

WINTER 2012

**UCSC** Silicon Valley  
Extension



2505 AUGUSTINE DRIVE, SUITE 100, SANTA CLARA, CA 95054

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# Environmental Health and Safety



[ucsc-extension.edu/ehs](http://ucsc-extension.edu/ehs)





# Environmental Health and Safety

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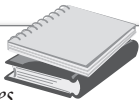
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## YOU MAY BE CLOSER TO A CERTIFICATE THAN YOU REALIZE



Are you just a few courses away from earning an EHS certificate? Let us review your academic record and help to fast track your goals. Contact us to develop a personalized study plan: [ehs@ucsc-extension.edu](mailto:ehs@ucsc-extension.edu).

## Course Readers, Textbooks and Other Instructional Resources



Students are responsible for obtaining the required instructional materials for all courses. A variety of media may be used. Please review the section details at the bottom of the course description pages on our Web site.

Instructors may specify any of the following:

- Printed course readers from our on-demand service provider, **Content Management Corporation (CMC)**
- Electronic course materials from our online learning platform, **UCSC Extension Online**
- Textbooks (required and recommended). Purchasing information can be found at: [ucsc-extension.edu/bookstore](http://ucsc-extension.edu/bookstore).
- Other materials distributed via e-mail either by the Academic Department or the instructor

Students should acquire or access their materials prior to the first class meeting. For full instructions, go to [ucsc-extension.edu/course-materials](http://ucsc-extension.edu/course-materials).



## Environmental Health and Safety Programs

UCSC Extension Silicon Valley offers individual courses and three full certificate programs to meet the needs of Bay Area professionals currently working in or planning for a transition into the environmental health and safety field. Courses in environmental safety and health, hazardous materials, and occupational safety and health are designed to help EH&S professionals meet regulatory and certification requirements as well as advance their careers. We also regularly offer HAZWOPER and one-day updates. Taught by experienced professionals, our EH&S programs develop the hands-on skills as well as the advanced management techniques needed to elevate performance to the highest level.

### Certificate Program

## Hazardous Materials Management

#### CERTIFICATE CONTACT

Applied and Natural Sciences Department, (408) 861-3860, or e-mail [program@ucsc-extension.edu](mailto:program@ucsc-extension.edu).

#### PROGRAM OVERVIEW

This program provides a solid foundation in the principles, regulations, and technologies required to manage hazardous materials and hazardous waste. Courses are designed for public and private-sector professionals and managers who have hazardous materials and hazardous waste regulatory compliance responsibilities and related duties.

#### CERTIFICATE REQUIREMENTS

Candidates for the certificate must complete a total of **210 classroom hours (21 units)** comprising **5 required courses** and **6 units of elective courses**.

Students pursuing both the Hazardous Materials Management certificate and the Occupational Safety and Health Management certificate (the dual certificate) may not use required courses from one program as electives for the other. A minimum of **37 units** is required to obtain two certificates. For GPA requirements and program time limits, go to [ucsc-extension.edu](http://ucsc-extension.edu).

#### COURSES MAY BE TAKEN INDIVIDUALLY OR AS PART OF THE CERTIFICATE PROGRAM.

#### PREREQUISITES

Completion of at least one college-level chemistry course.

#### RECOMMENDED COURSE SEQUENCE

Courses may be taken in any order.

#### FOR INFORMATION ON CERTIFICATE APPLICATIONS AND TRANSFERRING CREDIT FROM OTHER SCHOOLS, GO TO UCSC-EXTENSION.EDU.

#### FOR MORE INFORMATION

Current and future course schedules can be found at [ucsc-extension.edu/ehs](http://ucsc-extension.edu/ehs). For more information on this program or to be added to our mailing list, please call (408) 861-3860 or contact [program@ucsc-extension.edu](mailto:program@ucsc-extension.edu).

