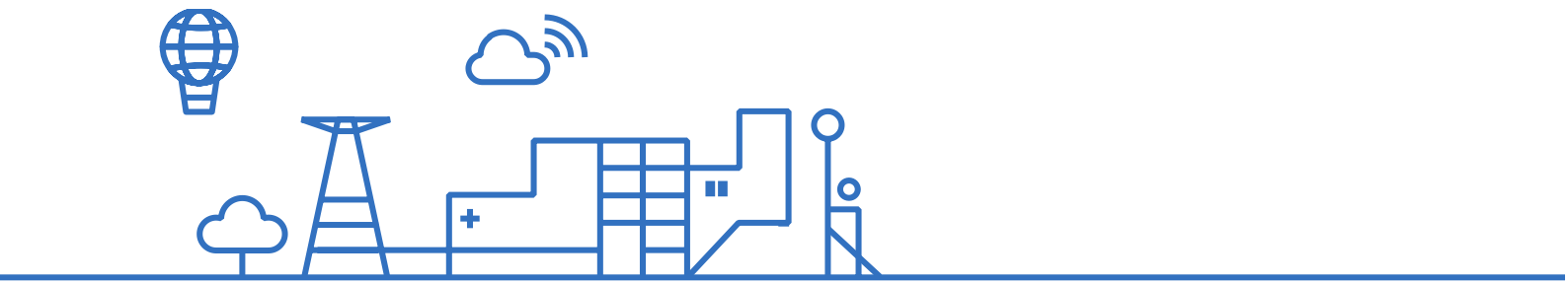
IEMA Transforming the world to sustainability

Course Specification

Lead Environmental Auditor
v3.0



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1. ABOUT US

IEMA is the membership body for more than 21,000 environment and sustainability professionals worldwide. We support individuals and organisations in setting and achieving globally recognised standards for sustainable practice, in turn driving the development and uptake of sustainability skills.

We add value for our members by providing the knowledge, connections and recognition necessary to lead change within organisations at all levels.

We are independent and international. We apply the combined expertise of our members to provide evidence and influence decision-making, working towards our vision of transforming the world to sustainability.

2. BACKGROUND

The Lead Environmental Auditor course has been developed to equip individuals with a general understanding of:

- How to audit or assess the effectiveness of environmental management systems or processes;
- Applicable environmental aspects and impacts, risks and opportunities and compliance obligations;
- The role of Lead Environmental auditors and the auditing standards acceptable for 3rd-party certification and similar levels.

3. COURSE DURATION

The Guided Learning Hours for the Lead Environmental Auditor course is a minimum of 40 hours (excluding breaks and assessment); which can include pre-course reading, guided homework as well as teaching delivery. This will normally be delivered over a period of five consecutive days, but can be split over a reasonable period, with IEMA approval.

When courses are delivered remotely, the daily schedules shall include adequate breaks, to minimise attendee fatigue and encourage effective participation.

4. WHO IS THIS COURSE FOR?

This course is aimed at environmental graduates or professionals with knowledge of organisational environmental performance management including system standards.

All attendees must be familiar with the text of ISO 14001 (or EMAS in the EU), either by attending an IEMA Certified/Approved course or through completion of pre-course work designed to ensure this understanding.

Pre-course reading material should include the latest issue of ISO 19011 and appropriate extracts from the relevant accreditation authority guidelines (e.g. in ISO/IEC 17021 Part 1, IAF MD4: 2023 and IAF MD 5: 2023).

The training course provider should use, for example, multiple-choice tests or questionnaires prior to the commencement of the course to test the competency of attendees and allow them to appropriately tailor the course to attendee needs.

Suggested reading material should include:

- ISO 14004 Environmental Management Systems – General Guidelines on principles, systems and supporting techniques,
- The IAF ISO 14001 and 9001 Auditing Practices Group guidelines

After successful course completion learners will be considered able to undertake environmental audits with supervision. Learners will have developed sufficient knowledge and understanding to be able to lead environmental audits **after gaining sufficient experience.**

5. MATERIALS AND CERTIFICATION

There are no IEMA materials available for this course and course providers must develop materials for approval by IEMA.

Course providers must ensure that their materials are maintained adequately to take account of evolving environmental and sustainability issues, environmental management practices and techniques for auditing.

When developing materials, please note that the key documents for all versions of the course are:

- ISO 19011;
- ISO 14000 series documents;
- ISO/IEC 17021 Parts 1 and 3.

If the course is being delivered internally for an organisation, rather than as a public course, exercises should use systems and background of the host organisation.

