

# PROFESSIONAL

## BASIC

## TECHNOLOGIST/ TECHNICIAN

## GENERAL

## SPECIALIST

### EDUCATION

Most individuals involved in safety at this level receive training through employer sponsored or supported courses. Typically, training extends beyond the safety of a particular craft or job function to more general safety of work places, conditions, and practices. Some may also receive training through union sponsored courses or through continuing education courses offered by safety organizations, community colleges, or universities.

The amount of safety and health training will vary, but is typically between 10 to 100 hours. Content often includes developing knowledge of OSHA regulations and standards and other generally applied safety and health principles.

People at this level typically have either considerable safety and health training through a series of courses or have an associate degree or higher. For many, obtaining a degree in safety and health is a key to getting a position at this level. A growing number of colleges and safety organizations offer certificate programs that provide a solid education/training foundation in safety and health.

Most people at this level have bachelor's degrees or higher. The degree may be in a safety or non-safety field. About 30% to 40% of those in the safety profession have degrees in safety and closely related fields. Over 40% have advanced degrees. Fewer than 10% have less than a bachelor's degree. Those with education in non-safety related fields are likely to have acquired considerable safety and health knowledge through continuing education and professional development courses and conferences.

Safety professionals often have training and education in specialized areas. Examples are industrial hygiene, fire protection, environmental, system safety, process safety, construction safety, health physics, ergonomics or other areas. Others specialize in areas within general safety practice, such as safety engineering, safety management, safety training, accident investigations and reconstruction, legal testimony, computer applications, risk management, loss control, etc. Preparing for an area of specialization is likely to involve advanced academic study and degrees, usually in the area of specialized knowledge and skills. Refer to the *Career Guide to the Safety Profession* booklet at [www.bccsp.org](http://www.bccsp.org) for more details on specialized areas of practice.

### EDUCATION

### EXPERIENCE

People at this level frequently get involved in safety and health activities sponsored by employers and unions. A common form of activity is serving on department, plant, or union safety committees. The committees may have general responsibility for assisting employees and management with improving safety performance and compliance with regulations and standards. In some cases, committees may have responsibility for specific safety matters, such as fire protection, employee participation, ergonomics, and similar topics. In other cases, people at this level have responsibility for co-workers under their direct supervision.

Positions at this level may have part-time or full-time safety and health responsibilities. For small companies, safety is often assigned to an employee who also has other job functions for the company or within a work unit. Typically, people in occupational health and safety roles (including loss control specialists) are making worksite assessments to determine risks, identifying potential hazards and recommending controls, evaluating risks and hazard control measures, investigating incidents, maintaining and evaluating incident and loss records, and preparing emergency response plans. Typically, technologists/technicians conduct safety, health, and environmental training for employees (e.g., OSHA 10- and 30-hour classes).

Professional safety experience differs from general safety experience in the degree of responsibility. Professionals typically must defend methods used to identify, control, and manage risk. Typically, company and department leaders rely on their analysis and recommendations relating to safety and health issues. Many in professional positions supervise others involved in safety and health programs. Responsibilities often involve planning, organizing, and budgeting for safety and health programs and overseeing their implementation. Responsibilities extend well beyond compliance with safety and health regulations and standards and often involve incorporating safety into company cultures, work practices, and profits.

Many safety specialists work in particular industries. Those engaged in system safety are likely to work for aerospace companies. Process safety specialists typically work in the petrochemical industry. Health physicists work in settings involving ionizing radiation. Many safety specialists offer their expertise through consulting businesses. Many specialists gained experience through years of employment in a particular type of safety work. They may have gained experience with special kinds of equipment, technology or operations.

### EXPERIENCE



### SPECIALTY CERTIFICATIONS

### CERTIFICATION

The STS certification provides a means for employers to verify safety and health knowledge of first-line supervisors and managers. The program requires applicants to meet minimum education and experience requirements and demonstrate knowledge of basic safety and health standards and practices. The examination contains 100 multiple-choice questions, is two hours long, and covers the breadth of safety and health functions supervisors must know. It is available every business day throughout the U.S. and Canada.

CCHEST has operated the STS program since 1992, beginning with the STS-Construction examination. In May 2002, the Assistant Secretary of Labor for Occupational Safety and Health signed an agreement recognizing the Safety Trained Supervisor in Construction.

CCHEST has expanded the STS certification. The STS-General Industry and STS-Petrochemical examinations are now offered.

The STS is specified in U.S. Department of Energy (DOE), U.S. Army Corps of Engineers, and Naval Facilities Engineering Command (NAVFAC) construction and service contracts.



The OHST certification, established in 1985, covers general health and safety practice. In 2007, the CLCS was added as a choice of examination and title. Both the OHST and CLCS examinations cover the same knowledge. Each is a four-hour, 200-item examination available every business day throughout the U.S. and Canada. Candidates for either must meet the same qualifications—five years of general experience in safety and health at a full-time or part-time (at least 35% of job duties) level. Academic education and approved certificate programs can substitute for part or all of the experience required.



