

University of California, Irvine
2018 Innovation Award Application
Campus Safety Health and Environmental Management Association (CSHEMA)
“Driving” Safety to the Heart of Campus

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“Driving” Safety to the Heart of Campus

Problem: The Location of the UC Irvine training facility slows down compliance with training mandates

The University of California Irvine (UCI) has made great progress in becoming a more safety-conscious campus. As part of our improving safety culture, we constantly seek to improve the effectiveness and efficiency in delivering services to our campus customers (faculty, researchers, staff, and students). Campus customer feedback through both verbal and written surveys have indicated that the Environmental Health & Safety and Risk Services (EH&S and RS) building location is a deterrent to obtaining efficient services (some say they prefer the 30 minute walk to the facility). The EH&S and RS facility is geographically located outside of the campus central core. The facility has limited parking and the campus bus service does not have stops nearby. Early efforts to find suitable space more centrally located on campus to provide routine services, like hands on training, were unsuccessful due to additional costs and space availability.

Solution: “Driving” Safety to the Heart of Campus

The University of California Irvine’s goal to encourage and cultivate a culture of lab safety relies on EH&S and RS’s ability to integrate the programs we offer in such a way that makes safety training and compliance more readily accessible and meaningful to our campus customers. In 2016, we purchased a van to deliver campus funded Personal Protective Equipment (PPE). We quickly realized that our Laboratory PPE Coordinator could perform the fittings at our customer’s locations on campus, as long as the equipped van was nearby. While performing a few ad-hoc PPE fittings in the field we started to notice a buzz of excitement around the PPE Mobile Van from researchers working in nearby buildings. We were able to field questions and requests from researchers who had just witnessed colleagues walking away with a smile on their face and a tote bag of PPE supplies, we wondered if we could take advantage of the excitement that seemed to develop naturally from an ad-hoc PPE fitting. After thoughtful planning and analysis, we decided to leverage our growing PPE Mobile Van presence by not only formalizing mobile PPE fittings, but also by partnering with other EH&S divisions to bring additional training to the field. In fiscal year 2017-2018, we chose to launch the PPE Mobile Van while also adding hands-on, interactive lab safety training modules traditionally only available at the EH&S and RS facility. We were able to offer several training modules such as fire extinguisher training, compressed gas training and emergency shower and eye wash training.

This combined on-site PPE fitting and laboratory safety training program has helped eliminate many obstacles associated with registering, scheduling and attending PPE fitting and training courses. By taking these services directly to the end user, this program has eliminated the need to access the UC Learning Management System to find, select and register for a lab safety training course. It has also reduced the amount of time for transit to and from the EH&S and RS facility and increased the perceived general interest and desire to participate in laboratory safety education on our campus. We are grateful that our PPE Mobile Van two-in-one training events are deemed as value-added services to the campus population and have enjoyed campus wide support from faculty and senior administrators.

The PPE Mobile Van program had a much higher participation rate than we had experienced previously; with faculty noting the ease of participation when training events are located just outside their buildings. We feel that this increase in participation is an essential factor in our mission to foster a culture of safety. “Driving” Safety to the Heart of Campus combines many of the EH&S and RS training programs with PPE fittings, enticing the researcher to fulfill two or more safety training requirements at once. This type of activity is advantageous because it is more enjoyable for the participants as it is being held outdoors in a convenient and relaxed environment.

Our campus community is informed of these training events through catchy and informative emails, tweets and flyers placed in various locations inside campus buildings. This has led to a successful word of mouth campaign around campus, allowing us to have participants from each of the schools: Engineering, Biological Sciences, Physical Sciences and the School of Medicine. Also, in part because of the public exhibition of training, our customers become intrigued with the safety event and often complete their required courses at that time. It is a more lively and engaging experience when you can be fitted for a flame-resistant lab coat, informed of its fire resistant properties and then move on to actually use a fire extinguisher, eye wash station or emergency shower.

Cost of Implementation:

The minimal costs related to the “Driving” Safety to the Heart of Campus events include the training and event supplies and giveaways provided to those who visit the event booth.

ITEMS PURCHASED	ONE TIME COST	ON GOING COST
1 Canopy	\$100	\$0
2 Foldout Tables	\$100	\$0
4 Foldable Chairs	\$150	\$0
1 iPad tablet	\$600	\$0
Marketing Tools/Supplies (poster paper, giveaways such as UCI logo water bottles, stylus pens, mints, stickers, band aids)	\$0	\$500
Total	\$950 one time	\$500 annually

Cost Effectiveness:

In comparison, if EH&S and RS were to identify and rent a suitable on-site campus venue, it would cost the department a minimum of \$250 per day and up to \$3,000 per year (12 times a year x \$250= \$3,000/year). Additional considerations include administrative support time to schedule and recharge for each event.

Furthermore, by reducing travel time and administrative time to schedule courses, these events save our customers at least 30 minutes per person per training. We fit and train about 1,000 customers/year. We are saving the campus about 5,000 hours of time that can be spent working in the laboratory. Estimating an average salary of \$40/hr, this equates to \$200,000 plus of salary savings for the campus.