This course is IEMA Certified and certificates are provided by IEMA to learners who have successfully completed the course. Dual branding of certificates to include training partner logos is available as an option. Please contact training@iema.net for further details.

6. ASSESSMENT

The course provider should develop a methodology for assessing learners and include this in their submission to IEMA for approval. Learners' knowledge and understanding of the course learning outcomes should be assessed using a combination of practical exercises, case studies, presentations, site visits (where practical) and an end of course examination.

Note: The assessment should be 'balanced'; course providers should avoid assessing learners by either practical work or by examination alone.

Each learning outcome must be separately assessed.

The end-of-course examination should examine the learners' understanding and application of the course topics – it should not be a test of memory of the course discussions or literature. Should the training provider wish to utilise the Lead Environmental Auditor course examination process provided by another professional body, IEMA will, on application, consider accepting this examination assessment mark for its purposes.

The course examination may be either:

- 'open book' under exam conditions (learners may have the supplied course notes, standards and their own course notes); or
- 'closed book' (learners may have only the standards).

7. TRAINER REQUIREMENTS

In addition to the trainer requirements set out in the policy manual, *Guide to becoming an IEMA Training Centre*, trainers are required to be a Full member of IEMA, or as a minimum have equivalent knowledge and experience that has been assessed against the IEMA Sustainability Skills Map at the managerial level.

Trainers must also have proven experience of managing organisational environmental performance, conducting external and internal EMS and single/multi issue audits.

8. LEARNING OUTCOMES

There are nine Learning Outcomes for this course which are as follows:

1. Understand and be able to evaluate current environmental issues, their inter-relationships and how they relate to the auditing process
2. Understand and be able to apply techniques used in the identification of environmental aspects & impacts
3. Understand, be able to evaluate, and explain the significance of environmental impacts
4. Understand and be able to analyse and validate environmental objectives, targets, management, controls and monitoring regimes relating to a range of industry types
5. Identify and be able to evaluate key pieces of environmental legislation and other compliance requirements; and define their relevance in the context of environmental auditing
6. Understand, be able to identify, and describe the relationship and differences between a range of audit types
7. Describe and explain the roles and responsibilities of the auditor, the audit team and other relevant bodies
8. Plan, initiate, implement, manage, monitor and review a broad range of audit programmes
9. Demonstrate the main competences required for leading an environmental audit and the main competencies required in an audit team

Detailed assessment criteria and scope for each learning outcome are provided below.

The course should contain a blend of teaching methods, including taught modules, discussions, exercises and workshops, designed not only to deliver knowledge but also to develop skills in auditing. Practical tasks could include the development of checklists, determining environmental aspects and impacts and conducting interviews, for example.

Note: The course should recognise and address the differences between auditing single/multiple environmental issues and differing management systems (e.g. Environmental Management Systems (EMS), Energy Management Systems (EnMS), Health and Safety Management Systems (H&S MS), Quality Management Systems (QMS) and Integrated Management Systems (IMS)).

LEARNING OUTCOME (THE LEARNER WILL...)	ASSESSMENT CRITERIA (THE LEARNER CAN...)	PRESCRIBED CONTENT (THE LEARNER WILL BE FAMILIAR WITH...)
1. Understand and be able to evaluate current environmental issues, their inter-relationships and how they relate to the auditing process	1.1 Explain the concepts of **sustainable development, corporate sustainability** and associated policies and strategies 1.2 Explain the concepts of **governance and accountability** 1.3 Describe the **impacts of human activities** on the environment, including the key global impacts and identify the local activities and aspects that cause them 1.4 Describe the role of **environmental media** and the interaction of ecosystems and biodiversity 1.5 Explain the relationship between businesses and environmental media, ecosystems and biodiversity; and the implications of them for business 1.6 Explain the key issues for management of renewable and non-renewable **natural resources** 1.7 Describe the **regulatory and other frameworks** for control of environmental impacts 1.8 Describe key **environmental tools/techniques** for environmental management 1.9 Explain how to establish the organisation's **context** and what the key elements are	**Sustainable development, corporate sustainability** – including drawing on relevant publications from IEMA (e.g. The case for applying ISO 14001 in the fastmoving landscape of corporate sustainability, April 2024), UNEP (e.g. the Sustainable Development Goals), the ISSB, etc. **Governance and accountability** – including in relation to public/private/NGO relationships and roles; social and livelihood impacts; community participation and management; common property resources; ESG **Impact of human activities** – current and emerging megatrends (climate change, biodiversity loss, resource depletion, energy and water, single use plastics, persistent organic pollutants, etc.) **Environmental media** – air, water, land, natural processes and their interactions with humans, businesses and society **Natural resources** – minerals, fossil fuels, water, flora and fauna, natural capital and ecosystem services **Regulatory and other frameworks** – environmental permitting; waste management; producer responsibility; habitat and species protection; pollution control; climate change/carbon management including UK ETS, GHG Management and Reporting **Environmental tools/techniques** – environmental assessment and decision-making; information systems; reporting and disclosure principles; the use of GIS; energy management and resource efficiency; environmental communications and reporting; strategic planning and management; financing sustainable development; business strategies and investment policies; managing change; managing conflict; communication skills **Context –** the internal and external issues relevant to the organisation's purpose and that affect its ability to achieve the intended outcomes of its EMS. Such issues include climate change, potential impacts on the organisation of emerging mega-trends in a changing environment and the importance of bio-diversity and resource efficiency to organisations