### Enrollment

- **Early Enrollment Discount:**  
Save 10 percent when you enroll more than 14 days before the first day of class.
- **Courses may be taken individually or as part of the certificate program.**

### Certificate Program

## Occupational Safety and Health Management

#### CERTIFICATE CONTACT

Applied and Natural Sciences Department, (408) 861-3860, or e-mail [program@ucsc-extension.edu](mailto:program@ucsc-extension.edu).

#### PROGRAM OVERVIEW

Businesses today face myriad safety and health issues, including worker safety, employee health liability, loss control, government regulations, program development, and extensive training requirements and techniques. This certificate helps employers develop proactive safety programs that meet these increasingly important safety and health responsibilities. Courses are taught by expert consultants, academics, and trainers from environmental health and safety companies, ensuring that you receive the latest knowledge, theory, and skills in this important field. If you are responsible for, involved with, or interested in managing a proactive health and safety program, you will find this certificate extremely useful. You also have the option of earning a dual Certificate in Environmental Safety and Health Management by taking as few as five required courses from our Hazardous Materials Management Certificate.

#### CERTIFICATE REQUIREMENTS

Candidates for the certificate must complete a total of **220 classroom hours (22 units)** comprising **5 required courses** and **6 units of elective courses**.

Students pursuing both the Occupational Safety and Health Management certificate and Hazardous Materials Management certificate may not use required courses from one program as electives for the other. A minimum of **37 units** is required to obtain two certificates. For GPA requirements and program time limits, go to [ucsc-extension.edu](http://ucsc-extension.edu).

#### COURSES MAY BE TAKEN INDIVIDUALLY OR AS PART OF THE CERTIFICATE PROGRAM.

#### RECOMMENDED COURSE SEQUENCE

We recommend that you start with "Safety Management, Introduction."

#### FOR INFORMATION ON CERTIFICATE APPLICATIONS AND TRANSFERRING CREDIT FROM OTHER SCHOOLS, GO TO UCSC-EXTENSION.EDU.

### Certificate Program

## Environmental Safety and Health Management

#### CERTIFICATE CONTACT

Applied and Natural Sciences Department, (408) 861-3860, or e-mail [program@ucsc-extension.edu](mailto:program@ucsc-extension.edu).

#### PROGRAM OVERVIEW

Known as the "dual" certificate, Environmental Safety and Health is a combination of the Hazardous Materials Management and the Occupational Safety and Health Management certificates. It is designed for safety engineers and managers who have broad environmental and management responsibilities that encompass hazardous materials, hazardous waste, and environmental health and safety compliance.

#### CERTIFICATE REQUIREMENTS

Candidates for the certificate must complete a total of **10 required courses** from the two basic certificates and **6 units of elective courses** for a minimum of **37 units**. For GPA requirements and program time limits, go to [ucsc-extension.edu](http://ucsc-extension.edu).

#### COURSES MAY BE TAKEN INDIVIDUALLY OR AS PART OF THE CERTIFICATE PROGRAM.

#### PREREQUISITES

At least one college-level chemistry course.

#### RECOMMENDED COURSE SEQUENCE

You can begin the dual certificate by taking courses from either the Hazardous Materials Management Certificate or the Occupational Safety and Health Management Certificate.

#### FOR INFORMATION ON CERTIFICATE APPLICATIONS AND TRANSFERRING CREDIT FROM OTHER SCHOOLS, GO TO UCSC-EXTENSION.EDU.

## Required Courses

### Dimensions of Safety and Health Training

*X424. EART (3.0 quarter units) 5.01 ABIH—American Board of Industrial Hygiene—CM Points 10-4255 3.99 CSPs can claim COC points*

There is a critical need for training to meet regulatory requirements and achieve occupational safety and health management systems objectives. The most frequently cited deficiency in safety audits is the "training program." This course provides a comprehensive assessment of required safety and health training programs, related training resources, adult education techniques, training needs, methods and technologies, and the opportunity to put the lessons into practice through a required classroom presentation.

DAVID PAIS, M.S., REA, CSP.

SANTA CLARA CLASSROOM

8 meetings: Tuesdays, 4:30–8:30 pm,  
January 17–March 20 (no meetings Jan. 31, Feb. 28).  
Fee: \$625 (\$562.50 through Jan. 3).

