Occupational Safety and Health Certificate Program
PROGRAM DESCRIPTION

Safety and health professionals play an important role in maintaining the quality of the work environment. The Certificate Program in Occupational Safety and Health prepares safety and health professionals to take a leadership role in assuring a safe and healthy work environment. Their employers reap the benefits of increased quality production derived from enhanced efficiency and knowledgeable compliance.

Most courses offer Board of Certified Safety Professionals (CSP) and American Board of Industrial Hygiene (ABIH) credit.

UC Irvine Extension is a State Bar of California approved MCLE Provider (provider number 2560).

WHO SHOULD ATTEND

- Individuals transitioning into the occupational safety field.
- Safety professionals who would like to add to their credentials and/or advance in their careers.
- Individuals who wish to increase their knowledge in specific areas in preparation for both the Certified Safety Professional (CSP) core examination and the Occupational Health and Safety Technologist examination.
- Other professionals in the industry who are involved in the development or management of a safety program and want to ensure their company meets government regulations and industry standards in the area of safety.

PROGRAM BENEFITS

- Update and expand professional skills in the design and implementation of occupational safety and health programs.
- Recognize hazards and minimize adverse effects to protect worker safety and health.
- Identify and keep abreast of legal and regulatory requirements for safety, health and the environment.
- Prepare for safety and health credential examinations such as Certified Safety Professional and Occupational Safety and Health Technologist.
- Obtain immediately applicable knowledge and skills for enhanced performance or career advancement.
- Network with other professionals and engage in continuing education activities.

CERTIFICATE CANDIDACY

It is recommended that participants possess at least one year practical experience in the field of occupational safety or related field (i.e. fire, paramedic, security, risk management and loss); OR obtain consent of the program director.

CERTIFICATE REQUIREMENTS

The certificate is awarded upon successful completion of four required courses (13 units) and six units of electives each with a grade of “C” or better.

Certificate candidates may choose One-Day Courses to fulfill elective units.

CERTIFICATE PREREQUISITE

Prior college preparation in algebra, trigonometry, and chemistry; OR Basic Math and Science Review, PhySci X420.7, is required for the certificate.

FOR MORE INFORMATION

Please call (949) 824-6538.

PROFESSIONAL ASSOCIATION OF INTEREST

Visit the American Society of Safety Engineers, Orange County Chapter at www.ocasse.com.

ADVISORY COMMITTEE

GLENN AZEVEDO, Senior Environmental, Health & Safety Specialist, Beckman Coulter, Inc.

THOMAS BUTLER, Consultant, Butler Health & Safety, Inc.

RONALD HUTTON, Health & Safety Manager, Allergan, Inc.

JOSEPH KUKLA, Health & Safety Specialist

HOWARD SPIELMAN, President, Health Science Associates (HSA)

LEO VORTOUNI, Consultant, Vortouni Occupational/Environmental Health Consulting

RICHARD WARNER, Unit Manager, Environmental Health & Safety, Metropolitan Water District
**PREREQUISITE COURSE**

**Basic Math and Science Review**
**PHYSIC X420.7 (2 units)**
Acquire the proficiency in math and science you need to launch or enhance your career in Occupational Safety and Health. Master topics include: materials handling problem solving using basic trigonometry and algebra equations, corrosives, gas law applications, metric conversion, balancing chemistry and algebra equations, and identification of anatomical functions. Practical and hands-on, this course also helps you prepare for the Certified Safety Professional (CSP) and the Occupational Health and Safety Technologist examinations.

**REQUIRED COURSES (13 units)**

**Fundamentals of Safety and Health in the Workplace**
**ENGR X469.6 (4 units)**
Gain an understanding of the safety engineering techniques and practical skills essential to safety professionals. Learn about topics including: biological stresses, hazard and exposure control, toxicology, property exposure and control, radiiation, ventilation, life safety aspects of fire, hearing conservation, machine guarding, system safety, and environmental health. The workshop setting of this course features a combination of lectures and open discussion, giving you the opportunity to clearly understand all material. Reading assignments and testing in class will also help you prepare for the Certified Safety Professional (CSP) and the Occupational Health and Safety Technologist examinations. **Prerequisite:** Prior college preparation in algebra, trigonometry, chemistry, or successful completion of PHYSIC X420.7, Basic Math and Science Review.

