



Institute of Environmental  
Management & Assessment

**Dedicated to creating a sustainable future through  
environmental skills, knowledge and thought leadership**

## **LEARNING OUTCOMES FOR THE IEMA ASSOCIATE CERTIFICATE COURSE**

### **Skills Level**

No previous in-depth environmental knowledge required. However, a basic awareness is desirable

### **ASSOCIATE CERTIFICATE COURSE**

#### **Outcome**

Candidates will have knowledge & understanding of a wide range of environmental management & assessment issues

### **MODULE I ENVIRONMENTAL SUSTAINABILITY**

A candidate will be able to understand the issues, science and philosophy that underpin environmental sustainability to a level that enables a general presentation to be made.

#### **KEY LEARNING OBJECTIVES**

After completion of this section a candidate should be able to:

- Appreciate how global and local environmental issues evolve, and identify why and how they can be incorporated into the management of an organisation
- Understand in general terms the impacts of societal activities on the earth's natural systems
- Outline practical ways in which an organisation can reduce its impacts, both strategically and operationally
- Inter-relationships of the environmental, economic, social and ethical aspects of sustainability

#### **1.1 Earths Natural Systems**

A candidate will have the skills and abilities to:

- understand ecological processes and systems
- understand the importance of biodiversity
- describe the main principles which underpin the earth's natural cycles.

#### **1.2 Business and environment**

A candidate will have the skills and abilities to:

- state ways in which organisations have positive and negative impacts on environmental systems e.g. resource depletion.
- argue cogently for the incorporation of environmental considerations into an organisation's operations, e.g. effective use of resources leading to environmental and financial benefits,

improved environmental credibility, compliance and the risk of failing to do so, improved efficiency of processes.

### **1.3 Effects of releases**

A candidate will have the skills and abilities to:

- state the principal sources of pollutants; their characteristics and effects on various media and key issues.
- explain the way in which pollutants adversely affect air, land and water and consequently people.
- outline the origin of key issues (e.g. climate change, biodiversity, ozone depletion, bio-accumulation, resource depletion and their implication in both environmental and business terms.
- explain in general terms key biological, physical and chemical technologies used to control releases.
- identify ways in which pollutants impact on habitat/species.

### **1.4 Towards sustainability**

A candidate will have the skills and abilities to:

- be aware of the implications of environmental, fiscal, societal and ethical values and social constraints on an organisation.
- understand the concepts behind sustainability eg Agenda 21.
- explain the basic parameters of eco-efficiency and design for the environment.
- demonstrate an understanding of underpinning concepts e.g. precautionary principle, product stewardship, polluter pays principle, best available techniques.
- appreciate the position of environmental management as a promoter of change and the role of environmental management systems in the process of continual improvement.
- understand the business benefits of environmental management.
- appreciate the importance of effective resource management including materials elimination or substitution, recycling, carbon management, waste reduction, the efficient use of energy and the role of renewable energy.
- appreciate the importance of reducing waste as goals of the EMS process.

## **MODULE 2 ENVIRONMENTAL LEGISLATION**

A candidate will be able to identify relevant legislation for an organisation and take initial steps towards ensuring compliance.

### **KEY LEARNING OBJECTIVES**

After completion of this section a candidate should be able to:

- Understand in general terms the structure of the regulatory process
- Determine the key environmental legislation, agreements and initiatives relating to an organisation and their relevance to operations
- Instigate management controls to ensure that operations do not pollute and compliance is maintained

### **2.1 Instruments for change**

A candidate will have the skills and abilities to

- identify types of instruments available to achieve change and the role they play (e.g. information, financial and legislative instruments and voluntary measures).
- understand in general terms the UK regulatory framework: relationships between UK, EC and international law, civil and criminal law and the regulators.

## **2.2 Controls on emissions to the atmosphere**

A candidate will have the skills and abilities to:

- explain the key agreements, protocols, EC directives /regulations and UK controls/policies, and understand the role of the regulators with respect to these.
- explain the operational implications of key controls (e.g. prescribed processes, authorisations to release prescribed substances to the atmosphere, key terms such as BATNEEC etc.)
- demonstrate an awareness of likely future developments e.g. IPPC, carbon tax, emissions trading.

## **2.3 Controls on the management of contained waste**

A candidate will have the skills and abilities to:

- explain in general terms the key instruments, agreements, protocols, EC directives/ regulations/UK controls/policies, and understand the role of the regulators.
- explain the operational implications of key controls e.g. duty of care, special wastes, licensing of carriers, waste management licensing.
- explain the role of waste minimisation techniques.
- demonstrate an awareness of likely future developments (pending and under consideration).