Method of Implementation:

The Laboratory PPE Coordinator works with EH&S and RS staff to determine which hands-on courses are appropriate for each month's event. The Laboratory PPE Coordinator is responsible for coordinating the logistics including: marketing and outreach, mobile van site selection and set up, fielding general safety questions received during the events and managing and analyzing customer feedback for continuous improvement.

1) Marketing and Outreach

Using the EH&S and RS database of researchers in each of the 4 major schools on campus, the PPE Coordinator sends out targeted messaging encouraging new researchers to complete online PPE training and stop by the event to get properly fitted and obtain their PPE. The email also highlights the hands-on lab safety training opportunity that will be provided (fire extinguisher training, compressed gas training, emergency shower/eyewash). Additionally, EH&S and RS Academic School Coordinators and students post marketing flyers in laboratory buildings. The EH&S and RS Communications staff member contact also uses social media platforms to disseminate the monthly message.

2) Day of the Event

The events take place during the busiest days and times of the week: Mondays, Tuesdays and Wednesdays from 10:00AM -2:00PM. Typically, the PPE Mobile Van arrives at the site at 9:00 AM to set-up the canopy, tables, chairs and training materials. Location sites are carefully pre-selected to be adjacent to medium to high traffic pedestrian areas located around the main campus (Appendix B Map of Campus Key Locations).

Researchers arrive at the event and can choose either to begin the hands-on training or be fitted for PPE first. These activities occur concurrently to minimize wait times.

The PPE Coordinator uses an iPad to verify that the researcher has enrolled in the campus Laboratory Hazard Assessment Tool (LHAT), which houses a database of the campus' lab PPE program. This system identifies the type of PPE each researcher is assigned and will be fitted for accordingly. The researcher is fitted for goggles, safety glasses and various types of laboratory coats; while being advised on the proper fit and limitations of each type of PPE. The final PPE selections are documented, prepared and delivered within 72 hours to the customer. Additional information is provided such as donning and doffing, laundry locations and alteration/repair services. Questions are also encouraged on any safety related topic.

In the hands-on experiential training section, EH&S and RS subject matter experts lead the customers through a focused and interactive learning activity. Learning objectives include: an explanation of the type of hazards associated with the particular equipment and proper and safe use and handling. Proper PPE use is reinforced while working with the equipment. The small training groupings allow each participant to experience proper and safe handling of equipment such as a compressed gas cylinder regulator or how to properly transport a gas cylinder in a cart, or extinguishing a live fire utilizing the BullEx Intelligent Training System with a water-based fire extinguisher.

A handout is provided to reinforce the learning objective and can be used as a reference tool. Each researcher signs in to receive credit for the course. The sign-in sheet is entered by EH&S and RS administrative staff into the campus Learning Management Systems to ensure completion and credit. The completed transcript can be viewed within 24 hours of the event. At least one work study student assists EH&S staff to guide researchers between sections.

To create a fun and more interactive atmosphere, a “Wheel of Fortune” style spinner is placed on a table. Researchers can choose to spin the wheel, answer a safety related question and win an EH&S and RS branded prize.

	Average Time Spent by Lab Workers at “Driving” Safety to the Heart of Campus Events	Average Time Spent by Lab Workers at EH&S and RS facility
PPE Fitting	10-15 min	15-30 min
Hands-on Training	20 min	45-60 min
Travel time to/from lab	0 min	30 min
Total	30-35 min	1.5-2 hours

Benefits

We understand that in order to continue developing a positive safety culture on campus we need to ensure that we make safety training easy, efficient, and effective, visually stimulating and inviting. We further acknowledge that with safety education, people learn best in situations that mirror real life laboratory settings and are more likely to participate when training is held in a convenient location.

1) Improved Customer Service:

- Faculty, staff and students are more likely to attend a safety training when the event is convenient and located at their workplace.
- Faculty appreciate the level of service provided and the efforts to simplify service, particularly on site delivery of training and materials, overall time savings, elimination of registration and scheduling requirements, and personal hands-on training.
- EH&S and RS receives positive attention from campus partners, and garners support and attention for EH&S and RS programs.

2) Increased Staff Efficiency:

The PPE Mobile Van and laboratory safety training services have also enabled us to fit and train more researchers in a shorter amount of time. Before starting this program, we would typically fit 60 researchers for PPE per month at the EH&S and RS facility. The same researchers would then be forced to return for a second and third time to receive fire extinguisher, compressed gas safety training and/or emergency shower/eye wash training. After launching this program, we are able to fit 70-80 researchers for PPE, while also training approximately 30 researchers on fire extinguisher, compressed gas or another topic in just one 4-hour event per month.

