

ISO 14001 Environmental Management Systems Foundation

Syllabus



November 2012

Version 01.1

www.peoplecert.org

The Experts in certifying Professionals e-mail: info@peoplecert.org, www.peoplecert.org

Copyright © 2012 PEOPLECERT International Ltd.

All rights reserved. No part of this publication may be reproduced or transmitted in any form and by any means (electronic, photocopying, recording or otherwise) except as permitted in writing by PEOPLECERT International Ltd. Enquiries for permission to reproduce, transmit or use for any purpose this material should be directed to the publisher.

DISCLAIMER

This publication is designed to provide helpful information to the reader. Although every care has been taken by PEOPLECERT International Ltd in the preparation of this publication, no representation or warranty (express or implied) is given by PEOPLECERT International Ltd. as publisher with respect as to the completeness, accuracy, reliability, suitability or availability of the information contained within it and neither shall PEOPLECERT International Ltd be responsible or liable for any loss or damage whatsoever (indicatively but not limited to, special, indirect, consequential) arising or resulting of virtue of information, instructions or advice contained within this publication.

1. Introduction

ISO 14001: Environmental Management Systems (EMS) is the recognized International standard, which defines the requirements for an environmental management system to enable an organization to develop and implement a policy, and objectives which take into account legal requirements and other requirements to which the organization subscribes, and information about significant environmental aspects. The intention of ISO 14001 is to provide a framework for a holistic, strategic approach to the organization's environmental policy, plans and actions.

PEOPLECERT's ISO 14001 Foundation level qualification covers the **knowledge** required for a candidate to prove a solid understanding of the content and requirements of the international standard, **ISO 14001: Environmental Management Systems**. In short, the Foundation certification covers the knowledge required to gain an **understanding** of the **content** and **requirements** of the international standard ISO 14001: Environmental Management Systems. Other available levels of certification cover more advanced knowledge and application of the standard.

2. Target Group/Audience

This qualification is the **first level** of the ISO 14001 certification scheme provided by Peoplecert, and is aimed at anyone working within an organization (internally or externally) who may require to have and demonstrate a solid **knowledge** and **understanding** of the **ISO 14001 standard** and its **content**. The certification can also cater for candidates seeking personal certification, also in regards to their knowledge and understanding of the requirements and the content of the standard.

This qualification will provide the **Foundation** level of knowledge to its holders and will certify that they have a solid understanding of the standard and its content.

Note that this qualification **does not** provide the **advanced** level of knowledge for:

- (a) external or internal auditors
- (b) external consultants or managers
- (c) staff responsible for managing implementation of the standard in a service provider organization

This advanced level of knowledge is covered in the next levels of the ISO 14001 certification scheme provided by Peoplecert.

3. Learning Objectives

As this is the **Foundation** level course, candidates will be introduced to the principles and core elements of the ISO 14001 standard for Environmental Management Systems, and more specifically:

- **ISO 14001:2004:** the standard which defines the requirements for an Environmental Management System.
- **ISO 14004:2004:** provides general guidelines on principles, systems and supporting techniques.

Holders of **PEOPLECERT's ISO 14001: Environmental Management Systems Foundation** Certification will be able to demonstrate their knowledge, ability, competence and understanding in:

- Definitions and principles of quality management in accordance with ISO 14001.
- Objectives and requirements in each section of the specification

- Scope, aims and use of the ISO 14001 Specification and Code of Practice.
- Processes and objectives of ISO 14001 and Environmental management (EM).
- Fundamental requirements for an environmental management system (EMS).
- Eligibility and scoping statement requirements.
- Requirements of the quality management system and the Plan, Do, Check, Act cycle.
- How assessments, reviews and internal audits of Environmental Management systems against the requirements of the standard are used.
- Application of the requirements in an organization

4. Examination

The ISO 14001 Foundation Certification Exam is designed to validate a candidate's knowledge of the contents and requirements of the standard and will allow for further development along the ISO 14001 – Environmental Management certification path. The **Foundation** exam focuses on the following **two (2)** categories in the cognitive domain of **Bloom's taxonomy**¹:

- Knowledge
- Comprehension

4.1 Entry Criteria/Training Requirements

No specific entry criteria exist for candidates of the ISO 14001 Foundation level examination. However, it is strongly recommended that candidates have at least a basic knowledge of environmental management concepts and terminology and have undergone some formal training on the subject with a proposed duration of **16 hours**. A detailed breakdown of these training hours, per topic area is provided in the syllabus section.

