fumes and gas leak
- Radioactive agents
- Biological/infectious agents

Ambulance

- Any serious injury/medical emergency

Utilities

- Electrical
- Water
- Steam
- Sewer
- Heating
- Ventilation
- Elevator

From campus
phone, call **911**

If using a cell
phone, call
530-752-1230

Give:

- Description of emergency
- Your name
- Your location (building, room)
- Any other information requested

Report by calling
530-752-1655

Earthquake

- If in building, get under a table, desk, or bench. Avoid windows
- Leave building by stairs after shaking has stopped
- When outside, stay clear of buildings and overhead hazards
- Proceed to building emergency assembly area

Evacuation

- If alarm does not sound, hit fire alarm button
- Close but do not lock doors, use posted exits
- Proceed to building emergency assembly area

Emergency assembly
areas as indicated in
map and below:
(Circle the designated
location):

1. Bainer Hall North
2. Bainer Hall South
3. Kemper Hall
4. TB207
5. Academic Surge West
6. Academic Surge East



Emergency Procedures

Police

- Disruptive behavior
- Harassment
- Gun related incidents
- Theft/break-in/robbery
- Trespass/illegal activity
- Bomb/terror threats

Fire

- Any fire
- Any discharge of a fire extinguisher

Hazardous Spills

- Chemical fumes and gas leak
- Radioactive agents
- Biological/infectious agents

Ambulance

- Any serious injury/medical emergency

Utilities

- Electrical
- Water
- Steam
- Sewer
- Heating
- Ventilation
- Elevator

From campus
phone, call **911**

If using a cell
phone, call
530-752-1230

Give:

- Description of emergency
- Your name
- Your location (building, room)
- Any other information requested

Report by calling
530-752-1655

Earthquake

- If in building, get under a table, desk, or bench. Avoid windows
- Leave building by stairs after shaking has stopped
- When outside, stay clear of buildings and overhead hazards
- Proceed to building emergency assembly area

Evacuation

- If alarm does not sound, hit fire alarm button
- Close but do not lock doors, use posted exits
- Proceed to building emergency assembly area

Emergency assembly areas as indicated in map and below:
(Circle the designated location):

1. SouthEast of AMRL, outside the fence of the adjacent parking lot.



Emergency Procedures

Police

- Disruptive behavior
- Harassment
- Gun related incidents
- Theft/break-in/robbery
- Trespass/illegal activity
- Bomb/terror threats
- Trapped in elevator

Fire

- Any fire
- Any discharge of a fire extinguisher

Hazardous Spills

- Chemical fumes and gas leak
- Radioactive agents
- Biological/infectious agents

Ambulance

- Any serious injury/medical emergency

Utilities

- Electrical
- Water
- Steam
- Sewer
- Heating
- Ventilation
- Gas leak
- Elevator

From campus
phone, call **911**

If using a cell
phone, call
530-752-1230

Give:

- Description of emergency
- Your name
- Your location (building, room)
- Any other information requested

Report by calling
530-752-1655

Earthquake

- If in building, get under a table, desk, or bench. Avoid windows
- Leave building by stairs after shaking has stopped
- When outside, stay clear of buildings and overhead hazards
- Proceed to building emergency assembly area

Evacuation

- If alarm does not sound, hit fire alarm button
- Close doors, and use posted exits
- Proceed to building emergency assembly area

Emergency assembly
areas for following
buildings indicated in
map:

1. Solar Dish Site
(STEEL)



ATIRC EMERGENCY PROCEDURES

POLICE

- Disruptive behavior
- Harassment
- Gun related incidents
- Theft/break-in
- Trespass/illegal activity
- Bomb/terror threats

FIRE

- Any fire
- Any discharge of a fire extinguisher

AMBULANCE

- Any serious injury/medical emergency

DIAL 911 FROM ANY PHONE.

Give:

- Description of emergency
- Your name
- Location/building name as: ATIRC, 3327 Apiary Drive
- Any other information requested

EVACUATION

- Hit fire alarm button
- Close and unlock doors, use posted exits
- Proceed to parking lot on east side of ATIRC



EARTHQUAKE

- Vacate building if possible, move to center of parking area. Stay away from powerlines and street lights.
- If in building, climb under table or workbench. Exit building as soon as possible after shaking has stopped.
- Proceed to parking lot on east side of ATIRC

UTILITY RELATED EMERGENCY

- Report to 530-752-1655

ROBBERY/HOSTAGE

- Follow perpetrator's instructions. Do not attempt to apprehend. Observe features and clothing.
- Call 911 after robber leaves

STAFF EMERGENCY CONTACT NUMBERS

UCPRC

John Harvey	(Principal Investigator)	510-206-8349
David Jones	(Principal Investigator)	530-574-0724
Jeff Buscheck	(Lab manager)	530-304-8941
Dave Miller	(Safety coordinator)	916-215-3374

AHMCT

Ty Lasky	(Principal Investigator)	530-752-6366
Will White	(Safety coordinator)	530-220-2175
Duane Bennett	(Lab manager)	530-906-5783
Loan-anh Nguyen	(Dept. Safety Coord.)	408-506-3277

Roll Call Sheet

Enter Department Name: Department of Mechanical and Aerospace Engineering

Office/Laboratory Location:

Dept. Safety Coordinator and Alternate Safety Contact are responsible for maintaining a current list of personnel in the department. This form can be used, or, if your department currently has a directory, you can format it into a roll sheet with room and building location and attach it to the EAP. Assembly Area Managers and DSCs should have a copy to complete roll call during an emergency.