## **2.4 Controls on discharges to the water environment**

A candidate will have the skills and abilities to:

- explain in general terms the key agreements, protocols, EC directives/ regulation, UK controls/policies, and understand the role of the regulators.
- explain the operational implications of key controls e.g. water quality standards, cost implications of discharges to sewers, issues relating to site drainage.
- demonstrate an awareness of likely future developments.

## **2.5 Issues relating to contaminated land**

A candidate will have the skills and abilities to:

- explain in general terms the key instruments and the role of the regulators.
- explain the operational controls of the mechanisms.

## **2.6 Nuisance**

A candidate will have the skills and abilities to:

- explain in general terms the key instruments and the role of the regulators.
- appreciate the nature of civil law with respect to nuisance and know the prime regulatory mechanisms.

## **2.7 Producer responsibility**

A candidate will have the skills and abilities to:

- explain in general terms the key instruments: EC directives/regulations, UK controls/policies, and explain the role of the regulators.
- understand in general terms the operational implications of the UK packaging regulations.
- demonstrate an awareness of likely future developments, e.g. application of producer responsibility to other priority areas.

## **2.8 Other relevant legislation**

A candidate will have the skills and abilities to:

- appreciate how planning law relates to environmental considerations.
- understand the manner in which radioactive materials are covered by legislation.
- explain the main legislation covering storage of hazardous materials.

## **MODULE 3 ASSESSMENT, INTERPRETATION AND MANAGEMENT OF ENVIRONMENTAL PERFORMANCE**

A candidate will be able to understand the role of various analytical and managerial tools and the assessment, interpretation and management of environmental performance.

### **KEY LEARNING OBJECTIVES**

After completion of this section a candidate should be able to:

- Design and implement processes for the assessment, interpretation and management of environmental performance

### **3.1 Identification and assessment of environmental impacts**

A candidate will have the skills and abilities to:

- understand the role of the review as a means of systematically identifying significant issues, significant relevant legislation and evaluating current environmental management.
- demonstrate an understanding of various approaches to the environmental review, environmental risk assessment and the identification of significant impacts.
- actively participate in the design and implementation of a preparatory review and environmental risk assessment.

### **3.2 Environmental Management Systems (EMS)**

A candidate will have the skills and abilities to:

- understand the standards for certificated EMS e.g. ISO 14001, EMAS
- understand the purpose of an EMS in terms of controlling and improving environmental performance
- appreciate the principles, objectives and practice of an EMS
- appreciate the elements of an EMS and how they relate
- appreciate the role of suppliers/contractors
- appreciate the relationship between environmental, health, safety and quality management systems
- understand the business benefits of an EMS
- understand the role of internal communication.

### **3.3 Monitoring**

A candidate will have the skills and abilities to

- understand the role and importance of monitoring.

### **3.4 Environmental audit**

A candidate will have the skills and abilities to:

- understand the role of the environmental audit and situations in which it is applicable.
- actively participate in the design and implementation of an audit process within an EMS.

### **3.5 Life Cycle Analysis**

A candidate will have the skills and abilities to:

- explain the role of LCA in evaluating the environmental burden associated with available options.
- outline the principles and practices of LCA: defining goals and scope; undertaking inventory analyses, impact assessment, and interpreting the findings.

### **3.6 Environmental Impact Assessment**

A candidate will have the skills and abilities to:

- appreciate the role of, and describe approaches to Environmental Impact Assessment and situations in which it is applicable.
- know the stages of the EIA process and their iterative nature
- appreciation of the impacts associated with the concept, design, construction, operation and decommissioning stages of a project
- understand the links with EMS and SEA

### **3.7 Strategic Environmental Assessment (SEA)**

A candidate will have the skills and abilities to:

- appreciate the role of SEA and situations in which it is applicable.
- understand the SEA process
- appreciate the role of SEA in working towards sustainability
- understand the links with EIA

### **3.8 Environmental Risk Assessment**

A candidate will have the skills and abilities to:

- understand the techniques of environmental risk assessment.
- understand the approaches to risk management
- communicate and interpret environmental risk.

### **3.9 Pollution Prevention and Control**

A candidate will have the skills and abilities to:

- understand integrated approaches to pollution prevention and control.
- understand treatment technologies and techniques

### **3.10 Environmental Communication**

A candidate will have the skills and abilities to:

- appreciate the role of environmental reporting, the types of report and how to compile a clear and concise report in line with stakeholder requirements.
- have knowledge of methods of environmental communication with stakeholders, including consensus building.
- understand the importance of two-way dialogue with stakeholders
- have knowledge of the role of environmental labelling and green claims in communicating environmental information

- have knowledge of published standards/protocols associated with preparation of Environmental Reports and Green Claims.
- understand benchmarking and key environmental performance indicators.