4.2 Assessment Approach

The assessment approach used for the Foundation certification focuses on the **two basic** categories of Knowledge and Comprehension. **Knowledge** is defined as recalling previously learned material, from facts to theories and represents the lowest level of learning outcomes in the cognitive domain. Such learning outcomes are turned in assessment objectives that include knowing and recalling such as:

- Common and/or basic terms, definitions, concepts and principles
- Specific compliance requirements and facts
- Processes, procedures and assessment methods

Comprehension is the lowest level of understanding and entails the ability to grasp the meaning of the material taught, including some sort of interpretation, translation or estimation during the process. Such learning outcomes and in turn assessment objectives go beyond simply recalling information and may include:

- Understanding facts, concepts and principles
- Interpreting material (i.e. charts, graphs, text)
- Justifying a Process, procedure and assessment method

The assessment incorporates the above learning outcomes as it uses assessment objectives that cater for the above cognitive domain categories.

¹ The Bloom's taxonomy defines **six (6)** levels of learning in the **cognitive** domain (know, comprehend, apply, analyze, evaluate, create), which are both sequential and cumulative and move from the simple to the complex. In order to achieve the 6th level of learning, it must be ensured that the previous five levels have been mastered.

4.3 Examination Format

The following table details the examination format:

Delivery	Computer (web) or Paper based
Type	40 Multiple choice questions <i>Single answer, one of four possible answers</i> <i>Each question is awarded one (1) mark</i>
Duration	1 hour (60 minutes) <i>For non-native speakers or candidates with a disability, an additional 15 minutes of extra time is allowed.</i>
Pass Mark	65% (26/40)
Invigilator / Supervisor / Proctor	Yes <i>Physical or Web proctoring</i>
Open Book	No <i>No materials are allowed in the examination room</i>
Prerequisites	None
Distinction	N/A
Certification validity	N/A

The tests are derived from a regularly updated question test bank (QTB) based on the test specification detailed below. Questions are used interchangeably among test sets. The overall difficulty level of each test is the same with any other test. A candidate is never assigned the same test in the case of multiple examination attempts.

4.4 Detailed Syllabus

The syllabus contains references to the established ISO 14001 standard and is structured into sections relating to **major subject headings** and numbered with a single digit section number. The **recommended training hours, per Syllabus Category** are also provided in this table. Note that for the Foundation level of certification all questions pertaining to the Knowledge set are **knowledge** and **understanding** items (level 1 & 2 only).

At the end of the training session, allow **30 minutes** for the candidates to familiarize themselves with the exam process and the sample questions. An additional hour could be provided for the sample test and/or answering the sample test for better preparation of the exam.

Category	Ref	Knowledge Set
EMS-1.1 Introduction, Terms and Definitions	EMS-1.1.1	Introduction
	EMS-1.1.2	Terms & Definitions
Proposed Training Time: 120 minutes		
EMS-1.2 Environmental Management System	EMS-1.2.1	General Requirements
	EMS-1.2.2	Environmental policy
	EMS-1.2.3	Environmental aspects
	EMS-1.2.4	Legal and other requirements
	EMS-1.2.5	Objectives, targets and program(s)
Proposed Training Time: 180 minutes		