**Occupational Safety and Health Regulations and Laws**
**SOCCECOL X492.2 (3 units)**
An organization’s occupational safety and health programs must comply with federal and state regulations. Enhance your knowledge of the different laws that affect a safety program including the labor code, workers’ compensation, and OSHA regulations. An understanding of the limits of the law and the responsibilities of those who are responsible for safety programs is essential to administrating a comprehensive system. Learn about topics that include accident investigation, OSHA inspections, work place violence, sexual harassment, and rights of privacy. Explore the ethics of the safety professional and the ethics and workings of the law governing safety.

**Fundamentals of Industrial Hygiene**
**SOCCECOL X496.2 (3 units)**
Industrial hygiene is both the science and art of protecting the health and safety of workers. Learn how to recognize, evaluate, and control health and safety hazards within the work environment. Gain an understanding of the effects caused by occupational exposure to hazards. Explore topics including identification of chemical and physical hazards, personnel monitoring, Cal OSHA standards, and contemporary industrial hygiene issues. Acquire the knowledge to assess the health hazards in your work environment. **Prerequisite:** ENGR X469.6, Fundamentals of Safety and Health in the Workplace, or equivalent experience.

**PRINCIPLES OF OCCUPATIONAL SAFETY AND ENVIRONMENTAL HEALTH MANAGEMENT**

**MGMT X494.2 (3 units)**
As an occupational safety and environmental health professional, you need to be able to integrate business strategies with sound environmental health and safety (EHS) principles. Learn the skills you need to successfully achieve business goals, while preventing environmental health and safety risks. Gain new insight into topics including implementing and maintaining effective EHS management systems; EHS information systems; measuring performance; EHS finance; using EHS as a competitive advantage; and "influencing with authority."

**ELECTIVE COURSES (Candidates choose 6 units)**

**The Occupational Safety and Health Auditing Process**
**SOCCECOL X498.19 (3 units)**
Learn the principles of the safety and health auditing process by understanding the methods from corporate, agency, OSHA, and insurance industry perspectives. Explore applications of the auditing process as they apply to a variety of safety and health management situations. Gain an understanding of the conceptual framework, development of protocols, interviewing techniques, conducting inspections, and document reviews and legalities. Learn about pre-audit, audit, and post-audit activities in the context of procedural development, task coordination and computer audit tools. **Prerequisite:** a working knowledge of safety and health regulations and related standards, or SOCECOL X492.2 Occupational Safety and Health Regulations and Laws.

**Emergency Management Plan Development**
**SOCCECOL X490.1 (3 units)**
Effective planning creates a roadmap for successful response to major emergencies and disasters. Increase your knowledge of the tools and techniques available for developing or enhancing the five types of all-hazard emergency plans: emergency operations/response, strategic, mitigation, recovery, and continuity. Enhance your understanding of topics that include the planning process; hazard threat and risk analysis; utilizing SEMS/NIMS as guides for written plans; and unique planning considerations for government, private industry, and other types of organizations. **Prerequisite:** SOCECOL X490, Principles of Emergency Management, or equivalent experience.