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2. Understand and be able to apply techniques used in the identification of environmental aspects & impacts	2.1 Explain the processes of determining environmental issues related to context (high level) and undertaking a more detailed operational level review; identify **key parameters** and recording of aspects and impacts 2.2 Explain the concept of a **life cycle perspective** for identification of aspects and impacts 2.3 Explain **different approaches, data sources and tools** for identifying aspects and impacts, and associated risks and opportunities	**Key parameters** – identification of emissions (fugitive and point sources) and wastes; resource intensive activities, sensitive receptors; contamination pathways **Life cycle perspective** – identifying and evaluating value chain (upstream and downstream) aspects/impacts, including supply chain and customer-controlled elements (circular economy principles). The use of LCA and the 14040 series of Standards; and whole life costing **Different approaches, data sources and tools** – HAZID/ENVID/HAZOP techniques (or national equivalents); task analysis; accident/incident reports; previous audits; procurement records; site plans and inventories; checklists
3. Understand, be able to evaluate, and explain the significance of environmental impacts	3.1 Explain why it is important to evaluate **significance** 3.2 Explain **different methods** for assessing risk and significance; and any limits on the auditor's responsibility in assessing methodologies used 3.3 Describe how to evaluate the magnitude of impacts taking account of **key parameters** 3.4 Describe how to take account of the concern of **interested parties**, community relations, reputation 3.5 Describe the relationship between significant aspects/impacts within the broader analysis of organisational **risks and opportunities**	**Meaning of "significance"** – ISO 14001 requires organisations to address aspects determined as being significant **Different methods** – probability and consequence, failure mode and effect analysis, BAT gap analysis **Key parameters** – spatial (local, regional, national) and temporal (past legacies, future liabilities); environmental criteria are mandatory **Interested parties** – organisational criteria, such as compliance and reputational impact can be used to determine significance **Risks and opportunities** – negative consequences of causing pollution, incurring costs for waste management, emissions, control, etc; realisation of opportunities to improve efficiency, innovate, enhance reputation, etc.
4. Understand and be able to analyse and validate environmental objectives, targets, management, controls and monitoring regimes relating to a range of industry types	4.1 Describe the processes and practices **specific to different sectors** 4.2 Describe different approaches to **management control** of operations, facilities, environmental risks and environmental data; and any challenges associated with auditing controls	**Specific to different sectors** – including: • Energy/power generation, extraction, processing, distribution, • Transport • Construction/buildings • Land Management and food • Manufacturing • Services • Retail

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	4.3 Describe the challenges associated with, and the implications for auditing of **integrated systems**; and propose solutions to deliver effective audits 4.4 Describe the approach to evaluating **key elements** of management systems and controls; and state typical problem areas 4.5 Explain how an audit should respond to **change** 4.6 Explain the process of **continual improvement** 4.7 Describe the approach to ensuring **reliable data** is collected 4.8 Describe approaches to management and prevention of **abnormal and emergency situations**	**Management control** – Site/business operating procedures; typical abatement techniques; evaluating environmental performance of suppliers; learning lessons from the past; planning for the future (e.g. scenario planning, eco-design) **Integrated systems** – different types of organisational structures and those organisations where environmental systems are integrated with and embedded in organisational strategy, governance and business processes **Key elements** – Top Management accountability, commitment, and support for other relevant management; operational controls, management programme(s); measuring/evaluating continual improvement; monitoring/analysis/evaluation of performance; internal auditing of processes **Change** – e.g. new production processes, acquisition of new sites, new regulatory or voluntary requirements; strategic change including innovation, new business models **Continual improvement** – links to Environmental policy; methods for selection of objectives; quantification; assessment of validity, achievability and effectiveness of objectives; SMART; measuring progress against objectives, auditing, addressing non-conformity **Reliable data** – good quality data/information; transparency; quality control; quality assurance; historic data; future information collection **Abnormal and emergency situations** – including - preventative and protection measures; preparation for emergencies/ accidents; contingency planning and testing; training; simulation and review of results; crisis management; communication channels; involvement of outside agencies
5. Identify and be able to evaluate key pieces of environmental legislation and other compliance requirements; and define their relevance in the	5.1 Identify and describe key **mandatory compliance obligations** relevant to the audit being conducted; and be able to explain the difference between 'environmental legislation' and 'legislation which may impose environment related obligations' 5.2 Identify '**other compliance obligations**' such as codes, internal policies and external requirements (e.g. contracts)	**Mandatory compliance obligations** – including National and International Legislation which contains environment related obligations (also European Union legislation, an overview, or in more detail for courses delivered in the EU); and including obligations related to: • Air, water, waste, natural resources, habitats and species, climate • Hazardous substances