Employee Name	Phone	Cell/Other Phone	Building/Room	Status/ Location

Additional Training:

Communications for Campus-Wide Emergencies

In the event of a major emergency, there are multiple ways to distribute life-saving and other important information. Familiarize the individuals in your department with these communication methods

- **Check the University homepage www.ucdavis.edu**
UC Davis posts information about emergencies and other major news on its home page at www.ucdavis.edu. News can also be found at www.news.ucdavis.edu or <http://www.ucdavis.edu/emergency/emergency-services.html>
- **Call the Emergency Status Line (530) 752-4000**
The Emergency Status Line provides a recorded telephone message about the status of the Davis campus in an emergency. It indicates the emergency's nature and provides brief instructions.
- **Listen to the News Media**
UC Davis works with the news media to share information about emergencies and provide direction to the university community.

AM radio KFBK 1530 initiates public Emergency Alert System messages for several area counties. The station offers live audio streaming at www.kfbk.com
- **Sign up for Personal Alerts through the WarnMe system**
This emergency notification service provides students and employees with timely information and instructions during emergencies. UC Davis WarnMe sends alerts by e-mail, telephone, cell phone and text messaging. To deliver messages, WarnMe uses employees' work contact information from the university's online directory, students' e-mail addresses and personal contact information you voluntarily provide. Register and update your information at <http://warnme.ucdavis.edu>.

It is important to understand that you will not be notified of every incident that UC Davis Police or Fire responds to. In a campus-wide emergency, communications may be sent out one or all of the ways listed above and will vary depending on the incident.

Additional Training:

Sheltering-in-Place

One of the instructions you may be given in an emergency is to shelter-in-place. Shelter-in-place is used mainly for hazardous materials incidents and sustained police action, or when it is more dangerous to venture outside than to remain indoors in your current location. This means you should remain indoors until authorities tell you it is safe or you are told to evacuate. The following are guidelines that should be shared with your department's employees.

General Guidelines on how to Shelter-in-Place

- Select a small, interior room, with no or few windows, ideally with a hard-wired telephone (cellular telephone equipment may be overwhelmed or damaged during an emergency).
- Close and lock all windows and exterior doors.
- Review your EAP, inspect your workplace emergency kits if you have them.
- Do not exit the building until instructed to do so by campus officials.
- Check for status updates using the resources detailed in the section, "Communications for Campus Wide Emergencies."

Specific for a Hazardous Material Incident

- Turn off all fans, heating and air conditioning systems
- If instructed, use duct tape and plastic sheeting (heavier than food wrap) to seal all cracks around the door and any vents into the room
- If you are in your car, close windows and turn off vents and air conditioning

Additional Training:

Community Survival Strategies for an Active Shooter

The UC Davis Police Department hosts workshops to the members of the campus community presenting strategies to increase the likelihood of surviving an active shooter. The workshop covers five steps for increasing your chances of surviving an active shooter and also provides demonstrations for attacking the attacker. Presentations run approximately 90 minutes including a question answer session, but it is recommended departments allow 2 hours release time for employees, as there is a hands-on component at the end of the presentation. Community presentations are available on the Davis and Sacramento campuses throughout the year. Link to register for workshop:
http://sdps.ucdavis.edu/course_catalog/environmental_occ_safety/cmtty_survival.html

COPING

WITH AN ACTIVE SHOOTER SITUATION

- Be aware of your environment and any possible dangers
- Take note of the two nearest exits in any facility you visit
- If you are in an office, stay there and secure the door
- Attempt to take the active shooter down as a last resort

Contact the UC Davis Police Department for more information and training on active shooter response in your workplace.

Phone: (530) 754-9153
Email: memacias@ucdavis.edu

PROFILE

OF AN ACTIVE SHOOTER

An active shooter is an individual actively engaged in killing or attempting to kill people in a confined and populated area, typically through the use of firearms.

CHARACTERISTICS

OF AN ACTIVE SHOOTER SITUATION

- Victims are selected at random
- The event is unpredictable and evolves quickly
- Law enforcement is usually required to end an active shooter situation



CALL 911 WHEN IT IS SAFE TO DO SO

HOW TO

WHEN AN ACTIVE SHOOTER IS IN YOUR VICINITY

1.

- Have an escape route and plan in mind
- Leave your belongings behind

Keep your head visible

2. HIDE OUT

- Hide in an area out of the shooter's view
- Block entry to your hiding place and lock the doors

Silence your cell phone and/or pager

3. TAKE

- As a last resort and only when your life is in imminent danger
- Attempt to incapacitate the shooter
- Act with physical aggression and throw items at the active shooter

CALL 911 WHEN IT IS SAFE TO DO SO

HOW TO

WHEN LAW ENFORCEMENT ARRIVES

- Remain calm and follow instructions
- Put down any items in your hands (i.e., bags, jackets)
- Raise hands and spread fingers
- Keep hands visible at all times
- Avoid quick movements toward officers such as holding on to them for safety
- Avoid pointing, screaming or yelling
- Do not stop to ask officers for help or

YOU SHOULD PROVIDE TO LAW ENFORCEMENT OR 911 OPERATOR

- Location of the active shooter
- Number of shooters
- Physical description of shooters
- Number and type of weapons held by shooters
- Number of potential victims at the location