**Emergency Preparedness: Business Continuity Planning**
**SOCCECOL X498.59 (1.5 units)**
Gain an understanding of the concepts necessary for an organization to address in preparing for a natural or man-made catastrophic emergency event (fire, terrorist act, hazardous material spill, internal sabotage, etc.). Explore the practical steps necessary to develop and test a plan to assure continuity of business operations. Learn about topics including: the components of a plan, including critical business processes; recovery location; required resources (equipment, software, and supplies); recovery teams and tasks; and vendor and customer contacts.
Managing Indoor Air Quality
SOCECOL X498.34 (1.5 units)
Protecting indoor air quality is critical in occupational safety and health, and facilities design and management. Learn about the threats to healthy indoor air in homes, offices, schools, and buildings. Gain an understanding of the risks of chemical and biological attacks on air systems in buildings. Learn to develop plans to protect people in a building from airborne agents released by terrorists. Enhance your knowledge of the sources of pollutants, "sick building syndrome," factors affecting the effectiveness of ventilation systems, regulatory requirements, and program development.

Biosafety: Principles and Practices
SOCECOL X496.4 (3 units)
Creating and maintaining a safe workplace often requires the assessment and control of biohazards. Gain an understanding of the biosafety principles, guidelines, and regulatory requirements that will help you implement a biosafety program at your company. Review microbiology and recombinant DNA technology to establish a common vocabulary. Enhance your knowledge of risk assessment techniques to evaluate hazards associated with biological materials in the workplace. Learn about biohazard control programs including sterilization methods, engineering controls, personal protective equipment (PPE), and facility design. This course will be of interest to professionals who are responsible for biosafety in their organizations, as well as other practicing professionals seeking a broader understanding of the elements of biosafety. Prerequisite: ENGR X469.6, Fundamentals of Safety and Health in the Workplace, or equivalent experience. Offers CSP and ABIH credit.

MOLD: Recognition, Evaluation and Control
SOCECOL X498.37
Enhance your understanding of the environmental factors that contribute to the formation of mold in buildings, and learn how to prevent its formation and take remedial action. Learn how to apply the principles of industrial hygiene in the investigation and remediation of mold in facilities. Explore the quantitative measures and the instrumentation used to evaluate mold problems and to determine the effectiveness of improvement measures. Familiarize yourself with the components of a comprehensive mold management and prevention program.

Risk Management for the Safety and Health Professional
MGMT X494.5
Increase your understanding of risk management and how to organize a risk management program. Learn how to develop safety practices and procedures that will help reduce losses involving people, environment and production in your company. Explore topics that include risk identification and analysis; risk control techniques; and selecting, implementing and monitoring risk. Gain practical, real-world knowledge of the risk management decision process that you can apply immediately on the job in a wide variety of situations.

Ergonomics and the Management of Cumulative Trauma Disorders
MED X413.2 (3 units)
Gain an understanding of industrial ergonomics and its importance in preventing cumulative trauma disorders (CTDs), and learn a systematic, practical approach to applying ergonomic principles in the workplace. Explore topics including elements of workplace ergonomics programs, basic anatomy and associated CTD risk factors, medical management systems, system and task analysis, basic biomechanics and anthropometry, and methods and resources to solve problems. Provides an overview of regulations, but the focus is on real-life methods for making ergonomic improvements.

Basic Workers’ Compensation Law of California
MGMT X438.51 (3 units)
Enhance your understanding of the changes in the Workers’ Compensation Law and how they impact the existing law and practices. Gain the specialized knowledge you need to understand California Workers’ Compensation law and handle these complex cases. Build a foundation by exploring the historical perspectives and basic concepts of workers’ compensation law. Master topics including workers’ compensation terminology, the organizational structure of the California system, methods of coverage of workers’ compensation benefits, as well as relevant Labor Code sections, benefit structure, and loss control considerations.

Introduction to Industrial and Commercial Fire Protection
ENGRCEE X469.5 (3 units)
Fire protection is a field that requires a broad spectrum of knowledge across multi-discipline principles. Gain an understanding of fire protection principles and their impact on industrial and commercial facilities to save lives and protect property. Enhance your knowledge of fire protection requirements for various types of commercial and industrial facilities. Learn how to evaluate fire hazards, conduct arson investigations, and recommend improvements to maximize life safety and minimize property loss. Prerequisite: A working knowledge of algebra with a basic understanding of formulas.