**To enroll, use Section Number 0419.(011)**

## COURSES

## CERTIFICATES

	Units	HM	OSHM	ES&H	Term
Applied Ergonomics: Human Factors of Safety and Health	3.0	Elec	Elec	Elec	Spring
Biosafety	1.5	Elec	Elec	Elec	Fall
Business Dynamics of Safety and Health Management	3.0	Elec	Req	Req	Fall
Climate Change and AB 32: What It Means for You	0.5	Elec	Elec	Elec	Winter
Dimensions of Safety and Health Training	3.0	Elec	Req	Req	Winter
Environmental Fate of Pollutants	3.0	Req	Elec	Req	Spring
Hazardous Materials Management, Principles	3.0	Req	Elec	Req	Winter
Industrial Hygiene and Health	4.0	Elec	Req	Req	Spring
ISO 14001 and Environmental Management Systems:					
Introduction	1.5	Elec	Elec	Elec	Fall
Occupational Safety and Health Standards for General Industry (OSHA 511)	3.0		Elec	Elec	Spring/Fall
Occupational Safety and Health Annual Regulatory Update	0.5	Elec	Elec	Elec	Spring
Regulatory Framework for Toxic and Hazardous Materials	3.0	Req	Elec	Req	Fall
Safety and Health Program Development and Implementation	3.0	Elec	Req	Req	Spring
Safety Management, Introduction	3.0	Elec	Req	Req	Summer
Toxicology, Principles	3.0	Req	Elec	Req	Summer
Toxics Laws and Regulations, Update	0.5	Elec	Elec	Elec	Winter
Trainer Course in OSHA Standards for General Industry (OSHA 501)	3.0		Elec	Elec	Summer/Fall
Waste Stream Management	3.0	Req	Elec	Req	Fall
40-Hour HAZWOPER*	3.0	Elec	Elec	Elec	Winter

\* May be used as a 3-unit elective only if taken at UCSC Extension.

Schedule subject to change without notice. Visit [ucsc-extension.edu/ehs](http://ucsc-extension.edu/ehs) for the most up-to-date information.

HM = Hazardous Materials Management, OSHM = Occupational Safety and Health Management,  
ES&H = Environmental Safety and Health Management

## Safety and Health Program Development and Implementation

X422. EART (3.0 quarter units) 3.99 CSPs can claim COC points 5.01 ABIH—American Board of Industrial Hygiene—CM Points 10-4258

This course provides the framework to plan, maintain and administer safety management elements as part of a proactive safety and health program. Topics include ergonomics, radiation and laser safety, process safety, fall protection, OSHA inspections, indoor air quality, machine guarding, electrical safety, contractor safety, selling safety, and asbestos management.

JAY JAMALI, CSP, CHMM, CHCM.

SANTA CLARA CLASSROOM

4 meetings: Tuesdays, 8 am–5 pm, April 3–24.  
Fee: \$625 (\$562.50 through Mar. 20).

To enroll, use Section Number 1424.(015)

## Safety Management, Introduction

For course description, [ucsc-extension.edu/ehs](http://ucsc-extension.edu/ehs).

## Toxicology, Principles

For course description, [ucsc-extension.edu/ehs](http://ucsc-extension.edu/ehs).

## Elective Courses

## 40-Hour Hazardous Waste Operations and Emergency Response Training (Federal OSHA, 29 CFR 1910.120 Training)

For course description, see page 4.

## Applied Ergonomics: Human Factors of Safety and Health

For course description, [ucsc-extension.edu/ehs](http://ucsc-extension.edu/ehs).



## Wireless Access at UCSC Extension Silicon Valley

Wireless Internet access is provided throughout our Santa Clara facility. Students may need to install protective software on their laptops to use our wireless network.

## ANNOUNCEMENT

UCSC Extension Silicon Valley is pleased to partner with the OSHA Training Center to offer Silicon Valley professionals greater access to OSHA safety courses.



