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Regulation

GCE subject-level conditions and requirements for environmental science (2022)

Published 11 November 2021

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Introduction

About this document

This document is part of a suite of documents which sets out the regulatory requirements for awarding organisations offering reformed A levels and AS qualifications in 2022.

We have developed all our requirements for GCE qualifications with the intention that AS and A level qualifications should fulfil the purposes set out below.

For A levels:

- define and assess achievement of the knowledge, skills and understanding which will be needed by students planning to progress to undergraduate study at a UK higher education establishment, particularly (although not only) in the same subject area
- set out a robust and internationally comparable post-16 academic course of study to develop that knowledge, skills and understanding
- permit UK universities to accurately identify the level of attainment of students
- provide a basis for school and college accountability measures at age 18
- provide a benchmark of academic ability for employers

For AS qualifications:

- provide evidence of students' achievements in a robust and internationally comparable post-16 course of study that is a sub-set of A level content
- enable students to broaden the range of subjects they study

Requirements set out in this document

This document sets out the GCE Subject Level Conditions for Environmental Science (2022). These conditions will come into effect at 09:30 on 12 November 2021 for the following qualifications:

- all GCE A levels in Environmental Science
- all standalone GCE AS qualifications in Environmental Science

for Learners completing the qualification in 2022, except where the General Qualifications Alternative Awarding Framework applies.

It also sets out our requirements in relation to:

- interpretation of the content document – an awarding organisation must comply with these requirements under Condition GCE(Environmental Science)1.1(c)
- assessment objectives – awarding organisations must comply with these requirements under Condition GCE(Environmental Science)1.2
- assessment – awarding organisations must comply with these requirements

under Condition GCE(Environmental Science)2.1

With respect to the qualifications listed above, awarding organisations must also comply with:

- our [General Conditions of Recognition](#), which apply to all awarding organisations and qualifications
- our [GCE Qualification Level Conditions and Requirements](#)
- all [relevant Regulatory Documents](#)

With respect to all other GCE qualifications in Environmental Science, taken by Learners completing the qualification in 2022 and after, an awarding organisation must continue to comply with the [GCE Subject Level Conditions and Requirements for Environmental Science](#).

Subject Level Conditions

GCE Subject Level Conditions for Environmental Science

Condition GCE(Environmental Science) 1: Compliance with content requirements

GCE(Environmental Science)1.1

In respect of each GCE Qualification in Environmental Science which it makes available, or proposes to make available, an awarding organisation must –

- (a) comply with the requirements relating to that qualification set out in the document published by the Secretary of State entitled '[Environmental science GCE AS and A level subject content](#)', document reference DFE-00198-2015,
- (b) have regard to any recommendations or guidelines relating to that qualification set out in that document, and
- (c) interpret that document in accordance with any requirements, and having regard to any guidance, which may be published by Ofqual and revised from time to time.

GCE(Environmental Science)1.2

In respect of each GCE Qualification in Environmental Science which it makes available, or proposes to make available, an awarding organisation must comply with any requirements, and have regard to any guidance, relating to the objectives to be met by any assessment for that qualification which may be published by Ofqual and revised from time to time.

Condition GCE(Environmental Science) 2: Assessment GCE(Environmental Science)2.1

An awarding organisation must ensure that in respect of each assessment for a GCE Qualification in Environmental Science which it makes available it complies with any requirements, and has regard to any guidance, which may be published by Ofqual and revised from time to time.

Subject content requirements

Requirements in relation to subject content for GCE Environmental Science

The subject content for GCE Qualifications in Environmental Science is set out in the Department for Education's [GCE AS and A level subject content](#), document reference DFE-00198-2015 (the 'Content Document').

Condition GCE(Environmental Science)1.1(c) requires awarding organisations to interpret the Content Document in line with any requirements, and having regard to any guidance, published by Ofqual.

We set out our requirements for the purposes of Condition GCE(Environmental Science)1.1(c) below.

