

Higher National Unit Specification

General information for centres

Unit title: Sustainable Development

Unit code: DN38 34

Unit purpose: The purpose of this unit is to enable candidates to develop an understanding of sustainability and sustainable development. In addition the candidate will be introduced to organisations and procedures active in promoting sustainability.

On completion of the unit the student should be able to:

1. Analyse environmental interaction arising from specific activities within a given area.
2. Evaluate the effectiveness of current best practice in contributing to sustainable development.

Credit points and level: 1 HN Credit at SCQF level 7: (8 SCQF credit points at SCQF level 7*)

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

Recommended prior knowledge and skills: Entry is at the discretion of the centre however, it would be beneficial for candidates to have studied Sustainable Development at Intermediate 2 or Higher level (SCQF levels 5 and 6). National units relevant to this unit include those units comprising Managing Environmental Resources.

Core Skills: There may be opportunities to gather evidence towards Core Skills in this Unit although there is not automatic certification of core skills or core skills components. The gathering together of data and the production of the assessment documents will involve Communication skills (developed), IT (developed) and Working With Others (developed)

Context for delivery: This Unit forms part of the HNC Applied Sciences and HND Environmental Sciences framework. It is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes. It should be noted that this unit could provide additional material that could be used in support of other units.

Assessment: This unit is assessed by two assessments. Assessment can reflect the teaching approach taken by an individual centre. Outcome 1 should be assessed by the production of a report. Outcome 2 should be assessed by production of a portfolio of evidence generated from a number of sources accompanied by a commentary that evaluates the effectiveness of current best practice in contributing to sustainable development.

Higher National Unit specification: statement of standards

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The sections of the Unit stating the Outcomes, knowledge and/or skills, and evidence requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Analyse environmental interaction arising from specific activities within a given area.

Knowledge and/or skills

- ◆ Environmental awareness
- ◆ Sustainability and sustainable development
- ◆ Human impacts on the environment and their environmental consequences

Evidence Requirements

Candidates will need evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ identify significant human impacts on the environment from several perspectives (socio-cultural, economic and bio-physical)
- ◆ identify changes taking place within the environment arising from specific human activities
- ◆ define Sustainable development
- ◆ analyse significant human interactions with the environment using appropriate data and recognized techniques
- ◆ draw logical conclusions as to the nature and significance of human interactions with the environment
- ◆ present conclusions clearly supported with evidence

Evidence for this outcome should be presented as a report with evidence gathered in an open book exercise. This outcome should be assessed by an assignment of approximately 3000 words, illustrated throughout by referenced material. The 3 bullet points outlined in the knowledge and skills should form the structure of the answer. This is an open book assessment.

Higher National Unit specification: statement of standards (cont)

Unit title: Sustainable Development

Assessment guidelines

The assessment for this outcome is an open book report. This can either be done in the candidates own time or can be undertaken in controlled conditions where candidates can bring notes and complete a report based on the knowledge and skills. Books, magazines, periodicals, journals, reports, the internet and newspapers would all be suitable sources of material which could be used to illustrate the points made. Further advice is offered within the guidance section at the end of this descriptor.

Outcome 2

Evaluate the effectiveness of current best practice in contributing to sustainable development

Knowledge and/or skills

- ◆ Measures used to mitigate human impacts on the environment
- ◆ Probable consequences of continuing with an established pattern of human behaviour
- ◆ UK and European governments and regulatory authorities

Evidence Requirements

All the knowledge and/or skills must be covered. Candidates will need evidence to demonstrate their skills and/or knowledge by showing that they can for a selected example:

- ◆ identify the nature and significance of human impacts on the environment and measures used to mitigate these impacts;
- ◆ explain the probable consequences of continuing with an established pattern of human behaviour;
- ◆ explain the need for urgent action to mitigate adverse human impacts on the environment;
- ◆ explain the UK and European governments and regulatory authorities roles in drawing up measures to mitigate adverse human impacts on the environment;
- ◆ Describe best practice in sustainable development;
- ◆ Evaluate the effectiveness of measures employed to mitigate human environmental impact;

The student should prepare a portfolio of evidence detailing an example of best practice in sustainable development. This should trace the development of a particular environmental initiative from the policy stage i.e. international convention or treaty, through the various legislative phases, to implementation at national or local level. The role of statutory and non statutory bodies should be highlighted at each stage of this process.

In addition to the portfolio a report of approximately 1000 words should be presented to evaluate the effectiveness of this selected environmental initiative (best practice) in promoting sustainable development, globally, nationally and locally. This is an open book assessment.