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context of environmental auditing		• Environmental assessment and planning • Specific national/ regional requirements • Eco-labelling standards, eco-labelling regulations (where appropriate) • Environmental reporting /information regulations (where appropriate) • Site operational permits, planning permits, waste/ resource permitting etc. **Other compliance obligations** • NGO guidelines e.g. World Bank (IFC), WHO • Sector codes of practice • Customer specifications • Examples of (group) policies, specific codes of practice, contract requirements and associated auditing issues
6. Understand, be able to identify, and describe the relationship and differences between a range of audit types	6.1 Explain the **principles of auditing and key auditing definitions** 6.2 Describe the **differences** between ISO 14001 and other management systems standards, and their implications for auditing, EMAS (briefly, unless course is for companies in or operating in the EU courses), ISO 14005 6.3 Explain **recent developments** in guidance, for auditing approaches, practices, etc. 6.4 Describe the purpose and outcomes of environmental audits; and how this might vary for the **different types** of audit 6.5 Explain the differences between **1st, 2nd and 3rd party** auditing	**Principles of auditing and key auditing definitions** – auditing principles from ISO 19011and key definitions from ISO 19011, ISO 17021 Part 1, etc. **Differences** – ISO approach to certification/registration, EMAS verification, phased assessment for ISO 14005 **Recent developments** – including, where relevant, the key changes associated with the revision of ISO14001 in 2015 and the changes to auditing practices introduced in ISO 19011:2018 (risk-based approach, expansion of the guidance on managing an audit programme and on conducting an audit, focus on auditing processes, new topics in the annexes, etc.); new developments in the use of remote auditing methods (ISO 17012), etc; EA EA-7/04 M Legal Compliance as a Part of Accredited ISO 14001:2015 Certification **Different types** – including EMS, IMS, Single/multiple issue, carbon, producer responsibility, energy, communication/reports, legal compliance, due diligence, etc. **1st, 2nd and 3rd party** – ISO 19011's explanation of the differences, and how they can be used to determine conformity
7. Describe and explain the roles and responsibilities of	7.1 Describe the roles and responsibilities of **key organisations** in establishing audit and accreditation processes	**Key organisations** – and their interactions, including the auditor; (EU courses only: the verifier, the Competent Body, the European Commission); the International Organisation for Standardization (ISO) in establishing audit and