Practical activities

An awarding organisation must interpret the Content Document as if a Learner may observe the undertaking of practical work (including fieldwork and experimentation), or undertake practical work by virtual or simulated means, where public health requirements mean that it is not possible for the Learner to undertake that work him or herself in the usual way.

Assessment objectives

Assessment objectives – GCE Qualifications in Environmental Science

Condition GCE(Environmental Science)1.2 allows us to specify requirements relating to the objectives to be met by any assessment for GCE Qualifications in

Environmental Science.

The assessment objectives set out below constitute requirements for the purposes of Condition GCE(Environmental Science)1.2. Awarding organisations must comply with these requirements in relation to all GCE Qualifications in Environmental Science they make available.

| Assessment objective | Description | A level weighting | AS weighting |
|-----------------------------|--|--------------------------|---------------------|
| AO1 | Demonstrate knowledge and understanding of scientific ideas, processes, techniques and procedures, including in relation to natural processes/systems and environmental issues | 30 to 35% | 35 to 40% |
| AO2 | Apply knowledge and understanding of scientific ideas, processes, techniques and procedures, including in relation to natural processes/systems and environmental issues | 40 to 45% | 40 to 45% |
| AO3 | Analyse, interpret and evaluate scientific information, ideas and evidence, including in relation to environmental issues, to make judgements and draw conclusions. | 25 to 30% | 20 to 25% |

Assessment requirements

Assessment requirements – GCE Qualifications in Environmental Science

Condition GCE(Environmental Science)2.1 allows us to specify requirements in relation to assessments for GCE Qualifications in Environmental Science.

We set out below our requirements for the purposes of Condition GCE(Environmental Science)2.1. Awarding organisations must comply with these requirements in relation to all GCE Qualifications in Environmental Science they make available.

Mathematical skills

The subject content for GCE Qualifications in Environmental Science is set out in the document published by the Secretary of State entitled '[Environmental science GCE AS and A level subject content](#)', document reference DFE-00198-2015 (the 'Content Document').

Appendix 2 to the Content Document specifies the mathematical knowledge, skills and understanding which Learners will be required to demonstrate and apply in GCE Qualifications in Environmental Science ('Mathematical Skills').

In designing and setting the assessments for a GCE Qualification in Environmental Science which it makes available, or proposes to make available, an awarding organisation must ensure that –

- (a) questions and tasks rewarding the use of Mathematical Skills assess those skills within the context of other areas of the subject content, and not in isolation,
- (b) in each set of assessments, [\[footnote 1\]](#) at least 10 per cent of the total marks for the qualification reward the use of Mathematical Skills at a Level of Demand which is not lower than that which is expected of Learners in assessments for the higher tier in a GCSE Qualification in Mathematics, and
- (c) without prejudice to the above requirements and those outlined in the Content Document, in each set of assessments Mathematical Skills are assessed across a range of Levels of Demand which supports effective differentiation in relation to the qualification.

Practical skills

Appendix 1 to the Content Document specifies skills, knowledge and understanding in relation to practical work which Learners are expected to be able to demonstrate in assessments.

In designing and setting the assessments for each GCE Qualification in Environmental Science which it makes available, or proposes to make available, an awarding organisation must ensure that, taking the assessments for that qualification together –

- (a) Learners' knowledge, skills and understanding in relation to practical work is assessed across assessment objectives AO1 to AO3,
- (b) the number of marks used to credit such knowledge, skills and understanding is no less than 15 per cent of the total marks for the qualification,
- (c) the questions and tasks which test Learners' knowledge, skills and understanding in relation to practical work draw on, and combine as appropriate, the theoretical and practical aspects of experimentation and/or fieldwork, and
- (d) Learners are required to –
 - (i) show and apply knowledge and understanding of practical activities, and
 - (ii) apply scientific thinking, use experimental skills and strategies, and analyse and evaluate information.

-
1. For the purposes of these requirements, a 'set of assessments' means the assessments to be taken by a particular Learner for a GCE Qualification in Environmental Science. For clarity, the assessments taken by Learners may vary, depending on any possible routes through the qualification.↵

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