

Higher Computing Science

Subject-specific guidance on gathering key evidence in session 2020–21



Please read this guidance alongside [National Courses: guidance on gathering evidence and producing estimates](#) and the SQA Academy resource, [Quality assurance of estimates for National Courses](#).

Gathering key evidence for Higher Computing Science

This document and *National Courses: guidance on gathering evidence and producing estimates* will give you additional support and guidance to support your decision making for session 2020–21. Evidence should be gathered later in the course, as a realistic reflection of a candidate's attainment. It is important to note that it is not the **quantity** of evidence, but the **quality** of evidence, in relation to its predictive value, that will support you during this process.

The following types of key evidence are likely to provide a good predictive value and may be helpful to you, although there may be other types of key evidence you would like to use.

Types of key evidence

While evidence to support a provisional result can come from a variety of sources (including naturally-occurring evidence during learning and teaching), there are certain types of evidence that provide a clearer indication of candidate ability. Typically, these closely represent the normal components of course assessment, in line with the modifications for 2020–21.

The modifications made to the [Higher Computing Science](#) course assessment still stand. While your aim should be to deliver all course content, you have the option to assess candidates in either 'database design and development' or 'web design and development'.

It is at your discretion how you approach this optionality in assessment. This could be determined by your progress through the delivery of the course or it might be possible to give candidates a choice of what option to complete in assessment. Evidence could be based on either:

- ◆ the same option assessed in the assignment and the question paper
- ◆ one option assessed in the assignment, the other option in the question paper

Normally, you would carry out assessment after all learning and teaching has been completed, however because of the current situation, you may find it more practical to mix assessment with learning and teaching activity.

Component 1: question paper

Using an assessment that replicates as far as possible the question paper, will have a high predictive value and represent 67% of the course assessment.

The design of the modified question paper for 2020–21 is as follows:

The paper is structured with sections for each area of the course			Marks
Section 1 (mandatory)	SDD and CS	A combination of short response questions and larger questions with more complex scenarios and multiple parts. Approximately 12 marks are for Computer Systems (10% of total course assessment).	55
Section 2 (one of two options)	DDD or WDD	A combination of short response questions and larger questions with more complex scenarios and multiple parts.	25
		Total	80

The duration of the question paper has been reduced to 2 hours (previously 2 hours and 30 minutes).

The question paper should sample across all aspects of the course content. Some marks should be available for analysis, testing and evaluation but the majority should have a focus on design and implementation.

You do not have to gather evidence from a single assessment event — each section can be assessed separately, at an appropriate time.

Other evidence could include a class test. This gives candidates the opportunity to demonstrate the skills, knowledge and understanding in a similar way to a question paper. For example, opportunities to:

- ◆ demonstrate problem solving skills in the various contexts of analysis, design, implementation, testing and evaluation for software design and development, database design and development and web design and development
- ◆ read and explain code in an unfamiliar context
- ◆ demonstrate application of computer systems knowledge

Past papers and marking instructions for [Higher Computing Science](#) are available on SQA's website. These should not be used in their entirety, but you can use them alongside other resources to help develop alternative assessments. The '[Past exam questions](#)' document maps past paper questions against the course content and is a useful resource.

Component 2: assignment

Using an assessment that replicates as far as possible the assignment, will have a high predictive value and represent 33% of the course assessment.

The design of the modified assignment for 2020–21 is as follows:

The assignment is structured as three tasks			Marks	Notional time
Task 1 (mandatory)	SDD	15 marks for implementation plus 10 marks sampled from analysis, design, testing and evaluation.	25	4hrs
Task 2 or task 3 (either option)	DDD or WDD	7–8 marks for implementation plus 7–8 marks sampled from analysis, design, testing and evaluation.	15	2hrs
Total			40	6hrs

You do not have to gather evidence from a single assessment event — each task can be assessed separately, at an appropriate time.

Other evidence could include tasks that give candidates the opportunity to demonstrate implementing the skills, knowledge and understanding that are the focus of the assignment.

Tasks should allow for integration of skills, in the way that the assignment task does. For example, a programming task that involves a number of Higher constructs and allows candidates to test and evaluate their own program. Such tasks could be completed as learning and teaching activity, providing evidence that occurs more naturally.

You must ensure that assessment tasks are managed in a way that generates evidence that is a reliable indication of candidate ability and supports you when producing provisional results.

You can use any integrated development environments (IDE) that enables candidates to generate evidence from home — this includes online IDEs. This gives greater flexibility in how you gather evidence this year, however, you should still aim to adhere to the key principles of the published conditions of assessment for the assignment. This means that:

- ◆ tasks should not be open-ended — the timing for the assignment can be used as the basis to set an appropriate limit
- ◆ you must take steps to ensure that the candidates' work is their own — this could be through your own actions or software functionality

Level of demand

The course assessment is designed to differentiate between candidates who meet the minimum requirements (grade C) and candidates who demonstrate a significantly higher level of understanding at this level (grade A).

Both the question paper and the assignment are designed with approximately 30% of marks at grade A and 50% at grade C.

Examples of **grade A performance** in questions and assignment tasks are where candidates are asked to:

- ◆ provide a written explanation of any computing concept in an unfamiliar context
- ◆ analyse and provide an evaluation that is detailed and in context for the given problem or task
- ◆ identify, understand and explain the constructs of complex code

Examples of **grade C performance** in questions and assignment tasks are where candidates are asked to:

- ◆ apply computing science skills for single stage problems
- ◆ design and implement code in familiar contexts
- ◆ complete the design stage in both database and web topics

Questions or assignment tasks with a number of marks available, are often the most effective way to differentiate between candidates. Candidates at grade C may only be able to access some marks, while those at grade A should be able to access the full range of marks.

Using additional assessment resources for session 2020–21: key information

It is important that you use valid and reliable assessment when gathering evidence in session 2020–21.

In Higher Computing Science, SQA will provide a question paper and coursework task for session 2020–21. Please note that the marking instructions have not been standardised based on candidate responses. You may therefore need to agree within your centre how to consistently mark an item if a candidate response is not covered by the marking instructions.

The Higher Computing Science question paper and coursework task will only be available on SQA's secure website — you must treat these confidentially, in the same way as other live assessment materials.

You have the option to use the question paper and coursework task as internal assessments for gathering candidate evidence. These can be split to support assessments you carry out during class time.

If you use a question paper or coursework task in part or in its entirety, you should remind candidates that they must not discuss the content of the paper with anyone, including friends, family or on social media.

Understanding the national standard

You can find examples of national standards on SQA's [Understanding Standards](#) website. This includes candidate responses and marking commentaries for the 2019 question paper and assignment.

We will also provide a resource that gives more information on how we identify grade A and grade C marks, which will be available in due course.