The CHST certification began in 1992. Candidates qualify through a flexible combination of part-time or full-time safety, health, and construction experience in addition to education and training. The four-hour, 200-item examination is available every business day throughout the U.S. and Canada.

The CHST is specified in U.S. Army Corps of Engineers and Naval Facilities Engineering Command (NAVFAC) construction contracts.

The CSP® credential is a highly recognized and respected certification for those who practice in professional positions to protect people, property, and the environment. On average, those holding the CSP are paid about 20% more than those without the credential. Many employers prefer the CSP for those in leadership positions.

To qualify, candidates for the CSP must have either a bachelor's degree in any field or an associate degree in safety and health. The model educational background for a CSP candidate is a bachelor's degree in safety from a program accredited by ABET ([www.abet.org](http://www.abet.org)). All other degrees receive partial credit toward the educational requirement. Candidates must have four or more years of professional safety experience.

There are two examinations. The Safety Fundamentals examination is five hours and the Comprehensive Practice examination is five and one half hours. Each contains 200 items. Examinations are given every business day at locations throughout the U.S. and Canada.

The CSP is specified in U.S. Army Corps of Engineers and Naval Facilities Engineering Command (NAVFAC) construction contracts.

Other certifications and licenses can supplement quality safety certifications (i.e. a professional engineering license complements the CSP credential). With specialized roles in safety and health, safety professionals may choose the Certified Industrial Hygienist (CIH), Certified Occupational Health Nurse (COHN), or Certified Hazardous Materials Manager® (CHMM®) or other designations to complement their CSP.

When choosing a certification, it is important to verify whether it holds accreditation through independent, third-party evaluations. Only a few have met recognized national and international standards to demonstrate quality. The organizations below list the certification bodies holding their accreditation:

- National Commission for Certifying Agencies (NCCA), [www.ncca.org/ncca/ncca.htm](http://www.ncca.org/ncca/ncca.htm)
- American National Standards Institute (ANSI), [www.ansi.org](http://www.ansi.org) [ISO/IEC 17024, *General Requirements for Bodies Operating Certification Systems of Persons*]

### CERTIFICATION

## CAREER PATHS

Some find safety to be challenging and rewarding. There are many ways to enter the safety field and advance along a career path. Here are a few routes of entry.

**Safety and Health Degrees.** A common career path is to obtain a bachelor's or master's degree in safety and enter the field as a professional. Some may begin with an associate degree in safety.

**Safety by Assignment.** Many people get involved in safety at various levels because their employer or union assigned them safety responsibility. The assignment may be on a safety committee, plant safety committee, as a collateral duty or part-time assignment, or as a full-time safety person. These assignments often progress in responsibility. Some may start in other roles, such as human resources, with safety as part of their job. The responsibility grows with the effort to improve safety performance and compliance.

**Craft-to-Professional.** A number of people begin their involvement in safety through a leadership role in their craft or workgroup. As a supervisor or team leader, they may have responsibility for the safety of others. Interest in advancing safety may lead to a greater safety assignment.

**Safety by Experience.** Sometimes people get involved in safety because they were part of a significant incident in which they or others were injured or became ill. The experience moves them to pursue safety as a career field. Roles and responsibilities may increase over time.

## CAREERS

The primary focus of safety practice is to prevent incidents and accidents that may lead to injuries, illnesses, damage to property and equipment, or harm to the environment. Many companies have combined safety, health, and environmental matters into a single department.

While there are many opportunities for people to participate in safety matters on a part-time basis, most career positions are full-time positions.

There are safety positions with different levels of responsibility in a safety career path. Each advancing level typically requires that one have higher levels of experience, education, and knowledge and skills in leadership, business practices, safety and health, and communication and information technology.

A number of surveys report that job satisfaction in the safety field is high. Typically, 90% of respondents say they are "satisfied" or "very satisfied" with their careers in safety. The reasons often include work differing each day and being able to contribute to the welfare of others.

Many looking to advance in a safety career want to know where to get academic training. BCSP maintains a list of nearly 800 academic programs at accredited U.S. colleges and universities at [www.bcsp.org](http://www.bcsp.org). Individuals can search by subject, state, and program level. Many programs offer online courses or full degrees.

*The Career Guide to the Safety Profession* is a free booklet that gives greater details on careers in safety. It is also located at [www.bcsp.org](http://www.bcsp.org).

## ADDITIONAL INFORMATION

### ***Career Guide to the Safety Profession***

This free booklet provides details about careers in safety that lead to the professional level. Contact BCSP for a copy or find it at [www.bcsp.org](http://www.bcsp.org).

