



## Certified Safety Specialist (CSS) CSS Blueprint

CSS Blueprint provides comprehensive information, understanding policies & procedures established by AOSH Awarding Body United Kingdom.



PASSION  
FOR SAFER WORLD

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## Preface

AOSH Awarding Body United Kingdom (AOSH UK) is pleased to present the candidate handbook for the Certified Safety Specialist (CSS). The candidate handbook was developed to guide those involved in the development of the Certified Safety Specialist Examination and to provide the public (e.g., examinees, educators, administrators) information about the examination.

AOSH UK wishes to thank all the individuals who have contributed to the creation of this candidate handbook, and a comprehensive review will be evaluated annually to reaffirm the competencies and the guidelines for examination.

AOSH UK encourages all users of this document to provide feedback which may be useful in future revisions of the blueprint. Please forward all such comments to [info@aoshuk.com](mailto:info@aoshuk.com).

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## Disclaimer of Liability

AOSH Awarding Body United Kingdom (AOSH UK) certified status is an indicator that an individual has completed a combination of defined education, experience, or examination requirements. However, certification is not a guarantee or assurance of the competence or ability of any particular individual. Further, given the rapid changes in the field, AOSH UK cannot warrant that the examination and other certification materials will at all times reflect the most current state of the art.

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## About AOSH UK

### Who We Are

AOSH Awarding Body UK Ltd. is a progressive and fast-growing autonomous certification body, our purpose is to certify practitioners in the health and safety profession. AOSH Certification Schemes are accredited by International Accredited Service (IAS) as per ISO/IEC/17024:2012 standard. AOSH Certification Schemes Certified Safety Specialist (CSS) is a pioneer in the United Kingdom and European Union. AOSH is using industry experts throughout the development and consultation processes. Our extensive knowledge in developing task analysis, assessments, accrediting and certifying qualifications means that we're the experts.

We are trusted and recognized autonomous certification body by employers, training providers and learners in the UK and across the World. We are dedicated to being the most dynamic and fresh-thinking awarding organization in the market. We believe that the right people with the right competencies deliver the right outcomes.

### Our Objective:

- Meet the individual needs of your organization.
- Support you in delivering externally accredited training programs.
- Provide quality assurance.
- Keep things simple and improve your overall efficiency.
- To uphold the integrity of the assessment and certification
- To promote professionalism.
- Promote ethical practice.
- Promote equality and diversity.

### Our Motto is "Passion for Safer World"



Our **vision** is - creating a safer world through safety, health, environmental certifications through an awarding organization of choice and helping learners to reach their potential.

Our **mission** is to provide flexible qualifications that:

- Help people achieve their goals in life and work
- To provide respected and valued qualifications and assessment to enable quality assured learning in the UK and Internationally

### AOSH UK Code of Ethics

This code of ethics sets professional standards and ethical values, which are set and must be complied by applicants, candidates and credential holders and abide by AOSH UK requirements, standards and its governing policies at all times.

**Integrity:** The certified professionals shall pursue and sustain integrity, honour and prestige of the profession as well as of the AOSH UK Awarding body, by complying with these standards of work ethics.

**Scope:** AOSH UK certified professionals shall hold and be accountable for main principles in during the conduct of their duties and professionally advise employers, clients, employees, the public and appropriate authorities, of any danger and unacceptable risks.

**Competence and Objectivity:** AOSH UK certified professional must be impartial and fair and conduct his professional affairs with responsibility and integrity. Continuously maintain high standards of ethics, balanced care for the interests of the public, employers, clients, employees, colleagues and the profession itself.

AOSH UK certified professional must avoid to conduct or practice, which might likely lead to discrediting the profession, AOSH UK Awarding Body or deceiving the public in any manner.

**Professionalism:** AOSH UK certified professional shall pursue opportunities in services of civic affairs, working for development of the safety, health, security and other well-being of the community, by sharing their obtained knowledge and skills.

AOSH UK certified professional shall only conduct practice in his/her educational field of expertise. As well as following up their professional development by maintaining their competence through further education, work experience, professional training and keeping up to date with current affairs of the profession.

**Fairness:** AOSH UK certified professional shall always act as a non-bias professional of their field and with the manner regardless to individual's religion, ethnicity, gender, age, national origin, sexual orientation, or disability.

**Support:** AOSH UK certified professional will always support fellow professionals and AOSH UK, as the main driving force behind the progress in the professional environment. In addition, certified professional by AOSH UK - will not collude, debase or discredit the AOSH UK or the other fellow professionals.