Applicability to Other Institutions

Focusing on the customer’s needs and minimizing non-value added steps, including transportation time, should be considered for all large institutions. When there is an opportunity to be physically present or closer to the customer to deliver services, there is an increased level of participation and appreciation. Lastly, pairing the act of PPE fittings with laboratory safety training creates a synergy that reinforces the safety message. The best tie-in is witnessed when researchers try on a flame resistant coat and put out a fire in the same session or try on cryogenic gloves with eye wear while learning how to handle liquid nitrogen gas tanks or experience an activated emergency eyewash. Researchers are learning that certain PPE, such as the flame resistant coat, provide protection from a fire and at the same time, they are learning how to use a fire extinguisher in case of a fire. This type of synergy can be used with other courses to show researchers the connectedness of safety and how being safety-minded is the best way to naturally integrate safety into their laboratory culture.

Appendix A- “Driving” Safety to the Heart of Campus Flyer For Fire Extinguisher Training

DRIVING SAFETY
TO THE  OF CAMPUS

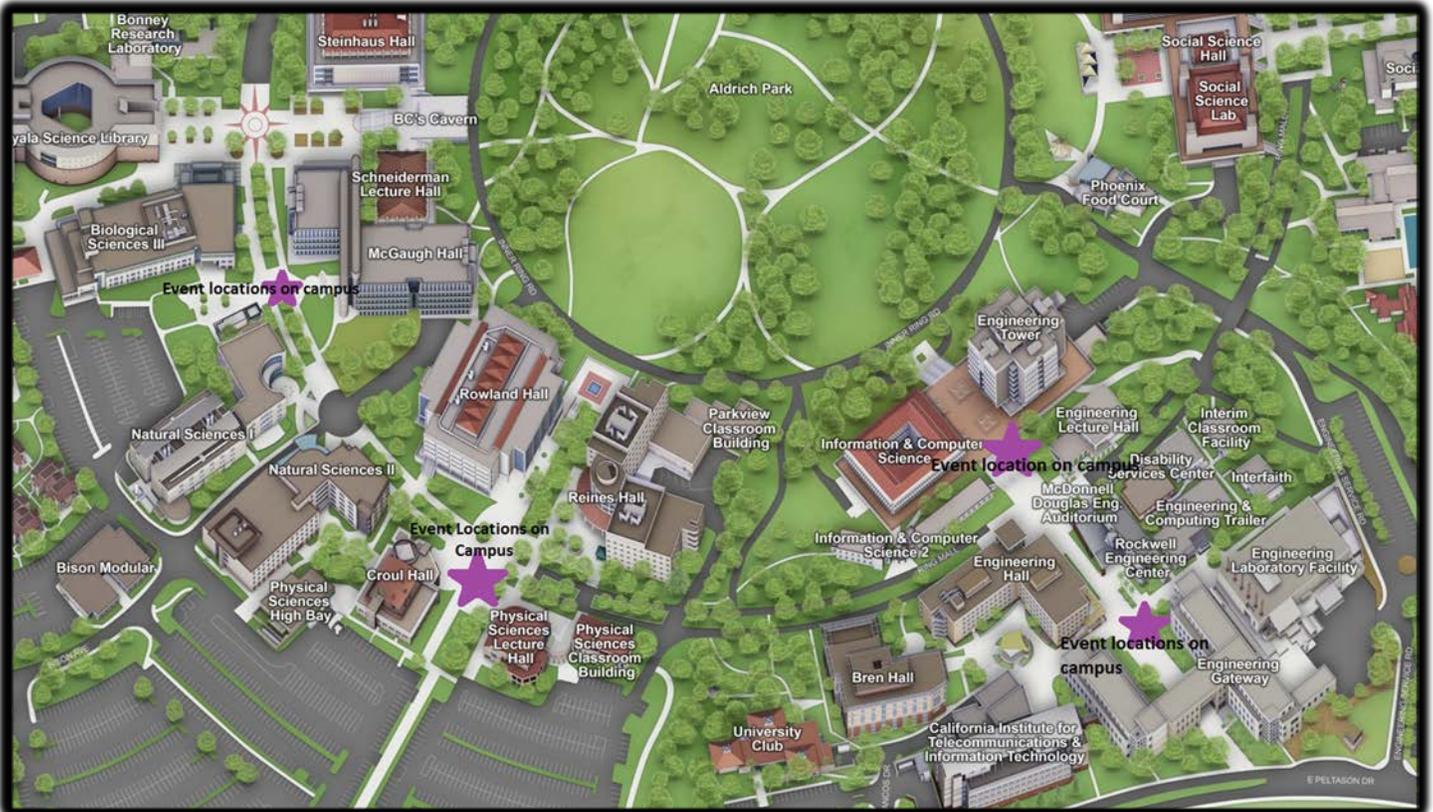
GET
UC LEARNING CENTER CREDIT
FOR TRAINING

LAB PPE FITTINGS
FIRE EXTINGUISHER TRAINING

Where: In front of Physical Sciences Lecture Hall
When: 10AM-2PM Monday, March 5th

UCI Environmental Health & Safety
and Risk Services

Appendix B - Map of selected campus locations for PPE and Experiential Safety Training Events



Appendix C – EH&S and RS building location from Central Campus



Photos of events