One-Day Courses on Special Topics
(0.5 units each)
One-Day Courses on special topics are offered each quarter. Candidates may choose One-Day Courses to fulfill elective units. Visit extension.uci.edu for One-Day Course descriptions and schedules.
## QUARTERLY SCHEDULE OF COURSES

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<tr>
<th>COURSE #</th>
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* College preparation in algebra, trigonometry, and chemistry OR Physical Sciences X420.7 Basic Math and Science Review.

** Offers credit in the Environmental Management Certificate Program.

Note: Schedules are subject to change.  O = Online  C = Classroom  ■ W = Winter  ■ SP = Spring  ■ SU = Summer  ■ F = Fall

You may take as many individual courses as you wish without enrolling in the full certificate program.

Check our catalog or web site ([extension.uci.edu](http://extension.uci.edu)) for the most current schedule.
ONLINE FORMAT FREQUENTLY ASKED QUESTIONS

What is an online course?
An online course utilizes the Internet and a web browser as a means of creating a learning environment outside of the traditional classroom. The lectures and discussions will take place on a Distance Learning Center Web site. You will be able to access your course lectures (text based) and communicate with your classmates and instructors through the use of a discussion forum (message board). The online courses follow a classroom structure of covering a lesson a week. You can access your course Web site anytime of the day and place where you have access to the Internet.

What are the online course fees?
Approximately $380 for two unit courses; $565 for three unit courses.

Who can take online courses?
Anyone can take an online course as long as they have access to a computer with Internet capabilities, have an active email account and have a basic understanding of how a computer works. An online student also has to be motivated to participate in discussion forums and regularly check the Web site and keep up with the course work.

What happens if I fall behind or complete the course early?
It is okay to be a week ahead or behind. You must remember that participation is a very important aspect of your final evaluated grade for the course. Active participation requires you to post and respond to your instructor and fellow classmates’ comments on the discussion forum. If you are too far behind, posting to an old topic will be revisiting something that the majority of your classmates might have discussed.

Are there specific dates that I need to log on to the Web site?
There is a set beginning and end date for your online course. It is suggested that you logon at least 3 times a week to check the discussion forums, to read over assignments and lectures. This is the “asynchronous” aspect of the course.

There might be occasion when the instructor will set a chat time (“synchronous”) where he/she assigns a specific date and time for all the students to try to meet in the chat room to ask questions.

All assignments, quizzes, exams, and projects must be completed within the time frame of the course. The instructor will set individual due dates for your assignments, projects and tests.

How many hours a week do I have to devote to my online course?
Just like a classroom course, to get the most out of any type of learning you must commit a certain amount of time to complete the course. You will most likely spend approximately 10 hours a week going over class lectures, doing assignments and spending time on the discussion forum. Time required for each course will vary.

Will I be able to see my online instructor or communicate with him/her via telephone?
Unless there is an extreme instance, all communications with your instructor will be done either through email, the discussion forums or the chat sessions. Please do not expect your instructor to telephone you.

How do I communicate with my instructor?
You communicate with your instructor by either email, discussion forums, or chat sessions. Students are highly encouraged to use these modes of communications, as faxed or mailed assignments are not accepted.

What happens if I have trouble accessing the URL with my login and password?
Contact the Distance Learning Center (DLC) office at unex-online@uci.edu or 949-824-7613 and we will assess and work to fix any problems in the most expeditious manner. In order to better serve you, please note the problem as it occurred.

Will having a firewall at home or at work prevent me from working on my online course?
Although this very seldom occurs, your firewall may prevent you from posting to the discussion forum while allowing you to read the lectures and other resources.

Do I need to have cookies enabled?
Yes, it is necessary to have your cookies enabled. To best protect your computer it is suggested that you vary your cookie options to ensure the most secure level.

Can I access my course from anywhere?
You can access the course anywhere that you have Internet access. Some companies have firewalls that prevent you from participating in the chat sessions. Please check with your company before you attempt to access the course.