## Environmental Fate of Pollutants

X424. NATSC (3.0 quarter units) 3.99 CSPs can claim COC points

This course is an overview of the movements, dispositions and transformations of chemical pollutants within and between environmental compartments such as air, soil, water and biota. Topics include major sources of environmental pollution, distribution mechanisms between and within environmental compartments, and the physical and chemical properties that affect the movement of pollutants through the environment. Also covered are the chemical reactions that pollutants undergo in the environment and major factors that influence those reactions, as well as site characteristics and process technologies that may have significant effects on the environmental fate of pollutants.

Prerequisite(s): At least one college-level chemistry course.

RONALD TJEERDEMA, Ph.D., D.A.B.T.

SANTA CLARA CLASSROOM WITH A WEB COMPONENT

4 meetings: Fridays, Saturdays, 9 am–5 pm,  
April 27–May 5.

Fee: \$625 (\$562.50 through Apr. 13).

To enroll, use Section Number 5475.(069)

## Hazardous Materials Management, Principles

X413.9 ENV5 (3.0 quarter units) 3.99 CSPs can claim COC points

This course provides a comprehensive overview of key issues in hazardous materials management. Topics include definitions of hazardous substances and hazardous wastes; types of hazardous materials; storage and transportation issues; waste management, including “minimization”; recycling, treatment and disposal methods and alternatives; water and air quality issues; industrial hygiene and public health; emergency response planning; regulatory jurisdictions and interactions; and basic management practices. It is recommended that this course be completed first because it provides a broad foundation of understanding for the other HazMat courses.

DAVID J. KEENAN, B.S.

SANTA CLARA CLASSROOM

4 meetings: Mondays, 8 am–5 pm,  
January 23–February 13.

Fee: \$625 (\$562.50 through Jan.9).

To enroll, use Section Number 3020.(093)

## Industrial Hygiene and Health

For course description, [ucsc-extension.edu/ehs](http://ucsc-extension.edu/ehs).

## Climate Change and AB 32: What It Means for You

X400.145 ENVS (0.5 quarter unit) 0.6 CSPs can claim COC points

After decades as a scientific and political issue, climate change is now emerging as the basis for statutory compliance requirements and market-driven economic activities. California has been a leader in this transition for a number of years, and enacted AB 32 in 2006 to establish statewide emission limits and enforceable standards to meet those limits. This evolving program will profoundly affect some California industries, and will create costs and opportunities for many more. The latest international and U.S. federal initiatives will also be discussed.

JON ELLIOTT, M.P.P., J.D.

SANTA CLARA CLASSROOM

Friday, 9 am–5 pm, March 23.

Fee: \$295 (\$265.50 through Mar. 9).

**To enroll, use Section Number 20758.(005)**

## Occupational Health and Safety Annual Regulatory Update

859. ENVS (0.6 CEU) 0.6 CSPs can claim COC points 6.0 hours  
MCLC—Minimum Continuing Legal Education State Board of CA 1.34 ABIH—American Board of Industrial Hygiene—CM Points 10-4261

This one-day seminar will update attendees on newly adopted and Fed-OSHA regulations. Topics include changes to the following state and federal regulations: electrical safety and NFPA 70E, title 8 reform, carcinogen report of use requirements, electrical safety, elevator safety, process safety management, dust collection systems, respiratory protective equipment, railings and stairways, excavation safety, laser safety, fall protection, machine guarding, crane safety and a review of the most common OSHA citations.

JAY JAMALI, CSP, CHMM, CHCM.

SANTA CLARA CLASSROOM

Friday, 9 am–4 pm, April 20.

Fee: \$395 (\$355.50 through Apr. 6).

