Subject Outline of Knowledge for Occupational Health and Safety Technologist and Certified Loss Control Specialist Practice

[xx] is number of times a knowledge statement appears in the examination blueprint.

GENERAL

Laws, Regulations, Standards, Government
Federal, state, and local regulations (e.g., FDA, OSHA, EPA, and DOT) [8]
Standard certifications and approvals (e.g., ANSI, ASTM, NIOSH, NFPA, and API) [3]
Benchmark standards (e.g., TLVs and PELs)
Consensus standards (e.g., NFPA)
Regulatory and consensus standards (e.g., EPA and OSHA)
Industry standards and best practices [3]
Industry standards [2]

Mathematics, Statistics,
Data sampling procedures
Basic mathematics (e.g., algebra and ratios) [4]
Formulas (e.g., mathematical, scientific, and statistical)
Basic statistics

Physical, Life & Chemical Sciences
Basic biological sciences, including toxicology and ergonomics [3]
Basic life and physical sciences [8]
Basic health concepts

Technology

Engineering
Industrial processes
Basic engineering concepts

Facilities
Basic building design and construction (e.g., blueprints and major systems)

Computers
World Wide Web
Internet search techniques
Computer databases
Spreadsheet, word processor, and database software

Behavioral and Organizational Science
Behavioral science, including human factors [5]

Business and Management
Business terminology (e.g., financial terms)
Basic financial terminology
Basic cost-benefit analysis [3]
Organizational types and structures [5]
Problem solving techniques
Necessary financial resources

Training/Education
Effective training solutions
Adult learning principles

Communication
Typical communication channels

Security
Physical and electronic security
Common methods of terrorism

SAFETY, HEALTH, ENVIRONMENT & ERGONOMICS

General
Safety and health regulations and best practices
Industry (e.g., NAISS, BLS) incidence rates
Types of medical surveillance

SHE in Design, Controls, Technology
Basic machine guarding techniques [2]
Engineering controls
Hierarchy of controls

Risk Management & Insurance
Insurance and loss control references
Acceptable ratios (e.g., loss ratios, incidence rates, and accident rates)
Strategies for prioritization of risks, hazard control measures, etc.
Basic risk assessment [2]

Safety Management
Administrative controls
Personal protective equipment
Hazard controls (e.g., engineering controls, administrative controls, and personal protective equipment)
Safety and health programs [2]
OSHA record keeping
Federal OSHA techniques for computing incident rates
Material safety data sheets [2]

Inspections, Investigations, Audits
Survey techniques (e.g., checklist, flow chart, and interviewing techniques)
Types of and methods for conducting audits (e.g., internal and regulatory)
Investigative techniques

Fire Protection
Fire prevention and suppression equipment
Life safety standards
Basic fire science

Industrial Hygiene
Sampling techniques (e.g., air sampling and noise monitoring)
Basic ventilation
Basic ventilation measurement
Protocols for the calibration, maintenance, and use of sampling and monitoring equipment
Industrial hygiene sampling techniques

Ergonomics
See: **Behavioral and Organizational Science**
Physical, Life & Chemical Sciences

Environmental
Properties of hazardous materials (e.g., basic chemistry and material safety data sheets) [3]

Emergencies
Modeling development
Local, regional, and federal resources (e.g., civil defense, FEMA, local fire and police, medical facilities)
Characteristics of emergencies and natural disasters [2]
Prior analyses conducted at the facility
Emergency equipment and supplies
Available emergency equipment
Community response plans [2]
Regulations (e.g., Incident Command System)
Administrative and engineering disaster response strategies
Mutual aid agreements
Procedure, process, and equipment evaluation
Evaluation of training methods (e.g., exercises, drills, and surveys)
Emergency equipment inspection and required performance tests

Professional Development and Ethics
Apply the Health and Safety Technologist/Technician Code of Ethics
Understand OHST disciplinary standards and practices.
Participate in professional development.

Applied SHE - Systems
Basic elements of risk analysis (e.g., failure mode and effects analysis, fault tree analysis, and root cause analysis)
System failures

Subject Outline of Skills for Occupational Health and Safety Technologist and Certified Loss Control Specialist Practice

[xx] is number of times a skill statement appears in the blueprint.

General and Applied Interpreting Skills
Analytical thinking (comparisons)
Reading blueprints
Interpreting regulations
Thinking critically [2]
Interpreting analytical data
Researching and gaining access to documents

Ethics Application Skills
Apply the Health and Safety Technologist/Technician Code of Ethics
Understand OHST disciplinary standards and practices

General and Applied Mathematical, Analytical and Scientific Skills
Computing sample sizes and interpreting data
Computing and interpreting statistical analyses
Computing cost-benefit analysis
Using statistical analytical techniques
Using qualitative analytical techniques [2]

General and Applied Verbal and Written Communication Skills
Communicating through talking and writing [8]

General and Applied Written Communication Skills
Combined with above

General and Applied Training Skills
Presenting
Teaching
Training
Training diverse populations [2]

General and Applied Computer and System Skills
Using computers and software packages [3]
Using Internet search engines
Using basic research techniques

Applied Safety and Health Skills
Calibrating test equipment
Interpreting exposure limits
Reading material safety data sheets
Selecting personal protective equipment
Calibrating, maintaining, and using sampling and monitoring equipment [3]
Computing incident rates using federal OSHA techniques
Using sampling protocols
Basic modeling
Performing basic risk assessments
Identifying risk
Planning and developing disaster plans and emergency response
Conducting and evaluating exercises, drills, and surveys

Inspection and Investigative Skills
Surveying facilities and operations
Measuring building dimensions
Conducting verification audits and site surveys
Inspecting and using emergency equipment

General and Applied Human Behavior Skills
Conducting interviews [3]
Negotiating
Influencing and persuading others
Listening actively [2]
Facilitating team process
Facilitating committees

General and Applied Business, Organization and Leadership Skills
Operating within the corporate environment [2]
Organizing
Managing projects