### CSS Blueprint

Sr. No.	Competency Categories	Questions Percentage
1	Law and ethics	6%
2	Ergonomics and hygiene	9%
3	Safety fundamentals	20%
4	Management systems	20%
5	Fire and emergency management	8.5%
6	Risk management	8.5%
7	Communication & training - 8	8%
8	Audit and inspection	7%
9	Environmental management system	7%
10	Mathematics & advance science	6%

Examination Length and format	200 operational multiple-choice questions. Five (5) hours will be allocated for the completion of the examination
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## Recommended Reference List

Principles of health and safety at work: 8th edition	by Allan St John Holt and edited by Jim Allen
Health and safety: risk management	by Dr Tony Boyle
Fundamentals of Industrial Hygiene	Plog, Barbara A, and Patricia J. Quinlan, National Safety Council, 5th Edition, 2002.
Fundamentals of Management	Griffin, Ricky W., Cengage Learning, 7th Edition, 2013.
Fundamentals of Occupational Safety and Health	Friend, Mark A. and James P. Kohn 4th Edition, 2007.
Fire Protection Handbook	Volume 1 and 2, NFPA, 20th Edition, 2008.
NFPA 20: Standard for the Installation of Stationary Pumps for Fire Protection	National Fire Protection Association, 2010 Edition.
Fundamentals of Industrial Hygiene	6th Edition, National Safety Council
The Safety Professionals Handbook: Management Applications	Haight, Joel M., Editor, ASSE, 2nd Edition, 2012.
Flammable and Combustible Liquids Code Handbook	Benedetti, Robert P. , National Fire Protection Association, 6th Edition, 1997.
Ergonomics in action: a practical guide for the workplace	by Céline McKeown
Be the best: how to become a world class health and safety professional	by Richard Byrne
Supporting health at work: international perspectives on occupational health services	by Peter Westerholm and David Walters
Disasters: learning the lessons for a safer world	by David Eves
AOSH UK code of ethics	By Aosh UK

### Domain 1 Law and Ethics – 6%

#### Knowledge of:

1. Health & Safety legislation (precaution, penalties, international, national, industry & trade)

2. Privacy protection (property liability, product liability, privacy law, trade secrets etc.)
3. Duties at the workplace (managers, supervisors, safety committee etc.)
4. AOSH code of ethics
5. Legal issues (common law, compensation law, due diligence, general duty clause, civil & criminal law etc.)
6. Consequences of professional error and oversights
7. Relationship between labour and management

#### Skill to:

1. Interpret laws, regulations, and consensus codes and standards
2. Apply concepts of AOSH UK Code of Ethics

### Domain 2 Ergonomics and Hygiene – 9%

#### Knowledge of:

1. Role of an occupational hygienist & human factors
2. Occupational illness & disease (cancer, asthma, dermatitis,
3. Route of the entry (inhalation, absorption, ingestion, injection)
4. Hazards & control of associated with gases
5. Physical & biological hazards & control (noise, ionizing & non-ionizing, vibration, stress, mold, influenza, viruses etc.)
6. Ventilation & indoor air quality
7. Symptoms of musculoskeletal injuries and ergonomics (biomedical, physiological, anatomical etc.)
8. Ergonomics assessment tools (surveys, checklists, direct observation, interview etc.)
9. Basics epidemiology and toxicology (mutagens, teratogens etc. LD50)
10. Measurement, monitoring and control
11. The fundamentals of epidemiology

## 12. Occupational exposure limits

**Skill in:**

1. Applying principles and concepts of toxicology (dose-response, acute/chronic, latency, routes of entry)
2. Applying principles and concepts of epidemiology (study design, measures of disease, and statistics)
3. Assessing information source credibility
4. Communicating with affected parties

## Domain 3

## Safety Fundamentals – 20%

**Knowledge of:**

1. Fundamentals of safe use, material handling & storage, disposal, risk associated with chemicals, explosive and radioactive material etc. (WHMIS/GHS)
2. Mobile equipment and vehicles safety (crane, forklifts, truck, vans, fleet safety etc.
3. Hazard & controls with automated systems, equipment and process (robotics, remote starts, computer controlled etc.
4. Common work place hazard (electrical, falls, confined space, lockout/tag out, excavation, hot work, cold & heat stress, caught in & between, struck by,
5. Work tools safety (hand tools, ladders, grinder etc.
6. Physical, chemical & biological hazard & control
7. Process safety management (pressure relief system, management of change etc.
8. Personal protective equipment
9. Human performance
10. Transportation safety principles
11. Hazardous materials management

## 12. Material handling

13. Common worksites issue (contractor, seasonal employee etc.)
14. Safeguarding machinery (point of operation, interlocks etc.)
15. Importance of safety (design, procurement etc.
16. Hierarchy of control & engineering control

**Skill to:**

1. Calibrate, use, and maintain data logging, monitoring, and measurement equipment
2. Identify relevant labels, signs, and warnings
3. Interpret plans, specifications, technical drawings, and process flow diagrams
4. Selection and use of appropriate sampling methods (analysis, strengths limitations)
5. Ventilation measurements
6. Noise and vibration measurements
7. Radiation measurements
8. Thermal stress measurements
9. Comparing air sampling and measurement data to recognized criteria
10. Troubleshooting control technology
11. Reading and interpreting design drawings and specifications

## Domain 4

## Management Systems – 20%

**Knowledge of:**

1. The key element of the management system (plan, do, check, act)
2. How to develop, implement, evaluate etc. OHSAS 18001/ISO 45001, ISO 9001, EMS 14001
3. Health and safety culture & consultation (benefits, barrier, improvement, measured etc.)