I have enrolled and I entered my key, but it still won’t let me in.
Many of you will have enrolled prior to the course start date. Courses will not appear until the course start date. Please note that the first week is considered an orientation week where you can become familiar with the course tools. Always make sure to enter a category for the current quarter that you are signed up for. Many times, previous quarters will be available for past students.

When is the last day to drop the course?
The last day to drop a course follows the standard provided in the UCI Extension catalog. There will be an administrative fee accessed for any withdrawals within the allowable period. Please refer to the Extension website at http://unex.uci.edu/services/registration/drops for more information.

What happens if I can’t finish a course?
We understand that certain situations can occur. Please refer to the UCI Extension catalog for procedures, etc.
How do I know which online courses can take the place of classroom courses?
Please visit our website at http://unex.uci.edu for more information about our certificate programs and course offerings.

How do online courses work?
Once you begin your course, you will find that with the use of the course tools, you will be able to navigate from the lecture to the discussion forums or to the weekly outline. You will be able to maneuver through the Web site to post/read assignments and to download/upload files from your instructor. Your instructor will primarily be contacting you by email or through the discussion forum. Once you begin your course, you will find that with your instructor’s help, you will find the benefits of taking a course online.

Help files are found on the Distance Learning Center website with instructions on accessing your online course with information about tools use.

Do I need to purchase books or any additional items?
Some courses do require that you purchase books or software. Please contact the UCI Bookstore for more information about the books for your courses at (949) 824-7810.

What happens after I sign up for a course, how do I get started?
If you enroll through the Web site at http://unex.uci.edu you will receive a confirmation email from our Student Services office with information regarding the steps needed to create your login and password, URL to access your course, and the enrollment key to enter your course.

If you have faxed or telephoned your enrollment, you will receive by U.S. mail a confirmation of your course enrollment. On that confirmation you will find the information regarding access to your online course.

I signed up for this quarter’s term and I can’t fine my online course!
Your online course will not be available until the actual course start date. The first week of the course is an orientation week, you will have this time to review the syllabus and become familiar with the course tools.

What is an enrollment key?
An enrollment key is required only for the first time that you enter your online course. Your enrollment key will be given at the same time as the information regarding your course access.

Will the platform for online courses be changing continually every quarter?
There will be changes periodically. Changes occur mainly as a result of student and instructor feedback to our Web site. This is done to maximize the tools.

Is my online course an instructor led course?
Like a traditional course, your online course has an instructor that will conduct the course by giving assignments, answering questions, leading discussions and assigning grades.

Can I get a degree online?
At this time, you can only receive a Master’s Degree in Criminology, Law and Society.

Students intending to transfer UC Irvine Extension course credit for a degree at another college or university should verify acceptance of the course with that institution.

What kind of grade options do I have?
The grading options are exactly the same as that of classroom courses.

Who do I contact if I am having problems with the instructor?
Please contact the DLC office at (949) 824-7613 or unex-online@uci.edu. Your instructor should be very explicit on the course syllabus or welcome message as to their availability. If the instructor is going out of town or will be away from the computer for an extended period of time, he/she must notify the class.

Why do I get emails of the discussion forum postings?
If you are receiving emails from the discussion forums, you are subscribed to that particular forum. You can change this option by going to the forums sections on the left side of the course site under Activities. By selecting forum, you will be able to see all the forums created and to turn on/off the subscription function. There may be a forum that you will not be able to change. More than likely, that will be a place where the instructor will post announcements.

I like getting the forum subscribed emails, but the responses I made are not on the course Web site.
If you prefer to receive the subscribed emails from the forum, please do not reply to the email directly, but post your reply to the specific forum where the posting originated. This will ensure that others, including your instructor, will see your reply or comment.

I am confused and frustrated, I can’t seem to find my way around the Web site. What can I do?
Call us at (949) 824-7613. We will be happy to walk you through the tools and show you everything you need to know.