### **BOARD OF CERTIFIED SAFETY PROFESSIONALS**

208 Burwash Avenue, Savoy, IL 61874  
Phone: 217-359-9263 • Fax: 217-359-0055  
Web: [www.bcsp.org](http://www.bcsp.org) • Email: [bcsp@bcsp.org](mailto:bcsp@bcsp.org)

Since 1969, BCSP has provided professional safety certifications. The Certified Safety Professional® (CSP®) is nationally accredited by the National Commission for Certifying Agencies. In 2003, the CSP became one of the first five certifications anywhere in any field to achieve accreditation under ANSI/ISO/IEC 17024. This same year, BCSP signed an Alliance agreement with the Occupational Safety and Health Administration (OSHA) to enhance safety professionals' education and professional expertise.

### **COUNCIL ON CERTIFICATION OF HEALTH, ENVIRONMENTAL AND SAFETY TECHNOLOGISTS**

208 Burwash Avenue, Savoy, IL 61874  
Phone: 217-359-2686 • Fax: 217-359-0055  
Web: [www.cchest.org](http://www.cchest.org) • Email: [cchest@cchest.org](mailto:cchest@cchest.org)

Since 1985, CCHEST has provided safety and health certifications for technologists/technicians, supervisors, and workers. CCHEST is a joint venture of BCSP and the American Board of Industrial Hygiene. All CCHEST certifications are accredited by the National Commission for Certifying Agencies. In 2004, CCHEST joined the BCSP Alliance with OSHA.

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# CAREER PATHS IN SAFETY



THROUGH  
Education • Experience • Certification



Involvement at this level of safety typically involves compliance and enforcement of safety rules, regulations, and standards or encouragement of safe practices.

**Safety Committees.** Many people get started in safety by serving on safety committees for their employer, work group, or craft.

**Safety Coordinator.** Some individuals may have a leadership role in safety for a union or work group. The work may involve record-keeping, accident investigations, training, and coordination of safety programs.

**Safety Leader/Supervisor.** For some, safety responsibility occurs in a supervisor, crew chief, foreman, or team leader role. Safety roles at this level involve identifying hazardous job situations and coordinating solutions to protect workers. Roles may involve safety aspects of ongoing training, planning of upcoming work, and assisting workers to perform their work safely.

**Competent Person.** Some OSHA standards require an employer to designate someone with specialized skills to serve as a competent person in specific safety matters on construction projects.

**Safety and Health Assistant/Associate.** Many in these positions assist professionals in collecting safety information and data, maintaining records, conducting training, coordinating safety programs, planning work, and implementing safety measures.

**Safety and Health Technician.** Responsibility varies from narrow to broad at this level.

**Safety Trainer.** Some at this level specialize. A common area of specialized responsibility is conducting new employee safety orientation training or safety procedures for respirator programs, confined space entry, maintenance operations, and a wide variety of other safety topics.

**Safety Administrator.** Sometimes safety technologists or technicians have sufficient experience and education to serve in basic management roles. They may oversee implementation of certain safety and health programs for an entire plant or a construction project.

**Safety Professional.** Most large companies have several safety and health professionals. A number of companies have safety and health professionals who also handle the environmental discipline. Many take care of the day-to-day safety matters, do not supervise others, and work for safety managers or directors.

**Safety Manager.** The titles for individuals who have responsibility for safety of a plant, operation, or company will vary. Typically, a safety professional will fill this responsibility and report to a plant manager or operational unit.

**Safety Director.** In many companies, the safety professional heads up safety and health and reports to upper management.

**Safety Executive.** For most companies that have multiple sites or plants and have several safety and health professionals, there is at least one person involved with upper management to plan and coordinate the safety efforts of the company.

**Safety Consultant.** Some safety professionals provide safety services to companies that out-source some of their safety programs. Safety consultants also provide professional services to medium and small companies that would not be able to justify a full-time safety professional.

Some safety professionals specialize in certain areas of practice. The specialty may be based on particular safety topics or particular industries, including construction, manufacturing, transportation, insurance, healthcare, mining, education, government, and others.

**Safety Engineer.** Safety engineers are typically involved in design issues related to facilities, processes, equipment, and work stations. They may perform analysis to determine the likelihood and severity of hazards and which controls are most effective and/or least expensive.

**Fire Protection Engineer.** Fire protection engineers evaluate the potential for fire, the severity of potential fires based on fuel loads, and combustion. They design systems and methods to limit or extinguish fires and to warn occupants and allow safe egress in case of fire.

**System Safety Specialist.** Many system safety specialists work with designers of process plants, aerospace equipment, weapons, complex medical, and other systems. They perform analysis to ensure that the systems and surrounding operations are safe.

**Other Subject Specialties.** There are a variety of subject-based safety specialties, such as ergonomist, industrial hygienist, health physicist, etc.