4. Integration of health and safety into organizational structure, culture & design etc.
5. System safety analysis techniques (like failure modes and effect analysis, fault tree analysis)
6. Elements of business continuity & contingency plans
7. Management function & understanding of quality management
8. How to measure, analyze, improve organizational culture,
9. What is benchmark & performance and how to measure
10. Problem-solving process and conflict of management
11. Leadership style / leadership technique, change of management & motivation models
12. Adult learning principles and Training need analysis
13. Project management concept and technique
14. Budgeting, finance, and economic analysis techniques and principles
15. Work place violence & harassment management (recognition & prevention)

**Skill to:**

1. Analyze and/or interpret sampling data (e.g., exposure, release concentrations)
2. Apply management principles of authority, responsibility, and accountability
3. Compare management systems with benchmarks
4. Conduct root cause analyses
5. Develop and implement environmental, safety, and health management systems
6. Evaluate and analyze survey data
7. Perform gap analyses
8. Demonstrate business need via financial calculations (e.g., ROI, engineering economy, financial engineering)

**Domain 5****Fire and Emergency Management – 8.5%****Knowledge of:**

1. Roles and functions of standard-setting bodies (local & international)
2. Fire chemistry, fire explosion hazards (electrical, mechanical, structural, hot work etc.)
3. Fire safety programs & prevention system
4. Fire detection system, devices and fire control systems & devices
5. Emergency/disaster/crises response planning (chemical spills, terrorist attacks, natural disaster etc.)
6. Fire suppression system
7. Incident management and behaviour
8. Emergency preparedness & response planning

**Skill to:**

1. Calibrate, use, and maintain data logging, monitoring, and measurement equipment
2. Identify relevant labels, signs, and warnings
3. Interpret plans, specifications, technical drawings, and process flow diagrams
4. Calculate required containment volumes and hazardous materials storage requirements
5. Calculate statistics from data sources
6. Supporting emergency services and systems
7. Supporting jobsite personnel in an emergency
8. Communicating in speech and writing

## Domain 6

## Risk Management – 8.5%

**Knowledge of:**

1. Risk management principles
2. Risk assessment process & prioritization
3. Risk control process or techniques
4. Hierarchy of control
5. Management process & safety system
6. Hazard communication (SDS/GHS)
7. Behaviour modification technique
8. Incident command system
9. Project management
10. Safety programs

**Skill to:**

1. Apply risk-based decision-making tools for prioritizing risk management options
2. Calculate metrics for organizational risk
3. Conduct job safety analyses and task analyses
4. Explain risk management options and concepts to decision makers, stakeholders, and the public
5. Prioritizing program needs
6. Identifying appropriate target audiences
7. Identifying appropriate program performance measurements
8. Communicating risk to affected parties

## Domain 7

## Communication &amp; Training – 8%

**Knowledge of:**

1. Adult learning method & technique and interpersonal communication
2. Training needs analysis, data collection,
3. Assessing training competency
4. Presentation tools & method of facilitating
5. Effecting training program & multidisciplinary teamwork
6. Mentoring, behaviour & performance
7. Negotiation & interpersonal skills
8. Conflict resolution

**Skill to:**

1. Perform training needs assessments
2. Develop training programs (e.g., presentation skills, tools)
3. Conduct training
4. Assess training competency
5. Develop training assessment instruments (e.g., written tests, skill assessments) to assess training competency

## Domain 8

## Audit and Inspection – 7%

**Knowledge of:**

1. Audit principles & techniques
2. Audit evaluation management system
3. Role of auditor
4. Audit requirement for management system
5. Audit types (internal, external & third party)

6. Audit process and data collection techniques
7. How to develop action plan from audit report

**Skill in:**

1. Identifying existing and foreseeable at-risk conditions and behaviors
2. Recognizing imminent danger
3. Using basic testing and monitoring equipment
4. Documenting observations and measurements, (e.g., note taking, photography, taking measurements)
5. Communicating in speech and writing
6. Applying health and safety standards, codes, and best practices
6. Program auditing

## Domain 9

## Environmental Management System – 7%

**Knowledge of:**

1. Environmental hazards
2. Environmental protection & prevention methods
3. Hazardous waste storage & disposal
4. Engineering control (above & underground storage tanks, ventilation, land pollution & water pollution, air pollution, segregation & separation,
5. Administrative control (sustainability, EMS system, housekeeping, warning etc.)

**Skill in:**

1. Extracting critical information from literature, standards, guidelines and other resources
2. Prioritizing hazards for evaluation
3. Anticipating exposure scenarios
4. Recognizing known potential hazards
5. Inventorying hazards

6. Surveying tasks, operations, and sites
7. Communicating with affected parties
8. Exposure reconstruction & forensic investigation

## Domain 10

## Mathematics &amp; Advance Science – 6%

**Knowledge of:**

1. Performance metrics & indicator
2. Structural, physical & mechanical calculation
3. Financial & statistics calculation
4. Engineering & administrative control calculation
5. Core concepts in chemistry (organic, radiation and general chemistry)
6. Microbiology (e.g., nanotechnology, waterborne pathogens, and bloodborne pathogens)

**Skill in:**

1. Calculate statistics from data sources
2. Calculate required containment volumes and hazardous materials storage requirements





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