Category	Ref	Knowledge Set
EMS-1.3 Implementation and operation	EMS-1.3.1	Resources, roles, responsibility and authority
	EMS-1.3.2	Competence, training and awareness
	EMS-1.3.3	Communication
	EMS-1.3.4	Documentation
	EMS-1.3.5	Control of Documents
	EMS-1.3.6	Operational control
	EMS-1.3.7	Emergency preparedness and response
Proposed Training Time: 240 minutes		
EMS-1.4 Checking	EMS-1.4.1	Monitoring and measurement
	EMS-1.4.2	Evaluation of compliance
	EMS-1.4.3	Nonconformity, corrective action and preventive action
	EMS-1.4.4	Control of records
	EMS-1.4.5	Internal audit
	EMS-1.4.6	Management Review
Proposed Training Time: 240 minutes		
EMS-1.5 Standard Implementation	EMS-1.5.1	Standard application
Proposed Training Time: 150 minutes		
Exam preparation and sample test/sample questions: 30 minutes		

4.5 Test Specification

The examination will consist of **five (5)** sections with the following structure:

Category	Description	Exam (%)
1	EMS-1.1 Introduction, Terms and Definitions	20.0%
2	EMS-1.2 Environmental Management System	25.0%
3	EMS-1.3 Implementation and operation	22.5%
4	EMS-1.4 Checking	20,0%
5	EMS-1.5 Standard Implementation	12.5%
	Total	100.0%

5. Recommended Reading

- (i) ISO copy of the standard for this certification/examination
ISO 14001:2004 Environmental Management Systems - Requirements. Switzerland, ISO, 2004.
ISO 14004:2004. Environmental Management Systems – General guidelines on principles, systems and supporting techniques. Switzerland, ISO, 2008.
- (ii) ISO 19011, Guidelines for quality and/or environmental management systems auditing. Switzerland, ISO, 2011.
- (iii) Block, Marilyn R. Implementing ISO 14001. USA: ASQ Quality Press, 1997
- (iv) Block, Marilyn R. Effective Implementation of ISO 14001. USA: ASQ Quality Press, 2006.
- (v) Whitelaw, Ken. ISO 14001 Environmental Systems Handbook. New York: Butterworth-Heinemann Publications, 2004.
- (vi) Woodside, Gayle, Jeanne Yturri and Patrich Aurricho. ISO 14001 Implementation Manual. New York: McGraw Hill Professional, 1998.

6. Glossary

Accreditation Body	Assessment organizations that provide certification, testing, and inspection and calibration services. Accreditation by an accreditation body demonstrated competence, impartiality and performance capability of an organization that does audits. Ensures a consistent approach.
Accredited Certification Body	Organization that performs certification audits, commonly referred to as 'professional audit companies' and which has been accredited by an accreditation body.
Availability	Ability of a component or service to perform its required function at a stated instant or over a stated period of time.
Baseline	Snapshot of the state of a service or individual configuration items at a point in time.
Change record	Record containing details of which configuration items are affected and how they are affected by an authorized change.
Code of Practice	A standard that recommends 'good, accepted practice as followed by competent practitioners'.
Compliance	Meeting the requirements in ISO/IEC 9001 (or another national or international standard), as assessed by an internal audit or an organization that is not an accredited certification body or qualified to carry out ISO/IEC 9001 certification audits. Compliance includes 'Self-assessment Audits'.
Document	Information and its supporting medium.
Incident	Any event which is not part of the standard operation of a service and which causes or may cause an interruption to, or a reduction in, the quality of that service.
Problem	Unknown underlying cause of one or more incidents.
Record	Document stating results achieved or providing evidence of activities performed.
Release	Collection of new and/or changed configuration items which are tested and introduced into the live environment together.
Request for change	Form or screen used to record details of a request for a change to any configuration item within a service or infrastructure.
Service/product provider	The organization aiming to achieve certification according to ISO/IEC 9001.
Specification	A standard that sets out 'detailed requirements', using the prescriptive 'shall', to be satisfied by a product, material process or system.