Higher National Unit specification: statement of standards (cont)

Unit title: Sustainable Development

Assessment guidelines

Reference should be made during delivery to major global initiatives towards sustainability. Examples of these might include: the Rio Earth Summit; the Kyoto Protocol; the Biodiversity Convention; Global agreements limiting the use of CFC's, etc. The main broad policy and legislative implications they contain should be covered. The role of statutory and non statutory bodies should make reference to their aims and objectives, and how they go about achieving them. These might include: the United Nations Environment Programme; the European Government; the UK Government; the Environment Agency; Scottish Environmental Protection Agency; DEFRA; SNH; JNCC; NGO's.

Examples illustrating how liaison, partnership and voluntary action, without recourse to legislation, have achieved environmental enhancement should also be examined. This outcome should be open book, and a wide variety of material can be utilised - books, magazines, periodicals, journals, reports, site visits, the internet and newspapers for example.

Administrative Information

Unit code:	DN38 34
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Superclass category:	QA
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Higher National Unit specification: support notes

Unit title: Sustainable Development

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

This unit can be delivered as a stand alone unit or as part of the HNC Applied Sciences and HND Environmental Sciences Group Award. When delivered as part of a Group Award it would be good, during delivery of the other units, to highlight positive aspects of sustainable development as they arise. The unit should be contextualised to the needs of the particular student group. Throughout delivery full use should be made of field trips, external speakers, websites, and press articles.

Outcome 1

Identify significant human impacts on the environment, these might include: global population growth; use of non-renewable resources; burning fossil fuels; pollution of earth, water and atmosphere; creation of waste: industrial aspects; agricultural aspects.

Identify changes taking place within the environment arising from specific human activities, these might include: global warming and climate change; loss of habitats and biodiversity; damage to the ozone layer; acid rain; eutrophication of rivers, lakes and seas.

The student should link these cause and effect relationships in an holistic way taking account of the ecological (interconnected nature) of global environmental problems.

It is not anticipated that the student will cover all of these aspects in-depth but rather that each topic will be covered in class and that a particular cause and effect relationship will be studied in more detail for assessment purposes.

Outcome 2

This follows directly from Outcome 1 and should be fully integrated with it, particularly the assessment. Again a holistic approach to delivery should be adopted as befits the holistic nature of the topic.

Explain the need for urgent action in cases of significant human impact on the environment. Consequences of business as usual might include: sea level rise; catastrophic weather patterns; mass extinctions; desertification; deforestation; loss of the earth's carrying capacity; destruction of the earth's life support systems.

Examples of best practice: Environmental legislation – this could be tracked from a particular international agreement or treaty, through the EC Legislative process to the production of a Directive, thence through the UK Legislative process - Enabling Act and Regulations to a particular Code of Practice. The learner then should evaluate the effectiveness of this in achieving its original objective.

Higher National Unit specification: support notes (cont)

Unit title: Sustainable Development

Guidance on the Delivery and Assessment of this unit

Opportunities for developing Core Skills

Sustainable development forms the cornerstone of UK and EC economic policy and legislation. This unit aims to improve the candidates understanding of what sustainability and sustainable development is. In addition the candidate will be introduced to organisations and procedures active in promoting sustainability. A holistic approach to delivery and assessment is recommended throughout.

Open learning

For information on normal open learning arrangements, please refer to SQA guide *Assessment and Quality Assurance of Open and Distance Learning* (SQA 2000).

Candidates with additional support needs

This Unit specification is intended to ensure that there are no artificial barriers to learning or assessment. The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative Outcomes for Units. For information on these, please refer to the SQA document *Guidance Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs*, which is available on the SQA website www.sqa.org.uk.

General information for candidates

Unit title: Sustainable Development

The unit aims to provide you with a clear understanding of the meaning of sustainability and sustainable development. It is hoped that on completion of the unit that you will have become more environmentally aware and better able to form your own opinions on current issues of global environmental significance. The unit will show you the interconnected nature of our environmental problems and their complexity.

On completion of this unit the student should be able to:

1. Analyse environmental interaction arising from specific activities within a given area;
2. Evaluate the effectiveness of current best practice in contributing to sustainable development

Outcome 1 will make you clear about exactly what is meant by the terms sustainability and sustainable development. You will examine significant human impacts on the environment and the changes arising from these impacts. You will be expected to study a range of impacts and a range of consequences but your assessment should allow you to study one particular impact / consequence in more detail. Assessed by the production of a report with approximately 3000 words.

Outcome 2 follows directly from the first Outcome. In it you will need to explain the need for urgent action in cases of significant human impact on the environment. Having explained why action is necessary you should explore best practice in bringing about action to improve the environment. Again you will be expected to study a range of actions and best practice but your assessment should allow you to study one particular action/best practice combination – perhaps continuing directly from the impacts you identified in Outcome 1. Assessed by the production of a portfolio of evidence and an evaluation of best practice in a selected example in bringing about environmental action (approximately 1000 words).