



Domain 1

Hazard Identification and Control (includes Health Hazards) • 57.1 %

Knowledge of:

1. Common hazards and controls associated with hot work (e.g., cutting, welding, grinding)
2. Common electrical hazards and controls
3. Common hazards and controls associated with excavations
4. Common hazards and controls associated with working at heights (e.g., ladders, scaffolding, aerial platforms)
5. Common hazards and controls associated with working in confined spaces
6. Common struck by hazards and associated controls
7. Common caught-in or caught-between hazards and associated controls
8. Common hazards and controls associated with hoisting and rigging
9. Common hazards and controls associated with crane operations
10. Common hazards and controls associated with material handling
11. Common hazards and controls associated with material storage
12. Common hazards and controls associated with housekeeping
13. Common hazards and controls associated with powder actuated tools
14. Common hazards and controls associated with hand and power tools
15. Common hazards and controls associated with asbestos exposure
16. Common hazards and controls associated with lead exposure
17. Common hazards and controls associated with noise exposure
18. Common hazards and controls associated with radiation exposure (ionizing and non-ionizing)
19. Common hazards and controls associated with silica exposure
20. Common hazards and controls associated with chemical exposure
21. Common hazards and controls associated with working in extreme temperatures
22. Common hazards and controls associated with vibration and impact exposures
23. The Globally Harmonized System of Classification and Labeling of Chemicals (GHS)
24. Basic safety through design (e.g., incorporating hierarchy of controls into design of building or systems)
25. Risks associated with multiple trades working simultaneously in work area (e.g., congested area, overlapping of workers)
26. Principles of ergonomics as applied to construction practices and material handling
27. Requirements, usage, and limitations of personal protective equipment
28. Basic testing and monitoring equipment (e.g., electrical, industrial hygiene, four gas meter) required for a situation

Skill to:

1. Apply the hierarchy of controls
2. Verify corrective actions were effective in eliminating or mitigating hazards
3. Recognize and address hazards over changing construction site conditions (e.g., excavations after weather events, changing site entrances)
4. Develop job/hazard safety analyses
5. Prioritize identified hazards based on level of risk (e.g., order of severity, probability, frequency)

Domain 2

Emergency Preparedness and Fire Prevention • 10.3%

Knowledge of:

1. Proper fire protection and prevention methods (e.g., appropriate class of fire extinguishers, inspection criteria)
2. Components of emergency action plans
3. Common elements of response plans for environmental hazards (e.g., releases or spills)
4. Emergency response system (e.g., incident command system, crisis management, emergency response equipment, media)
5. Potential first aid or medical needs (e.g., availability of first aid kit, AED, CPR supplies)
6. Universal precautions (e.g., bloodborne/airborne pathogens)

Skill to:

1. Plan for emergencies

Domain 3

Safety Program Development and Implementation • 17.1%

Knowledge of:

1. Applicable health and safety standards and best practices (e.g., health, safety, construction, and environmental)
2. Common components of site-specific safety plans
3. Worksite assessment or audit processes
4. Roles, responsibilities, and lines of authority as they relate to safety management
5. Recommended equipment inspection records or logs
6. Basic risk management concepts (e.g., public safety, builder's risk and liabilities, general liability)
7. General/basic construction site conditions that could potentially impact safety
8. Data gathering techniques and procedures used in incident investigations
9. Techniques for determining the root cause of accidents or incidents
10. Post-incident/accident reporting and follow-up procedures
11. Documentation requirements of occupational injuries and illnesses

Skill to:

1. Identify which health and safety programs (e.g., fall protection, ladders, respiratory) are relevant to site-specific safety plan
2. Apply relevant standards to worksite conditions
3. Identify trends related to incidents and accidents
4. Evaluate construction means and methods and their impact on safety

Domain 4

Leadership, Communication, and Training • 15.5%

Knowledge of:

1. Available training delivery methods and instructional materials (e.g., classroom, on-the-job training, online)
2. Appropriate human behavior motivation methods and techniques (e.g., behavior-based safety)
3. Communication strategies (e.g., methods to disseminate information)
4. When to consult with equipment manufacturers, suppliers, or subject matter experts
5. Information confidentiality requirements (e.g., trade secrets, personal medical, personally identifiable information)
6. BCSP Code of Ethics

Skill to:

1. Develop site-specific safety training requirements based on job tasks and work environment
2. Maintain all applicable documentation (e.g., training documents, injury logs)
3. Determine training requirements and delivery methods based on characteristics and needs of worksite personnel (e.g., skill level, education level, language proficiency)
4. Identify existing and foreseeable at-risk conditions and behaviors
5. Recognize situations or behaviors that present imminent danger
6. Coach personnel to correct unsafe behaviors
7. Access relevant current information (e.g., standards, codes, safety-related information)
8. Apply the BCSP Code of Ethics



BLUEPRINT REFERENCES CHST4

The questions that appear on the CHST examination are written by subject matter experts, and every question is supported by a published reference. The following is a list of references that were frequently used during development of the CHST examination. This is not intended as a comprehensive list of all materials available to CHST candidates and should not be intended as a guaranteed means of passing the exam. Candidates are also strongly advised to become familiar with industry regulations, standards, and practices in preparing for the CHST certification examination.

Title & Auxiliary Information

Accident Investigation Techniques; 2nd Edition

Oakley, J. S. (2012). Des Plaines, IL: American Society of Safety Engineers.

Accident Prevention Manual for Business & Industry: Administration & Programs; 14th Edition

Hagan, P. E., Montgomery, J. F., et al. (2015). Itasca, IL: National Safety Council.

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Hagan, P. E., Montgomery, J. F., et al. (2015). Itasca, IL: National Safety Council.

Accident Prevention Manual for Business & Industry: Environmental Management; 2nd Edition

Krieger, G. R. (2000). Itasca, IL: National Safety Council.

Advanced Safety Management: Focusing on Z10 & Serious Injury Prevention

Manuele, F. A. (2008). Hoboken, NJ: John Wiley & Sons, Inc.

BCSP Code of Ethics

Board of Certified Safety Professionals. (2013). Retrieved from <http://www.bbsp.org/Portals/0/Assets/DocumentLibrary/BCSPcodeofethics.pdf>.

Construction Safety Management and Engineering; 2nd Edition

Hill, D. C. (2014). Des Plaines, IL: American Society of Safety Engineers.

Construction Safety Planning

MacCollum, D. (1995). New York, NY: John Wiley & Sons, Inc.

Emergency Incident Management Systems: Fundamentals and Applications

Molino, L. N. (2006). Hoboken, NJ: John Wiley & Sons, Inc.

Fundamentals of Industrial Hygiene; 6th Edition

Plog, B. A. & Quinlan, P. (2012). Itasca, IL: National Safety Council.

Handbook of Occupational Safety & Health; 2nd Edition

DiBerardinis, L. J. (1999). New York, NY: John Wiley & Sons, Inc.

Handbook of Rigging: Lifting, Hoisting, and Scaffolding for Construction and Industrial Operations; 5th Edition

MacDonald, J. A., Rossnagel, W. E., et al. (2009). New York, NY: The McGraw-Hill Companies, Inc.

Incidental Trainer: A Reference Guide for Training Design, Development and Delivery

Wan, M. (2014). Boca Raton, FL: Taylor & Francis Group, LLC.

Introduction to Fall Protection; 4th Edition

Ellis, J. N. (2011). Des Plaines, IL: American Society of Safety Engineers.

Occupational Health & Safety; 3rd Edition

Balge, M. Z. & Krieger, G. R. (2000). Itasca, IL: National Safety Council.

Occupational Health and Safety Management: A Practical Approach; 3rd Edition

Reese, C. D. (2016). Boca Raton, FL: Taylor & Francis Group, LLC.

Occupational Safety and Health for Technologists, Engineers, & Managers; 7th Edition

Goetsch, D. L. (2011). Upper Saddle River, NJ: Pearson Education, Inc.

Safety Professionals Handbook, The: Technical Applications; 2nd Edition

Haight, J. M. (2012). Des Plaines, IL: American Society of Safety Engineers.

Safety Professionals Handbook, The: Management Applications; 2nd Edition

Haight, J. M. (2012). Des Plaines, IL: American Society of Safety Engineers.

Safety Professional's Reference & Study Guide; 3rd Edition

Yates, W. D. (2020). Boca Raton, FL: Taylor & Francis Group, LLC.

Supervisors' Safety Manual; 11th Edition

National Safety Council. (2018). Itasca, IL: National Safety Council.