**To enroll, use Section Number 3809.(018)**

## Toxics Laws and Regulations, Update

809. ENVS (0.6 CEU) 6.0 hours MCLC—Minimum Continuing Legal Education State Board of CA 0.6 CSPs can claim COC points

This one-day workshop covers new and pending developments in environmental legislation and regulations. A number of environmental policy initiatives have emerged from recent state legislative actions, and regulatory initiatives continue to implement and expand upon earlier legislation. Notable developments include bills that impact air quality, hazardous materials and hazardous waste, water quality, solid waste, cleanup, and brownfields. Participants learn about these and other new environmental laws and regulations, as well as their compliance implications. This workshop is intended for environmental professionals and managers in government and industry, and lawyers, elected officials, and policy makers.

JON ELLIOTT, M.P.P., J.D.

SANTA CLARA CLASSROOM

Friday, 9 am–5 pm, March 2.

Fee: \$395 (\$355.50 through Feb. 17).

**To enroll, use Section Number 0486.(021)**

## HAZWOPER

### Program Contact

Applied and Natural Sciences Department, (408) 861-3860 or e-mail [program@ucsc-extension.edu](mailto:program@ucsc-extension.edu).

### 40-Hour Hazardous Waste Operations and Emergency Response Training (Federal OSHA, 29 CFR 1910.120 Training)

825. ENVS (4.0 CEU) 4.0 CSPs can claim COC points 5.0  
ABIH—American Board of Industrial Hygiene—CM Points

This 40-hour course meets the OSHA training standard for professionals involved in hazardous waste site operations, including remediation workers, first responders, environmental health and safety specialists, and investigators. The instructor discusses local, state, and federal regulations; chemical and fire safety; site safety plans; protective equipment; monitoring and sampling equipment; emergency response; incident command systems; and decontamination procedures. Case studies, simulated field situations, and hands-on demonstrations of protective equipment and field instruments are used to illustrate important topics.

MARY HENRIQUES, M.B.A., SPHR.

SANTA CLARA CLASSROOM

5 meetings: Monday–Friday, 8 am–5 pm, March 12–16.

Fee: \$795 (\$715.50 through Feb. 27).

**To enroll, use Section Number 6457.(079)**

### 8-Hour Annual HAZWOPER Refresher

828. ENVS (0.8 CEU) 0.8 CSPs can claim COC points 1.0  
ABIH Credit—1.0 CM

Professionals who have completed the “40-Hour Hazardous Waste Operations and Emergency Response Training” course must attend an annual eight-hour refresher course. This course is designed to meet the Cal-OSHA GISO 5192 and 29 CFR 1910.120 requirements. Students are required to bring to the class their valid certificate for the “40-Hour Hazardous Waste Operations and Emergency Response Training” or a previous “8-Hour Annual Refresher for Hazardous Waste Operations and Emergency Response Personnel.”

JAY JAMALI, CSP, CHMM, CHCM.

SANTA CLARA CLASSROOM

Friday, 8 am–5 pm, March 9.

Fee: \$265 (\$238.50 through Feb. 24).

**To enroll, use Section Number 5363.(084)**

## Hazardous Waste Handling and Awareness Training

844. ENVS (0.7 CEU) 0.7 CSPs can claim COC points

Businesses that store or use hazardous materials must provide annual training for all employees in the safe and proper handling of hazardous waste under Title 22, Section 66265.16, California Code of Regulations. This training program was designed to meet the personnel training in hazardous waste management requirement in the California Code of Regulations. Topics include federal and state regulatory structure; steps for identifying a hazardous waste; documentation, manifesting and labeling; on-site handling requirements for hazardous wastes; contingency planning, emergency response, and spill reporting and recording procedures; and liabilities for improperly handling hazardous waste.

DAVID J. KEENAN, B.S.

SANTA CLARA CLASSROOM

Thursday, 9 am–5 pm, April 26.

Fee: \$265 (\$238.50 through Apr. 12).

**To enroll, use Section Number 1993.(080)**

## BIOTECHNOLOGY

Learn the principles, processes and technologies you need to move ahead in the bioscience field.

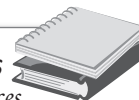


Courses include:

- Biotechnology Basics for Non-Scientists
- Drug Development Process

For more information, go to [ucsc-extension.edu](http://ucsc-extension.edu).

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