26 May 2017

Changes to National 5 Computing Science

In September 2016 the Deputy First Minister announced that units and unit assessments would be removed from National 5 to Advanced Higher courses.

For session 2017-18 onwards, we have removed units from the National 5 Computing Science course. As a result, we have strengthened the National 5 course assessment to ensure it assesses the full content of the course. We have also made some changes to the course content within the revised course specification for National 5.

What are the changes?

Skills and knowledge for the course.
In moving from a unitised course to a syllabus-based course, we have combined the skills and knowledge from the previous course specification with the skills and knowledge that were specific to the units. We have also transferred some of the optional content from the units into the revised course specification and this is now a mandatory requirement.

Examples of content transferred from the units include:

♦ The requirement to read and understand code, which is an overarching principle of the course but was more explicit in the units.

♦ SQL — candidates previously had the option to use SQL when producing evidence for the Information System Design and Development unit (as outlined in the unit assessment support pack). We have now extended the use of SQL and included it as a requirement in the database design and development area of the course. This gives database design and development a strong computing science focus.

♦ For the web content area of the course, we have introduced CSS. This is following feedback from teachers that it is more common to teach HTML and CSS together, and that many centres already do this. This will also create a smoother progression between National 5 and Higher.

Added clarity and detail
In the revised course specification, we have provided clear and accurate information about what candidates could be assessed on. We have had to present this information in a different way, as previously it was organised in relation to the two component units. In the revised course specification, it is presented in the following four areas of study:

♦ Software design and development

♦ Computer systems

♦ Database design and development

♦ Web design and development

We have also provided additional clarity and detail in areas such as HTML tags, Javascript mouse events and vector graphics.

Changes to the coursework task

We received feedback from teachers around the additional workload associated with marking the coursework task, and this would be improved if changed to an externally assessed task. This change has been made, however, it is not possible to externally assess the 'process', so the assessment task will be redesigned accordingly.

Teachers also indicated that the amount of time being allocated to coursework was negatively impacting on learning and teaching. They felt that the assessment conditions for coursework were too vague, leading to different assessment practices being used across the country. To address these concerns, we will now issue a new coursework task in February of each year. The task will be time-bound and will be carried out under a high level of supervision and control.

We have also transferred content from the previous bank of assessment tasks to the revised course specification, where it has been specified in more detail. For example, while the bank of tasks allows for flexibility in how candidates will design a database, we have now included the use of data dictionaries. This will ensure that all candidates are prepared for a coursework task, should this be included.

Other examples include:

♦ user-interface design using a wireframe
♦ identifying end-user and functional requirements for database and web-based problems
♦ exemplifying a design of a solution to a database query
♦ testing and evaluating of solutions

Content that has been removed from the course

We received feedback from the National Qualification Support Team (NQST) and Computing at Schools (Scotland) that there was too much content in the National 5 course. In light of this, we have removed the following non-mandatory content to provide additional time for learning and teaching:

♦ Technical implementation
♦ Contemporary developments
♦ Sections on security risks, legislation and environmental impact, which were more focused on digital literacy

This content does not contribute to the revised course assessment.