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the auditor, the audit team and other relevant bodies	7.2 Explain the roles of **participants in an audit**, including auditors and others 7.3 Describe the **key professional characteristics** of an auditor 7.4 Explain the purpose of a **code of practice for auditors**/verifiers; and describe some of the key elements of a code 7.5 Explain the **responsibilities of an organisation's management** in the audit process 7.6 Explain how and why it is important to engage with **top management** of organisations to evaluate the extent of their commitment to and leadership on environmental performance management and compliance	other standards; Certification Bodies/Registrars; National Accreditation Body; relevant regulatory agencies (e.g. Environment Agency, Natural England, local authorities and similar bodies in devolved UK regions); Auditor registration bodies (e.g. IEMA); other relevant bodies (e.g. IAF, European Co-operation for Accreditation) **Participants in an audit** – auditors (including lead), programme managers, clients, auditees, observers, technical experts, etc. **Key professional characteristics** – including ethical conduct; due professional care; professional scepticism; impartiality and independence; fair presentation; objective audit evidence **Code of practice for auditors** – including the IEMA Code of Professional conduct, and those from other relevant organisations, e.g. CQI **Responsibilities of an organisation's management** in the delivery of successful audits, ensuring co-operation and access to key individuals, etc. and the benefits of bringing client representatives into an audit team **Top management** – senior accountable persons who direct and control the organisation and with responsibilities for leading, enabling and providing resources for performance management and compliance with obligations
8. Plan, initiate, implement, manage, monitor and review a broad range of audit programmes	8.1 Explain the process of **planning for, conducting** and **reporting** an audit, including responsibilities; resources and procedures; record keeping; and monitoring/review of the audit process 8.2 Describe **typical contents and methodologies** of various audit types; and typical audit technical problems 8.3 Explain different **approaches to gathering audit evidence**, including using remote auditing methods 8.4 Explain the approach to **evaluating non-conformities** against standards, system elements and regulations etc; and how to write clear non-	**Planning for** – including determining the feasibility of the audit; establishing audit objectives, scope and criteria; appointing the Lead Auditor; selecting the audit team (avoiding duplication of functions); initial communication with auditee; conducting a document review; and preparing for onsite activities (assessing level of audit risk, planning, team assignments, H&S, work documents, sampling approach, assurance/confidence level requirements of various legal and other requirements) **Conducting** – including onsite or remote audit activities (opening meeting, communications during the audit, roles and responsibilities of guides, collecting evidence and verifying information, audit findings and conclusions, communications after the audit, closing meeting)

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	conformance statements 8.5 The function of **the audit programme** in ensuring the delivery of effective audits	**Reporting** – including evaluating the findings; writing non-conformances; preparing the audit report (preparation, content, report approval and dissemination, retention of documents and evidence etc); audit completion and follow up of non-conformities and non-compliances **Typical contents and methodologies** – including certification/registration audit stages 1 and 2; single/multiple issue audits; auditing for compliance with regulatory control; audits (verification) of data and data assurance **Approaches to gathering audit evidence** – including use of observational, verbal, document review; analytical procedures and other techniques; interpreting process flow diagrams; data collection from a broad range of sources; appropriate audit sampling techniques; using different evidence elements for verification; the risks and opportunities from using remote auditing methods (risks to achieving audit objectives: e.g. inability to use all senses, potential for being misdirected by auditees; opportunities: e.g. to reduce travel time, cost and carbon emissions, greater flexibility, ability to bring in specialists for short periods, etc.) – see ISO 17012 **Evaluating non-conformities** – including root cause analysis; grading (major/minor); materiality of non-conformity against outcomes; implications for certification and cultural differences in non-conformance assessment **The audit programme** – the purpose and elements of the audit programme (with refence t ISO 19011 and ISO 14001), the role of the person responsible for the audit programme, the relationship between the programme and individual audits; the role of remote or hybrid audits in an auditing programme
9. Demonstrate the main competences required for leading an environmental audit and the main competencies required in an audit team	9.1 Describe the roles and responsibilities of members of the **audit team** and the required generic auditor competencies (knowledge and skills) 9.2 Explain the **requirements for leadership** for achieving audit objectives 9.3 Explain the importance of obtaining and maintaining **specific competencies and experience**	**Audit team** – including Lead Auditor; Audit Team Member; Independent Technical Reviewer **Requirements for leadership** – planning and organisation; effective time management; maintenance of confidentiality and data security; ability to communicate effectively with a broad range of stakeholders, sometimes translating complex information into a digestible format

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	9.4 Explain the general approach to **auditor evaluation** processes and evaluation methods	**Specific competencies and experience** – including robust environmental knowledge and skills; relevant education, work experience, audit training and audit experience; maintenance and improvement of knowledge and skills through planned continuing professional development; and maintenance of auditing capability **Auditor evaluation** – distinctions between knowledge-based and skills-based assessment, specific requirements of IEMA and other auditor bodies

9. PROGRESSION AFTER THIS COURSE

All learners who have successfully completed this IEMA Certified course will gain credit towards an Environmental Auditor application on IEMA's Environmental Auditors register. Those gaining more than 70% have sufficient credit to apply for IEMA Associate Environmental Auditor registration. All learners are encouraged to continue their development so that they can apply for registration to the higher levels of the IEMA auditor registration scheme.

- Those specialising in environmental auditing may wish to apply for 'Environmental Auditor' and 'Principal Environmental Auditor'
- Those responsible for carrying out internal audits of their company EMS may wish to apply for 'EMS Auditor' or 'Lead EMS Auditor' levels

All of these levels require a candidate to demonstrate appropriate auditing experience and further specialist training/education.

Course providers should provide information to learners on the IEMA auditor register, and should be aware that the auditor levels and qualification criteria may be subject to review.

10. CONTACT US

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