



EXAMINATION BLUEPRINT CHANGES IN 2024

Every five years, or more often if necessary, BCSP revalidates all certification examinations. During the revalidation process a new blueprint is created that reflects the consensus of the profession as to the key elements a minimally qualified candidate must possess to be deemed competent.

The Occupational Hygiene and Safety Technician® (OHST®) examination began its revalidation process in 2021 and a new blueprint was generated. The following is a synopsis of the changes:

- Overall, the majority of the concepts identified in the current blueprint carried over to the new blueprint, however some of the domains have increased slightly in length due to an increased focus on the skills associated with application of the topics.
- In Domain 1 skills to apply fundamental math and science concepts in occupational hygiene and safety and interpreting qualitative measures have been added.
- In Domain 2 skill to apply behavior-based safety principles has been added.
- In Domain 5 knowledge of incident management structure has been refocused to skills to function within this structure.
- In Domain 6 knowledge of techniques to evaluate the trainer and skill to resolve conflicts have been added to the respective sections.
- While the Knowledge and Skill statements within each domain did not change greatly the emphasis (percentage weight) of some of the domains did. Domain 3 decreased substantially from 31.4% to 21.1% and Domains 5 and 7 both increased by 3-4%. These changes suggest that while the overall practice hasn't changed greatly, the amount of time spent on specific tasks has shifted.

The new OHST blueprint is tentatively expected to be effective by the first quarter 2024.



Domain 1

Fundamental Math and Science and Business Calculations/Analysis • 11.3%

Knowledge of:

1. Basic business financial concepts and terminology
2. Basic concepts related to economic effects of losses
3. Benchmarking procedures and standards
4. Fundamental biology/anatomy concepts
5. Fundamental chemistry concepts
6. Fundamental mathematics used in the field of occupational hygiene and safety
7. Fundamental physics concepts
8. Fundamental statistics used in the field of occupational hygiene and safety
9. Qualitative data collection and analysis

Skill to:

1. Apply fundamental chemistry concepts used in the field of occupational hygiene and safety
2. Apply fundamental physics concepts used in the field of occupational hygiene and safety
3. Apply fundamental mathematics used in the field of occupational hygiene and safety
4. Calculate performance metrics
5. Interpret quantitative measures to track and report performance

Domain 2

Safety, Health, and Environmental Programs (Includes Risk Management) • 19.5%

Knowledge of:

1. Administrative controls
2. Audit processes and practices
3. Basic concepts of hazardous waste management
4. Basic concepts of process safety management
5. Behavior-based safety principles
6. Conducting investigations
7. Fundamental elements of risk analysis techniques
8. Fundamental risk management concepts
9. The Globally Harmonized System of Classification and Labeling of Chemicals (GHS)
10. Incident investigation practices or processes
11. Interview techniques for investigations
12. Processes for continuous improvement
13. Relevant international safety, health, environmental and security standards, guidelines, and best practices
14. When to consult with equipment manufacturers, suppliers, or subject matter experts

Skill to:

1. Assess external and internal risks to facilities
2. Apply behavior-based safety principles

Domain 3

Hazard Identification and Control • 21.1%

Knowledge of:

1. Basic components of process flow diagrams
2. Basic components of technical drawings
3. Confined space hazards and controls
4. Electrical safe work practices
5. Fundamental building design and construction
6. Hazardous materials management requirements
7. Hazards and controls associated with compressed gas storage and use
8. Hazards and controls associated with excavations
9. Hazards and controls associated with hand and power tools
10. Hazards and controls associated with hazardous energy sources
11. Hazards and controls associated with hot work
12. Hazards and controls associated with housekeeping
13. Hazards and controls associated with radiation
14. Hazards and controls associated with using personal technology while working
15. Hazards and controls associated with walking/working surfaces
16. Hazards and controls associated with working around moving parts and pinch points
17. Hazards and controls associated with working around pressurized systems
18. Hazards and controls associated with working at heights or on elevated work platforms
19. Hazards and controls associated with working in extreme temperature environments
20. Hierarchy of controls
21. Personal protective equipment (PPE), including types, selection, proper use, storage, maintenance, and inspection
22. Safety operations associated with cranes and lifting devices
23. Safety practices associated with heavy equipment operation
24. Safety practices associated with motor vehicle operation
25. Safety procedures associated with hoisting and rigging
26. Safety systems/interlocks
27. The requirements for operating and inspecting material handling equipment/trucks, including forklifts
28. Unique workplace hazards

Domain 4

Health Hazards and Basic Industrial Hygiene • 15.8%

Knowledge of:

1. Acute and chronic occupational exposures and control methods
2. Basic concepts in ergonomics
3. Basic concepts of industrial hygiene sampling and indicator media
4. Hazards and controls associated with biological safety and containment
5. Hazards and controls associated with noise
6. Industrial hygiene terminology
7. Lighting requirements for job tasks
8. Occupational illnesses
9. Occupational injuries
10. Principles of medical surveillance and their relevance to health hazards
11. Respiratory hazards and controls
12. Sampling equipment, applications, and limitations
13. Stress-related conditions and responses

Domain 5

Emergency Preparedness, Fire Prevention, and Security • 11.5%

Knowledge of:

1. Agents that could be used in terrorist events
2. Appropriate selection of available emergency response equipment
3. Disaster and emergency response and crisis planning
4. Emergency equipment use, inspection, and required performance tests
5. Emergency response procedures or action plans
6. Emergency systems operations and limitations
7. Organizational and community preparedness and response plans
8. Techniques for conducting and evaluating the effectiveness of exercises and drills

Skill to:

1. Function in the Incident Management Structure
2. Participate in emergency response drills and exercises

Domain 6

Organizational Communication and Training/Education • 12.6%

Knowledge of:

1. Appropriate training for content and audience
2. Basic concepts of adult learning theory
3. Basic conflict resolution techniques
4. Basic management principles
5. Methods to evaluate student learning
6. Techniques for evaluating the quality of the trainer
7. Techniques for evaluating the quality of the training delivered
8. The most appropriate channels or methods for communicating various types of information
9. Training delivery mediums and technologies
10. Types of records that must be retained

Skill to:

1. Develop and deliver effective presentations or trainings
2. Effectively communicate verbally and in writing with internal and external stakeholders
3. Influence behavior related to safety
4. Participate in organizational teams
5. Resolve conflicts

Domain 7

Ethics and Professional Conduct • 8.2%

Knowledge of:

1. BCSP Code of Ethics
2. Obligation to ensure safety information is delivered without bias
3. Protecting confidential information

Skill to:

1. Apply concepts of BCSP Code of Ethics