



# NQ Verification 2016–17

## Key Messages Round 2

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### Section 1: Verification group information

Verification group name:	Engineering Science
Verification event/visiting information	Visiting
Date published:	June 2017

#### National Courses/Units verified:

C723 National 5 Engineering Science Assignment (IACCA\*)  
C723 Higher Engineering Science Assignment (IACCA)  
C723 Advanced Higher Engineering Science Project

\*Internally-assessed component of course assessment

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### Section 2: Comments on assessment

#### Assessment approaches

The use of SQA-produced assessments is mandatory for course assignments/projects at all levels. With regards to this, all verified centres were found to have used appropriate approaches to assessment.

However, it should be noted that, when candidates progress from National 4 to Advanced Higher, there should be progressively less scaffolding from the class teacher/lecturer. Where there is assistance, this must be noted on the marking sheet and in the Record of Progress. Mark allocations must reflect any assistance given.

#### Assessment judgements

Of the centres verified, approximately 65% demonstrated an understanding of national standards — an increase from 60% last session. The breakdown was 84% accepted at National 5, 44% accepted at Higher and 100% accepted at Advanced Higher. As last session, the remainder required additional support and had to re-assess candidate work to bring them in line with national standards.

In the course assignment, for all levels, no observational evidence is permitted and marks can only be awarded where clear evidence is present.

Centres must use the most up-to-date assignments from the secure area of SQA's website, however two centres were found to be assessing to, older, invalid marking instructions.

Assessment must be based on whether the work truly demonstrates application of knowledge at a minimum of the assessed level. For example, at National 5, closed-loop control would be expected within the analysis section. At Higher, either two-state or proportional closed-loop control in the form of a control diagram would be expected. The same can be said for other areas of the assignment:

- ◆ To attain a high mark in the record of progress, sufficient depth must be supplied to demonstrate the application of skills at that level.
- ◆ Candidates must demonstrate the use of knowledge or strategies appropriate for the level, eg at Higher, mechanical calculations should not just rely on gear ratios (National 5). Other calculations, such as torque, should be completed.
- ◆ At Advanced Higher, mathematical modelling or calculations must be to a minimum of the level required for Higher (SCQF 6) Mathematics. A list (not exhaustive) of suggested appropriate strategies is presented in the candidate guide.

It is helpful to the verification process if centres provide justification of why a mark was awarded, signposting where to find the evidence and giving clear detail on the amount of teacher support given.

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### **Section 3: General comments**

In round 2, 16 visits took place. At most visits, two levels were verified (typically Advanced Higher and Higher, or Higher and National 5).

A range of materials is now available on the Understand Standards section of SQA's website. These will support centres in making assessment judgements.

It is crucial that centres demonstrate effective use of internal verification procedures. It is not enough to merely cross-mark the sample — centres should show what impact their internal verification processes have had.